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Comments of CEDMC on June 20 IEPR Workshop Integrating Renewable Energy

Additional submitted attachment is included below.



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California Energy Commission
Dockets Office, MS-4
Docket No. 17-IEPR-06
1516 Ninth Street
Sacramento, CA 95814-5512

Re: Docket 18-IEPR-06: California Efficiency + Demand Management Council Comments on the June 20, 2018 IEPR Workshop on Integrating Renewable Energy

The California Efficiency + Demand Management Council (Council) appreciates the opportunity to provide comments on the California Energy Commission (CEC or Commission) June 20, 2018, Workshop on Integrating Renewable Energy.

BACKGROUND

The Council is a statewide trade association of non-utility businesses that provide energy efficiency and demand response services and products in California.¹ Our member companies employ many thousands of Californians throughout the state. They include implementation and evaluation experts, energy service companies, engineering and architecture firms, contractors, financing experts, workforce training entities, and manufacturers of energy efficiency products and equipment. The Council's mission is to support appropriate energy efficiency and demand response policies, programs, and technologies to create sustainable jobs, long-term economic growth, stable and reasonably priced energy infrastructures, and environmental improvement.

¹ For more information about the Council, including the organization's current membership, Board of Directors, antitrust guidelines and code of ethics for its members, can be found at <http://www.cedmc.org/>. The views expressed by the Council are not necessarily those of its individual members.

DISCUSSION:

The Council appreciates the Commission's efforts to identify ways to increase the resiliency of the electric grid and enhance its ability to rely on renewable and other clean energy resources. We are so pleased to see the Commission's leadership in convening stakeholders, collaborating with industry experts, and gathering additional resources to map a new course toward California's ambitious carbon reduction goal. The Commission's guidance and partnership with other agencies is fundamental to helping us all understand how we can contribute to meet the state's challenges.

In our presentation at the June 20 workshop, the Council emphasized that efficiency and demand management are essential components of the holistic, clean energy approach California needs for a reliable, least-cost and least carbon energy system.²

In considering presentations and discussion at the workshop, and upon further reflection, we offer the following observations and recommendations:

- Significant progress is needed across all of the four pillars of greenhouse gas reduction identified by California, with the most significant ramp-up between today and 2030. First and foremost of these pillars, consistent with California's loading order, are efficiency and conservation, followed by electrification; low-carbon fuels; reduce non-combustion emissions³
- All of the mitigation scenarios, assume high levels of flexible loads⁴, which also reduces renewable curtailment and overall system costs.
- Even with aggressive energy efficiency deployment, meeting California's climate goals could result in 40% - 90% higher electricity demands by 2050, relative to today.⁵ Absent significant increases in energy efficiency investments, the additional costs in energy infrastructure needed to support those higher demands could be prohibitive and lead to policy failure. Energy efficiency, particularly if targeted towards use categories and locations that mitigate otherwise-necessary energy infrastructure investments, are an essential ingredient to a cost-effective, low-carbon future grid.
- Additional study is needed of flexible load capabilities in buildings, industry, and electric transportation of all types⁶
- For flexible load capabilities to be implemented, appropriate incentives are a necessity, including stable and consistent rate structures that offer clear benefits for the use of flexible capabilities. Mandatory standards may be appropriate, where cost-effective, to ensure flexible capabilities are incorporated into systems in the first instance, but unless

² Presentation by California Efficiency + Demand Management Council: *IEPR Commissioner Workshop on Renewable Integration and Electric System Flexibility*, June 20, 2018.

³ E3 Presentation at June 20 IEPR Workshop: *Deep Decarbonization in a High Renewables Future – Implications for Renewable Integration and Electric System Flexibility*; at slide 6.

⁴ Id, at slide 11.

⁵ Id, at slide 15.

⁶ Id, at slide 11.

the market environment exists for those systems to be utilized, they will remain a dormant potential.

- The current demand response potential in California is significant⁷, however the 2018-2019 Demand Response Auction Mechanism for demand response participating in the CAISO market topped out at a scant 200 MW with a CAISO peak load demand that exceeds 45,000 MW.
- California lags significantly behind other regions in meeting peak demand from demand resources. For example, the existing demand response resource potential a decade ago ranged from 3 to 9% of a region's summer peak demand in most regions, with the exception of the Midwest Reliability Organization region where demand response resources represented 20 percent of summer peak demand.⁸ Enrollment in PJM's DR programs topped 4600 MW a decade ago; ISO-NE's real-time demand response program saw an 800% increase in just five years.⁹
- Without renewable integration solutions such as targeted energy efficiency and demand management, 2050 electricity costs are projected to increase by \$8 - \$36B.¹⁰

Conclusion

The Council appreciates the opportunity to submit these comments. It is clear that efficiency and demand management have much to offer to a future flexible energy supply for California, and indeed tremendous progress in both efficiency and demand management will be an absolute necessity in the near term. California can, and should, meet and exceed the progress on demand management that has been attained by other markets. We look forward to continuing our engagement with the Commission and all other stakeholders in enhancing the ability of efficiency and demand management to further reduce greenhouse gas emissions reduction from California's energy system.

⁷ For example, the LBNL Potential Study indicates as much as 10 GW of Shed Dr exists in 2025, and 1.8 GWh per day of Shape as Shift DR potential for 2025.

⁸ *Demand Response in U.S. Electricity Markets: Empirical Evidence*, authored by LBNL and FERC, June 2009.

⁹ Ibid.

¹⁰ E3 Presentation at June 20 IEPR Workshop: *Deep Decarbonization in a High Renewables Future – Implications for Renewable Integration and Electric System Flexibility*; at slide 13.