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**California Efficiency + Demand Management Council CERIP
Response_2162023**

Additional submitted attachment is included below.

February 16, 2023

California Energy Commission
CEC-200-2023-003
Docket No. 21-ESR-01

715 P Street
Sacramento, California 95814

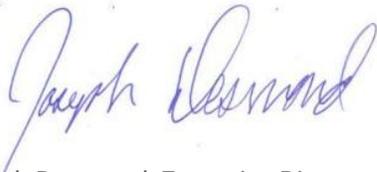
Re: Response to CEC's Notice of Availability and Request for Comments on the Draft Clean Energy Reliability Investment Plan

The California Efficiency + Demand Management Council ("Council") appreciates the opportunity to respond to the California Energy Commission's ("Energy Commission") Draft Clean Energy Reliability Investment Plan ("CERIP"). The Council acknowledges the Energy Commission's significant work to submit its Draft CERIP at this point. The Council points to our November 2022 response¹ to the Energy Commission's RFI as a reference throughout this document.

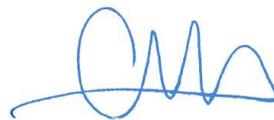
The Council is a statewide trade association of non-utility businesses that provide energy efficiency ("EE"), demand response ("DR"), and data analytics services and products in California. Our member companies include EE, DR, and distributed energy resources ("DER") service providers, implementation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

The Council firmly believes demand side resources, particularly EE, DR, and DERs are essential to resolving California's energy and climate challenges equitably, reliably, and effectively. Generally, the Council believes that, although the Draft CERIP does not immediately reflect our proposals submitted in our November CERIP RFI response, the Energy Commission has crafted a plan that balances immediate and long-term needs that would incentivize beneficial resource investments, including those suggested in our November RFI response. The Council looks forward to continued and ongoing engagement with the Energy Commission and stakeholders on this important matter.

Sincerely



Joseph Desmond, Executive Director
California Efficiency + Demand Management Council



Clark McIsaac, Director, Policy & Strategy

¹

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

Invest in Immediate and Long-Term Successes

The Council continues to express our support for the Clean Energy Reliability Investment Plan (“CERIP”) and the benefits that can be delivered through implementing its investment recommendations across California. The Council would like to also express our appreciation for the Governor’s proposed preservation² of yet-to-be-appropriated CERIP investments (and clean energy funding in general) despite the projected revenue shortfall. These investments are crucial to supporting the state’s climate and clean energy goals reliably, affordably, and effectively.

The Council also acknowledges California faces significant and growing energy reliability and affordability challenges in the wake of increasingly strenuous summer weather conditions. The State’s future investments, especially those guided by the recommendations put forward by the Energy Commission in the CERIP, can deliver near- and long-term benefits to Californians. This near- and long-term balance as proposed by the Energy Commission in their draft CERIP lays the foundation for successful long-term investments while addressing immediate and near-term needs. Without this strategic balance, short- and long-term energy needs that could be addressed by CERIP-recommended investments face potential failure.

The Council Supports Additional Funds to DSGS and DEBA for Near-Term Reliability

As the state continues to contend with extreme weather events, customer access to and participation in demand response (DR) programs remain imperative to empowering consumers to conserve energy, reduce strain on the electricity system, and lower costs for all customers. The Demand Side Grid Support Program³ (“DSGS”) has already dispatched roughly 300 MW of enrolled capacity on September 8, 2022 during the extended summer heat event.⁴ However, it appears about 50 MWs that were dispatched were DR resources alone. The Council acknowledges the DSGS statute and guidelines in place during the September heat event limited eligibility relative to the expansion of eligibility under AB 209.⁵ The Energy Commission is currently revisiting its DSGS guidelines and considering the Legislature’s clear expansion of eligibility to “make only those customers enrolled in those demand response or emergency load reduction programs ineligible for the program.”

