

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Consider
Distributed Energy Resource Program Cost-
Effectiveness Issues, Data Access and Use,
and Equipment Program Standards.

Rulemaking 22-11-013
(Filed November 17, 2022)

**OPENING COMMENTS OF THE
CALIFORNIA EFFICIENCY + DEMAND MANAGEMENT COUNCIL ON
THE ORDER INSTITUTING RULEMAKING TO CONSIDER DISTRIBUTED
ENERGY RESOURCE PROGRAM COST-EFFECTIVENESS ISSUES, DATA ACCESS
AND USE, AND EQUIPMENT PERFORMANCE STANDARDS**

Dated: January 9, 2023

Joseph Desmond
Executive Director
California Efficiency + Demand
Management Council
849 E. Stanley Blvd #294
Livermore, CA 94550
Telephone: (925) 785-2878
E-mail: policy@cedmc.org

Luke Tougas
Consultant for
California Efficiency + Demand
Management Council
849 E. Stanley Blvd #294
Livermore, CA 94550
Telephone: (510) 326-1931
E-mail: l.tougas@cleanenergyregresearch.com

Clark McIsaac
Director, Policy & Strategy
California Efficiency + Demand
Management Council
849 E. Stanley Blvd #294
Livermore, CA 94550
Telephone: (925) 785-2878
E-mail: policy@cedmc.org

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I. INTRODUCTION

The California Efficiency + Demand Management Council (“the Council”) appreciates this opportunity to submit their Opening Comments on the Order Instituting Rulemaking to Consider Distributed Energy Resource Program Cost-Effectiveness Issues, Data Access and Use, and Equipment Performance Standards (“OIR”), pursuant to Rule 6.2 of the Rules of Practice and Procedure of the California Public Utilities Commission (“CPUC” or “Commission”) and the instructions accompanying the OIR filed November 17, 2022.

II. BACKGROUND

The Council is a statewide trade association of non-utility businesses that provide energy efficiency, demand response, and data analytics services and products in California.¹ Our member companies employ many thousands of Californians throughout the state. They include energy efficiency (“EE”), demand response (“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 energy efficient product manufacturers. The Council’s mission is to support appropriate EE, DR, and

¹ Additional 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.

DER policies, programs, and technologies to create sustainable jobs, long-term economic growth, stable and reasonably priced energy infrastructure, and environmental improvement.

III. SUMMARY OF THE COUNCIL’S RECOMMENDATIONS

The Council makes the following recommended additions to the preliminary scope:

- Incorporate load shifting capability into DER cost-effectiveness considerations;
- Not to develop cost-effectiveness methods for emerging technologies;
- Incorporate all DERs into the Integrated Resource Plan (“IRP”) process to the extent they are not included in the load forecast;
- Establish a Data Working Group that is open to other State agencies;
- Make no changes to the proposed timeline;
- Address data quality, delivery time frames, and privacy protections to leverage under-utilized functions of Smart Meter data;
- Revisit rules that govern sharing of individual customer data which require customer approval for each entity with which data are shared;
- Make anonymized customer energy usage data available to researchers for analytical purposes while ensuring care is taken for protection of individual customer privacy;
- Make anonymized program administrator data and customer energy usage data available to non-utility DER providers, etc. for market, education, and/or outreach while ensuring care is taken for protection of individual customer privacy;
- Require only smart devices that are supported by ratepayer-funded incentive programs to provide data for research purposes while ensuring care is taken for protection of individual customer privacy. Simple participation in a tariff should not obligate a customer to disclose that information;
- Collect data on Environmental & Social Justice (“ESJ”) communities to enable program and participation analysis; and
- Require third-party consultants that have been retained by the Commission to make available all elements of their work.

IV. THE COUNCIL'S RESPONSES TO TRACK 1 QUESTIONS

- 1. R.14-10-003 focused on making cost-effectiveness methods more consistent across DERs. To accomplish this, D.16-06-007 adopted a universal ACC which is updated annually and required for use by all DER proceedings. What other aspects of cost-effectiveness should also be made more consistent across DERs, and which of those are priorities?**

The Avoided Cost of Capacity (“ACC”) captures an important value of DERs, but it does not necessarily reflect the holistic value of those resources. The Council therefore recommends the Commission also incorporate load shifting capability into DER cost-effectiveness considerations. 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. Further accounting for load shifting benefits would also further the Commission’s stated goal of its DER Action Plan 2.0 which “...seeks to align the CPUC’s vision and actions to maximize ratepayer and societal value of an anticipated high-DER future.”²

