BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

FILED
04/28/23
04:59 PM
R2211013

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 ADMINISTRATIVE LAW JUDGE'S RULING SEEKING COMMENTS FROM PARTIES ON THE SOCIETAL COST TEST AND AIR QUALITY RESEARCH RESULTS

Dated: April 28, 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

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 Administrative Law Judge's Ruling Seeking Comments from Parties on the Societal Cost Test and Air Quality Research Results, issued in this proceeding on February 13, 2023 ("ALJ Ruling"). These Opening Comments are timely filed and served pursuant to the Commission's Rules of Practice and Procedure and the contained in the ALJ Ruling.

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

[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.

III. SUMMARY OF THE COUNCIL'S RECOMMENDATIONS

The Council agrees with the Commission's definition of a "DER" as explained in the Order Instituting Rulemaking.[2] The definition accurately reflects the resources that are considered DERs, which is important in establishing policies and regulations impacting DER development and deployment.

> DER customer programs… enable participants to manage their energy use by purchasing energy efficient or electric generation technologies, behavioral changes, or other activities that occur on the customer's premises (often called "behind-the-meter"). They are sometimes referred to as "demand-side management" programs because they allow customers to manage their own demand for electricity or natural gas.[3]

In response to the Commission's analysis of the Societal Cost Test ("SCT") in the CPUC Staff Report on the Impact of a Societal Cost Test on Resource Procurement ("Staff Report") and the questions posed in the February 13 Ruling, there are substantial opportunities to revise the outdated and narrow-in-scope SCT in order to modernize and improve cost-effectiveness tests ("CE Tests") for DERs. The Council, therefore, recommends that the Commission:

1) Use the SCT per Staff recommendations as an informative, interim solution.
2) Launch a Working Group of stakeholders and area experts that will develop and recommend new SCT inputs or tests as necessary to stand-up, enable, and evaluate DER programs over the coming decades.
3) Transition from the interim SCT to the long-term solution developed by the Working Group.

The Council does not provide responses to the Air Quality Research Questions but reserves the right to respond to these questions in the future.

IV. THE COUNCIL'S RESPONSES TO SOCIETAL COST TEST QUESTIONS

1. Should the Commission adopt an SCT?

Track 1 of the rulemaking process in R.22-11-013 has established an opportunity to kickstart the development of a modernized CE Test. Though the Staff Report generally captured some important elements of DER benefits with the SCT, the Staff Report also illustrated the constraints and limitations of the existing SCT (and other CE Tests for that matter) in meeting an ever-changing landscape for DERs.

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[2] R.22-11-013, at p. 2, Footnote 1.
[3] *Id*.

The SCT, as analyzed in the Staff Report, leverages resources that preempt many technological and policy advancements undertaken in this rulemaking (i.e. the 20+ year old California Standard Practice Manual ("CSPM") or Interagency Working Group Social Cost of Greenhouse Gases (informed by 10-year-old+ data)). Though California has built upon the CSPM framework, the SCT as assessed in the Staff Report does not accurately reflect modern-day DER benefits or abilities. That inaccuracy undervalues DERs and diminishes potential investments in those resources, limiting the state and stakeholders' abilities to mitigate bill impacts and improve energy reliability. Revisions to the existing SCT are necessary to align DERs with the state's climate and energy goals, improve the effectiveness of several cross-agency regulatory efforts, and advance (among other things) key elements of the Commission's DER Action Plan 2.0, including Element 4B:

> CPUC decisions on budgets and priorities for all ratepayer-funded DER programs are informed by metrics and guidelines for cost-effectiveness, program impact, GHG emissions, equity, marketing, and other criteria that are as consistent as possible across programs and proceedings.[4]

The Council therefore urges the Commission to take full and deliberate advantage of the opportunity in this rulemaking and adopt the SCT per staff recommendations in the Staff Report as an interim CE Test for DERs and initiate a working group to gather resources and develop a modernized SCT composed of new components and appropriate portions of other CE Tests. To accurately reflect DER values, the modernized SCT must address at least the following issues, which are not incorporated in the current SCT, in addition to existing SCT considerations:

- Load Shifting benefits;
- Incentive or policy stackability (e.g. the Inflation Reduction Act or Infrastructure Investment and Jobs Act);
- Anticipated grid condition changes, including load growth and greater reliance on intermittent/renewable resources;
- Forecasted, long-term effects of the changing climate, including: extended fire seasons, more severe and frequent droughts, and greater and more consistent fluctuations between seasonal extremes; and
- Ability to dispatch as either a ramp-up or ramp-down resource.