Following the Legislature’s clear expansion of customer eligibility and the Energy Commission’s upcoming update to the DSGS guidelines, the DSGS can provide even greater individual and grid-wide benefits than those delivered during summer 2022. It is through this lens the Council supports the Energy Commission’s proposal in the Draft CERIP to provide \$33 million to:

...augment investments to support near-term electric system reliability, including during extreme weather conditions. This funding allocation will prioritize energy resources that

² 2023-24 Governor’s Budget, Proposed Budget Detail. <https://ebudget.ca.gov/budget/2023-24/#/BudgetDetail>

³ <https://www.energy.ca.gov/programs-and-topics/programs/demand-side-grid-support-program#:~:text=The%20Demand%20Side%20Grid%20Support,reducing%20the%20risk%20of%20blackouts>.

⁴ CEC Presentation - DSGS-DEBA Development - Jan 27 2023 Public Workshop. <https://efiling.energy.ca.gov/GetDocument.aspx?tn=248608&DocumentContentId=83087>

⁵ https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=202120220AB209

can be deployed and available by June 2024. **This may include additional funding for the DSGS Program or DEBA [Distributed Electricity Backup Assets] Program** that support additional demand reduction opportunities in industries such as agricultural and water sectors. [Emphasis added]

As the Council highlighted in our CERIP RFI response, we offered our input “with a particular emphasis on demand-side investments that can deliver real and tangible benefits in the short, medium, and long-term time horizons.” In addition, the recommendations in our CERIP RFI response underscored the benefits of load shifting, which can “deliver direct and ancillary benefits across the state in emergency-response scenarios (e.g. peak demand crises like that observed on September 7, 2022) as well as year-round (e.g. evening ramping and peak demand generally experienced from 4 - 9 p.m.)” Some of those benefits include:

- **“Avoided renewable generator curtailment:** Load shift can reduce oversupply of generation in the middle of the day, which contributes to curtailment of renewable generation, and address significant ramps in the morning and evening;
- **Energy Cost Reductions:** By reducing the need to dispatch conventional generators, Load Shift has the potential to lower the marginal cost of generation in both day-ahead and real-time energy markets;
- **Emission Reductions:** Where conventional generator dispatch is avoided, Load Shift also reduces both GHG emissions and local particulates, contributing to the mitigation of climate change, improving local air quality, encouraging environmental justice;
- **System, Local and Flexible Resource Adequacy:** Load shifting can reduce peak and ramping needs, at both the system and local level;
- **Transmission Capacity:** Like the impact on Resource Adequacy demands, Load Shift may contribute to a reduced need for high-voltage transmission;
- **Distribution System Services:** Load Shift may reduce the cost of distribution systems while easing operations by giving operators new flexibility to shift load off circuit peaks, increase load in locations where distributed generation currently exceeds demand, and where the resource is inverter based, support voltage regulation;
- **Customer Bill Savings:** Load Shift provides customers the opportunity to reduce both volumetric and demand charges, shifting their consumption to periods of relatively low costs”⁶

Providing additional funding to the DSGS and DEBA through CERIP recommended funding offers significant customer and grid opportunities and benefits. Those benefits are magnified when paired with the proper expansion of customer eligibility in the upcoming DGS guideline update. The Council believes the proposed investment opportunities and benefits in Fiscal Year 2023/2024 will be further enhanced if the investment framework across Fiscal Years 2024/2025 and 2025/2026 are followed as offered by the Energy Commission in its Draft CERIP.

⁶ CA Public Utilities Commission (“PUC”) Load Shift Working Group Final Report - January 2019
https://gridworks.org/wp-content/uploads/2019/02/LoadShiftWorkingGroup_report.pdf

The Success of the Draft Plan Hinges on Plans for Future Year CERIP Funding

The Council supports the Energy Commission's proposed shift in funding focus across Fiscal Years 2024/2025 and 2025/202 in its draft CERIP: "The CEC proposes continued funding for enabling investments, but at a lower level than in the first year, to focus less on planning activities in future years and more on scaling of resources." The Council further supports the Energy Commission's emphasis to allocate "significant funds in years two and three to initiatives that scale the deployment of both demand-side and supply-side solutions, with a greater focus on demand-side resources."