Incorporating load shifting benefits into DER cost-effectiveness considerations would better align DER valuations with current state policy and recent budgets crafted by the Legislature (e.g., the Demand Side Grid Support Program established in Assembly Bills 205³ and 209⁴, and permanent load shifting targets outlined in Senate Bill 846⁵ (Sec. 4(25302.7))). Without appropriate DER cost-effectiveness considerations, the Commission would inadvertently increase the difficulty and costs of achieving those urgent policy goals by

² DER Action Plan 2.0, adopted on April 21, 2022 which can be found here: <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M467/K470/467470758.PDF>

³ Assembly Bill 205 which can be found here: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=202120220AB205

⁴ Assembly Bill 209 which can be found here: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=202120220AB209

⁵ Senate Bill 846 which can be found here: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=202120220SB846

undervaluing DERs which would reinforce barriers to private investment thereby deterring DERs from the scaling to meet the increasing demand flexibility needs, and improperly favoring more expensive alternatives that may not fulfill the State’s policy goals. The Council urges the Commission to incorporate stakeholder discussions on this matter throughout this rulemaking effort.

2. Should the Commission develop cost-effectiveness methods for emerging and bundled technologies? Which technologies, or combinations of technologies, should we prioritize, and what are the most important considerations?

The Council focuses the following response on bundled technologies as it is not clear what the Commission means when the question addresses “emerging **and** bundled technologies” (emphasis added). The phrasing of the question implies the Commission is seeking input on a mix of emerging and mature technologies. The Council asks the Commission to clarify if the question, as stated, only applies to emerging and bundled technologies (together) or if stakeholders are to address whether the Council should develop cost-effectiveness methods for emerging technologies and bundled technologies (separately).

The Council recommends the Commission not develop cost-effectiveness methods for emerging technologies. State and federal governments have employed a variety of incentives to encourage the development of clean energy resources. These incentives are varied, but include direct subsidies, tax breaks, market support, technology demonstration programs, research and development (“R&D”) programs, procurement mandates, information generation and dissemination, technology transfer, directed purchases, and government-funded regulations.

There are barriers to adopting efficient, smart, and connected technologies that require more than technology innovation. Commercially available products that improve efficiency and demand flexibility may not be adopted for a number of reasons such as limited information on performance and associated value; perceived comfort or services issue; upfront capital cost, and complexity with installation. Applying cost-effectiveness criteria to emerging clean energy solutions runs counter to how those technologies are supported in California and by the U.S. Department of Energy today. Generally speaking, technology-to-market (“T2M”) activities are designed to accelerate innovative R&D concepts to become commercially viable and available products. The T2M process relies on two elements: Technology Readiness and Market Readiness. Technology readiness is commonly measured on a nine-point scale referred to as

Technology Readiness Levels (“TRLs”). TRLs are used to consistently identify technology development stages across technology types. Market Readiness Levels (“MRLs”) refer to the readiness of a market to accept and adopt a new technology.