[4] DER Action Plan Aligning Vision and Action, adopted on April 21, 2022.

Adopt the Staff Report's SCT Using High SCC as an Interim CE Test

As stated above, the SCT as assessed in the Staff Report does not accurately reflect modern-day DER benefits or abilities which leads to the undervaluing and under-deployment of the resource. In order to mitigate impacts of undervaluing DERs while enabling a working group to develop a long term solution, the Council suggests the Commission adopt the Staff Report's SCT using the high social cost of carbon ("SCC") scenario.

Though the Council finds value in the SCT over the Total Resource Cost ("TRC") regarding the cost-effectiveness of DERs, we recommend this interim process for two primary reasons. 1) There are several questions and concerns that have yet to be resolved regarding the SCT. Depending on the rigor and the depth of the SCT, a final SCT could pose unintended consequences or perverse incentives that act contrary to the benefits of the resource as well as the state's progress towards its energy and climate goals. 2) The Council is concerned about impacts to program administrator, implementer, and participant engagement in DER programs if there is too frequent fluctuation in DERs cost-effectiveness. The Council acknowledges this is an urgent matter that must be resolved expeditiously and therefore intends this interim recommendation to be short-lived.

The Modernized SCT Must Incorporate: Load Shifting Benefits

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.

The Council firmly believes DERs, including load shifting, are essential to resolving California's energy and climate challenges equitably, reliably, and effectively. The state's actions in 2022 alone demonstrate support for load shifting (a DER) as a valuable resource. Just two examples that illustrate that support include: 1) Over the 2022 Legislative session, the Legislature and the Governor passed and signed into law a series of significant policies and

budget recommendations incorporating various load shifting provisions.[5] 2) During the California Energy Commission's ("CEC's") April 19 workshop: Lead Commissioner Workshop on SB 846 Preliminary Load Shift Goal, leaders and representatives for the Commission, CEC, and California Independent System Operator ("CAISO") all acknowledged the benefits (potential and realized) and importance of load shifting.[6] During that workshop, the CEC proposed an admittedly ambitious yet achievable goal of ~6,400 – 8,100 MW of load shifting potential.

The Staff Report and existing SCT do not incorporate those or other load shifting benefits into cost-effectiveness considerations. The Staff report states that the core scenario observes increases to avoided costs throughout most of the day, except the mid-day hours "where there is negligible avoided gas generation." However, the Staff Report's analysis overlooks load shifting's potential to avoid renewable generator curtailment; reduce energy cost; reduce emissions; improve system resilience; and preserve or open transmission capacity associated with shifting net peak demand from critical evening hours to off-peak hours. Despite the Staff Report's assessed 35% increase in avoided costs across non-mid-day hours, shifting load to those mid-day hours will provide cost-savings and greenhouse gas emissions reducing benefits by relieving grid stress and mitigating potential and additional generation during the evening ramp.

It is not clear why the Staff report did not incorporate the findings and recommendations of the Final Report of the California Public Utilities Commission's Working Group on Load Shift.[7] The recommendations of the Working Group included:

1. The Commission should bring a new focus to developing Load Shift to support renewable integration and distribution system planning and operations.
2. The Commission's engagement with Load Shift should be actively coordinated with related efforts underway at the California Energy Commission and CAISO, as well as related Commission proceedings.

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[5] Sec. 4 of SB 846 (Dodd, 2022) re: Diablo Canyon Power Plant: extension of operations established a process to build the nation's first load shifting goals to reduce net peak electrical demand; Sec. 12 of SB 846: established and laid out yet-to-be-appropriated funding for the Clean Energy Reliability Investment Plan where the Energy Commission recommended investments to scale load shifting and other demand side resources; AB 205 and AB 209 (Committee on Budget, Energy and climate change, 2022) established and provided appropriations for the Demand Side Grid Support Program and Distributed Electricity Backup Assets Program; among others.