As already discussed in this response and offered in the Council's CERIP RFI response, demand side resources hold significant opportunities to serve a myriad of benefits. The Council finds the Energy Commission's refocus for funding years two and three to lift up the principles and the specific investment recommendations offered in our CERIP RFI response. Below are the Energy Commission's list of potential demand-side initiatives (bolded) and the Council's recommended investments relative to that list. The suggestions below are non-exhaustive and all of the recommendations offer important benefits that span beyond its associated categorization.

- **"Enabling Demand Flexibility":**
 - **Advanced Energy Storage for permanent load shifting:** There have been significant technology advances in packaged cooling systems that serve small and medium commercial buildings. The range of options include self-contained ice units that produce ice during off-peak hours when net loads are low and use that ice as a coolant during on peak periods to systems that combine dew-point-style sensible cooling with liquid desiccant dehumidification to significantly reduce non-fan electricity usage. With aggressive enablement incentives and effective tariff designs, these systems could potentially offset half of a building's electrical demand during peak periods. One key advantage of such thermal storage systems to the grid is that they can discharge during the warmest period of the day, during peak load periods (e.g. they are used when temperatures are high, not low), yet there is flexibility when they can be charged, either during low cost kWh hours or low GHG impact hours.
 - **Advanced pumping for small and medium agricultural facilities:** While larger agricultural interests have been able to invest the capital needed to improve water pumping efficiencies, small and medium agricultural facilities generally have not been able to keep pace with their larger counterparts. As a result, their operating costs have increased due to pumping and irrigation inefficiencies. The purpose of this program would be to target underserved agricultural customers with incentives and technical assistance that would lead to efficiency improvements in pumping. This would effectively lead to significant load reductions during peak periods.
 - The Council did not explicitly recommend in our CERIP RFI response but supports CERIP recommended funding for automated load controls (including smart thermostats).

- **“Distributed Generation”:**

- Grid Responsive Energy + Water Storage Systems (GREWSS): Pumped storage hydropower (“PSH”) uses pumps to convey water from a lower reservoir to an upper reservoir for energy storage and releases water back to the lower reservoir via a powerhouse for hydropower generation. PSH facility pump and generation cycling often follows economic and energy demand conditions.

PSH systems are characterized as either open-loop (continuously connected to a naturally flowing water feature) or closed-loop (not continuously connected to a naturally flowing water feature). Most PSH development has involved the construction of facilities that provide large energy storage and capacity. For multiple reasons, large-scale, open-loop PSH development has been virtually non-existent in the United States in recent decades.

- **“VGI and V2B”:**

- Vehicle to building deployments: A typical electric vehicle (“EV”) has more than sufficient battery capacity to meet the power needs of a home. With the addition of in-home inverters, these EVs can be connected to the home’s power system through a virtual aggregator and in effect be “islanded” during peak load emergencies as the EV would supply their electricity needs. The EVs would be charged during peak solar hours (10 a.m. to 3 p.m.) using existing rooftop solar systems or charging could be accomplished during these same hours at the workplace.

- **“Innovation Grants”:**

- Enabling statewide distributed energy storage fleets: 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 photovoltaics – 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.
- Flow equalizer basins for wastewater facilities: Build flow equalization basins (“EQ basins”) that can store incoming sewage during peak periods by not sending the sewage flow into the plant for treatment during those times. This effort would advance energy and cost savings by withholding raw sewage and delaying required treatment. Existing controls would allow the plant’s equipment downstream of the EQ basins to modulate down to their lowest position, reducing energy demand.

To effectively advance the potential customer, grid, and climate benefits made possible under CERIP recommended investments, the Council reiterates the importance in preserving yet-to-be-appropriated funding amounts as outlined by the Legislature in 2022 and advancing the Energy Commission’s recommendations as laid out in their draft CERIP.