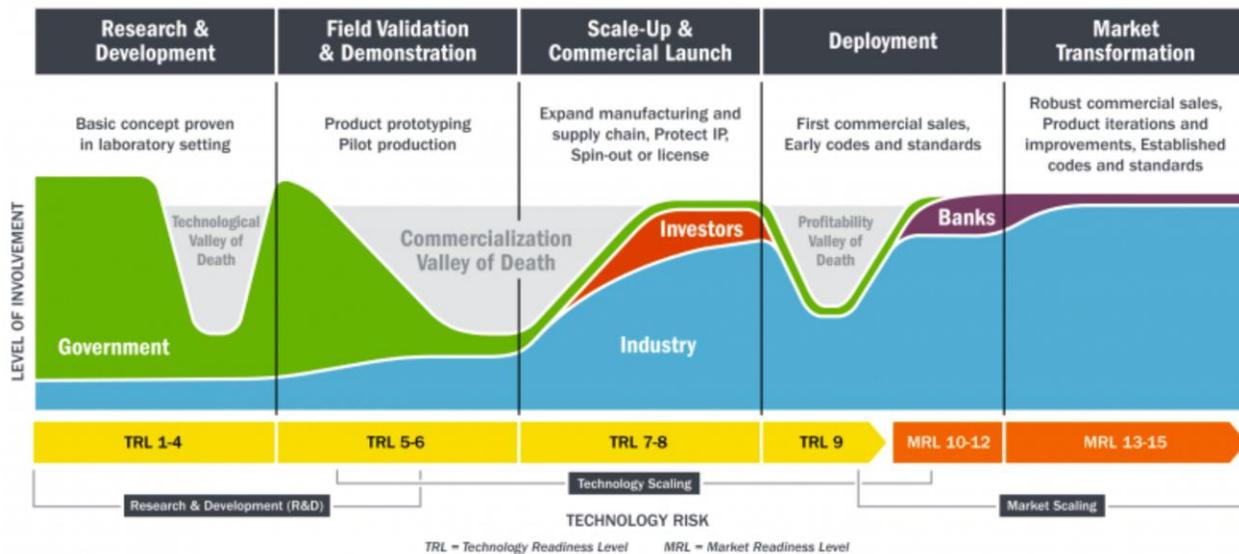


Illustration Source: Dept. of Energy <https://www.energy.gov/eere/buildings/technology-market>

3. How important is it to fully incorporate DERs into the IRP process? What kinds of tools, data, models, or processes would we need? How can the resource proceedings best provide data to the IRP process, and how can they best use IRP output data?

It is very important that all DERs are incorporated into the IRP process to the greatest extent possible. DERs are experiencing further deployment, in part, through applicable state policy and funding mechanisms (including leveraging federal funding opportunities such as those available in the Infrastructure Investment and Jobs Act⁶ or Inflation Reduction Act⁷) and should be fully incorporated into the IRP process to the extent they are not included in the load forecast.

The Council appreciates the Commission’s attention to this issue, as Vision Element 4A of the Commission’s DER Action Plan 2.0 outlines potential coordinating and research matters needed to better incorporate DERs into the Integrated Resource Planning (“IRP”) process. As noted in this rulemaking’s order instituting rulemaking (“OIR”), “... DERs are not completely

⁶ Infrastructure Investment and Jobs Act which can be found here: <https://www.congress.gov/bill/117th-congress/house-bill/3684/text>

⁷ Inflation Reduction Act which can be found here: <https://www.congress.gov/bill/117th-congress/house-bill/5376/text>

incorporated into IRP modeling as candidate resources.”⁸ Any work the Commission conducts to incorporate DERs into the IRP process should complement the California Energy Commission’s (“CEC”) process to fulfill their statutory requirements of establishing load shifting targets under SB 846 as mentioned previously in this document. Similarly, the Commission should incorporate all other DER procurement targets into the IRP process to the extent they are not today.

The Council also appreciates the Commission’s cross-agency coordinating intent, in particular with the CEC, also as noted in Vision Element 4A. Whether DERs are accounted for on the supply side or load side of the IRP process, if they can, individually or in aggregate with other DERs, reduce the need for more conventional resources, then they should be reflected in the process of assessing resource needs.

4. Should the Commission authorize the allocation of additional ratepayer funds for consultant support to continue the ACC work?

The Council does not have a response to this question at this time.

5. Please comment on any additions or changes needed to the preliminary Track 2 schedule provided in section 4 below.

The Council does not have a response to this question at this time.

V. THE COUNCIL’S RESPONSES TO TRACK 2 QUESTIONS

1. Should the Commission create a Data Working Group consisting of Commission, CEC and CARB Staff, as well as utilities, and interested stakeholders? If so, what should be the scope and timeline for the working group?

Yes, the Commission should create a Data Working Group that is open to other State agencies with a direct interest in the issues being addressed by the Data Working Group. However, involvement by these agencies should be based on the understanding that they do not have greater standing than any other party.

There is a longstanding need for a Data Working Group. Over several years, many important data-related issues have come to light that are so complicated and highly technical in nature that they cannot be resolved solely through comments or testimony. It is also reasonable to expect that as time goes on, additional data-related issues needing resolution will present

⁸ OIR, at p. 4.

themselves, so the Commission should retain the Data Working Group as a vehicle for addressing them, even once the initial issues within the scope of this proceeding are resolved.

The Council provides some initial thoughts below on issues that should be addressed in the working group. They generally revolve around improving access to accurate customer meter data, an issue that is critical to operating a modern grid and enabling DER participation in the CAISO market.

- Expand Electric Rule 24/32 to other types of DER providers: Electric Rule 24 (Pacific Gas and Electric Company (“PG&E”) and Southern California Edison Company (“SCE”)) and Electric Rule 32 (San Diego Gas & Electric Company (“SDG&E”)) govern the provision of customer meter data to DR providers whose customers are enrolled in California Independent System Operator (“CAISO”) market-integrated products like Proxy Demand Resources (“PDRs”) and Reliability Demand Response Resources (“RDRRs”). These rules should be expanded to other DER providers to enable them to participate in the CAISO market as well.
- Update rules for sharing customer meter data to allow for the aggregated use of customer data, including Marketing, Engagement, & Outreach (“ME&O”): Currently, individual customer meter data may only be shared with a specific entity if the customer provides explicit access. However, there are potential benefits of making aggregated customer meter data available, with the appropriate privacy protections, for third-party ME&O, assessing distribution system needs, etc.
- Standardized metrics for advanced meter infrastructure performance: A set of standardized metrics and a common method for measuring them should be adopted to allow stakeholders to objectively and consistently value and evaluate the performance of data service providers in California. The State's regulatory bodies could establish specific target levels. A common approach that is agreed upon would allow for the establishment of a baseline for performance, allow for benchmarking, and reporting.
- Customer authorization performance standards (click-through): These issues are currently being litigated in Application (“A.”) 18-11-015 et al where, pursuant to Ordering Paragraph 29 of Resolution E-4868, PG&E, SCE, and SDG&E filed individual applications for approval of cost estimates and propose improvements and/or enhancements to the functionality of the Click-Through electronic signature authorization

process utilized by customers to authorize these investor-owned utilities (“IOUs”) to share a customer’s energy data with third party DR Providers. The Commission recently issued a proposed decision that would again extend the statutory deadline of this proceeding until September 29, 2023. However, to the extent that there are outstanding issues pertaining to click-through that are not addressed in that proceeding, the Commission should address them in this proceeding through the Data Working Group.

- Potential improvements to Share My Data (or equivalent for SCE/SDG&E) performance standards (e.g., timeline of data provision and quality of data): Similar to the recommended Rule 24/32 performance standards provided above, similar standards should be developed for Share My Data (or equivalent for SCE/SDG&E).
 - Create universal control groups for CAISO market settlement, DR/DER Qualifying Capacity valuation, and cost-effectiveness calculations: The CAISO has demonstrated the benefits of control groups that are comprised of anonymized, non-participating customers that are available to third parties to measure DR performance in the wholesale market.⁹ The Data Working Group should identify any necessary Commission authorizations necessary to enable to creation and management of these control groups for DR/DER use.
- 2. Referring to the preliminary Track 2 schedule provided in section 4, do you suggest any changes? What workshops or other activities, if any, are needed to advance work in Track 2?**

This high-level proposed timeline generally looks reasonable at this stage, but the Commission should be prepared to make adjustments in the future, especially depending on the scope of the Data Working Group.

- 3. How can the Commission, utilities, DER providers, and customers better use Smart Meter data? How can Smart Meter data help individual ratepayers, developers, and contractors determine which DER programs are likely to provide the most benefits?**

In general, Smart Meter data, including device-level data, can be used to diagnose locations on the grid and specific customers for targeted DER participation for the purposes of distribution system deferral, load curve flattening, and peak shaving. In addition, Smart Meter data can be used to inform automated grid edge device responses and to form universal control

⁹ See *Demand Response Advanced Measurement Methodology*, February 2022, under “Demand Response Baseline Enhancements 2022 - Feb 14, 2022”:
<http://www.caiso.com/informed/Pages/MeetingsEvents/MiscellaneousStakeholderMeetings/Default.aspx>

groups for the purpose of measuring DR performance. However, the issues of data quality, delivery time frames, and privacy protections must be addressed to maximize the benefits of Smart Meter data.

4. What barriers (legal, regulatory, technological capacity, etc.) exist for load-serving entities and DER providers that prevent the greater use of energy consumption data to increase customer awareness and adoption of DERs?

In addition to the Council’s response to Question V.1. above, the issue of non-discriminatory data access in real-time is a barrier that prevents greater use of energy consumption data. “Non-discriminatory” means when data is made available to one qualified/eligible party, it is made available to all eligible qualified parties.

A non-discriminatory requirement was recently included by the Department of Energy’s (“DOE”) Grid Deployment Office (“GDO”), in collaboration with the Office of Clean Energy Demonstrations (“OCED”), for the Smart Grid Grants Program in its Request for Information (RFI): Grid Resilience and Innovation Partnerships (“GRIP”) Program (DE-FOA-0002827).¹⁰ The concept papers were due December 16, 2022. DOE specifically stated that the “DOE will require projects to support data standards, interoperability, and non-discriminatory data access on a real time basis.”¹¹

5. To what extent should data collected by program administrators, or available from smart devices (including Smart Meters) be available to researchers for analytical purposes, such as evaluation, measurement, and verification?

The IOUs already have in place rules governing the collection and use of anonymized customer energy usage data by eligible academic researchers, local government entities, and state and federal agencies for academic purposes.¹² This data should be available to researchers for the uses described in the question at an aggregate level, but care must be taken to ensure the protection of individual customer privacy.

¹⁰ GRIP RFI FundOpp_DE-FOA-0002827, Section 40107 Topic Area 2, p. 12 : Deployment of Technologies to Enhance Grid Flexibility/Smart Grid Investment Matching Grant Program (Smart Grid Grants)

¹¹ *Id.*

¹² Electric Rule 27 and 27.1 (PG&E), Electric Rule 25 (SCE), and Electric Rule 33 (SDG&E).

6. To what extent should data collected by program administrators, or available from smart devices (including Smart Meters) be available to utilities, non-utility DER providers, and other energy providers or program administrators, for marketing, education, or outreach purposes?

There are a lot of potential benefits to making program administrator data and customer energy usage data available to utilities,¹³ non-utility DER providers, etc. for ME&O. These benefits can include the ability to engage Disadvantaged Communities (“DACs”), geographically-targeted marketing, and time-of-day targeted marketing. Meter data information on DACs would also be useful for evaluating distributional equity analysis to ensure they are benefitting appropriately from DER programs. However, customer privacy must be respected so anonymization of data is needed.

7. Should smart devices, such as thermostats, solar and/or storage inverters, energy storage devices, grid-connected heat pump hot water heaters, and electric vehicle chargers, that are supported by ratepayer-funded incentive programs, be required to provide data for research purposes?

Yes, this appears reasonable but only to the extent that the customer receives a ratepayer-funded incentive for the technology; simple participation in a tariff should not obligate a customer to disclose this information. Customer anonymity should also be preserved.

8. How can existing data reporting and data collection processes be improved to make them more consistent across resources and accessible by users?

The Council does not have a response to this question at this time.

9. What types of quantitative and qualitative data do we need to support equity customers’ awareness of and participation in DER programs? Should the Commission collect data to measure the impact on and the benefits of DER programs for ESJ communities? Is the Commission currently collecting this data? If not, what additional mechanisms do we need to do so?

The Council offers no suggestions at this point with regard to the needed quantitative and qualitative data to support equity customers’ awareness of and participation in DER programs but reserve the right to make recommendations in the future. The Commission should collect data on ESJ communities to assess the success in participation of customers in ESJ communities and inform potential course corrections in marketing and program design.

¹³ “Utilities” presumably, the intent is meant to imply other utilities rather than the one serving the customer in question.

10. When the Commission contracts with third party consultants to provide analytic and program evaluation services, should the data collected by the contractors be always required to be shared with the Commission?

Third-party consultants that have been retained by the Commission should be required to make available all elements of their work, including data and analysis, if 1) a consultant is paid using ratepayer funding, and 2) if the work is used to inform a proceeding, regardless of the funding source. In any instance, individual customer privacy must be protected.

VI. SCHEDULE

The Council has no comments on the preliminary schedule.

VII. COMMENTS ON CATEGORY, NEED FOR HEARING, AND SCHEDULE

The Council does not object to the preliminary determinations regarding category, need for hearing and schedule.

VIII. CONFIRMATION OF PARTY STATUS

Pursuant to OIR Section 8 at page 19: “Persons who file responsive comments become parties to the proceeding and will be added to the ‘Parties’ category of the official service list upon such filing.” By filing these responsive comments, therefore, the Council requests “party status” and inclusion on the service list of R.22-11-013 as parties as follows:

Joseph Desmond
Executive Director
California Efficiency + Demand Management Council
849 E. Stanley Blvd #294
Livermore, CA 94550
Telephone: 925-785-2878
E-mail: policy@cedmc.org

IX. CONCLUSION

The Council appreciates the Commission’s consideration and the opportunity to provide Opening Comments on the OIR.

Dated: January 9, 2023

Respectfully submitted,

/s/ JOSEPH DESMOND
JOSEPH DESMOND
Executive Director
California Efficiency + Demand
Management Council
849 E. Stanley Blvd #294
Livermore, CA 94550
Telephone: 925-785-2878
E-mail: policy@cedmc.org