[6] Lead Commissioner Workshop on SB 846. More information can be found here: https://www.energy.ca.gov/event/workshop/2023-04/lead-commissioner-workshop-sb-846-preliminary-load-shift-goal

[7] Final Report of The California Public Utilities Commission's Working Group on Load Shift, 2019, which can be found here: https://gridworks.org/wp-content/uploads/2019/02/LoadShiftWorkingGroup_report.pdf.

3. The Commission should continue with a period of experimentation that will ensure adequate and proactive testing of policies, incentives and business models related to Load Shift. Begin by inviting pilot proposals in early 2019 along the lines of the products envisioned here. Use insights gained to support a mature Load Shift market by 2025.
4. The Commission should consider how to incentivize Load Shift and ensure incentives are consistent with the value the resource creates, including the avoidance of renewable curtailment and other grid services identified in the "Introduction" to this Report.[8]

The Modernized SCT Must Incorporate: Incentive or Policy Stackability

> The Staff Report raises a finding that:
>
> basing decision making on an SCT, as opposed to a cost-effectiveness test such as the Total Resource Cost (TRC) test currently considered the primary cost-effectiveness test, could result in increases to electric rates, **if** any increased resource procurement shown as cost effective under an SCT were paid for **through electric rates alone.**"[9] [emphasis added]

In addition to overlooking load shifting benefits to mitigating resource buildout needs, the finding above appears to acknowledge but ultimately foregoes a myriad of policy and incentive mechanisms that could accurately reflect the cost-effectiveness of DERs. Some of those policy and incentive mechanisms, such as through the Inflation Reduction Act ("IRA") and Infrastructure Investment and Jobs Act ("IIJA"), are anticipated to be longstanding and available over the coming decade.

A few examples of opportunities provided under IRA that could benefit and advance DER deployment include (this list is not exhaustive, and the funding amounts are captured at a national level, not California-specific, and are thus intended to be illustrative):

- Home Energy Rebate Programs: $8.8 billion into the next decade;
- Rural Energy for America Program expansion: $2 billion; and
- Electric infrastructure loans for renewable energy in Rural America: $1 billion.

A few examples of opportunities provided under IIJA that could benefit and advance DER deployment include (this list is not exhaustive, and the funding amounts are captured at a national level, not California-specific, and are thus intended to be illustrative):

[8] Final Report of The California Public Utilities Commission's Working Group on Load Shift, 2019, which can be found here: https://gridworks.org/wp-content/uploads/2019/02/LoadShiftWorkingGroup_report.pdf, at p. 18.
[9] Staff Report, at p. 6.

- Battery supply chain investments: $7 billion
- Smart Grid Investment Matching Grant Program expansion: $3 billion
- Energy Efficiency and Conservation Block Grant Program expansion: $550 million

A few examples of opportunities provided by the State that could benefit and advance DER deployment include (this list is not exhaustive):

- Clean Energy Reliability Investment Plan
- Demand Side Grid Support Program
- Distributed Electricity Backup Assets Program
- Self-Generation Incentive Program
- Technology and Equipment for Clean Heating Program

<u>The Modernized SCT Must Incorporate: Anticipated grid condition changes, including load growth, greater reliance on renewables, and forecasted long term impacts of climate change.</u>

The state and much of the nation's energy system is undergoing immense and rapid changes. These changes are testing the makeup of existing and future energy systems while establishing new ways for customers to engage with their energy consumption. As stated in the Advanced Strategies for Demand Flexibility Management and Customer DER Compensation: Energy Division White Paper and Staff Proposal:

> In addition to the widespread curtailment of renewable energy, the ability of the bulk system operator to ensure system reliability is also under duress, due in large part to:
>
> 1. **Increasingly steep system ramping needs**. The CAISO forecasts a 60% increase in the maximum three-hour ramp of system net load, from 15,600 megawatts in 2019 to 25,000 megawatts in 2030…
> 2. **Increasing reliance on use-limited and intermittent supply resources.** The penetration of use limited resources, such as energy storage or SSDR resources, and intermittent resources, such as solar or wind, is growing rapidly. This, combined with adverse climate change impacts, such as extreme heat waves and drought, has contributed to increasing reliability challenges for California's grid.[10]

[10] Advanced Strategies for Demand Flexibility Management and Customer DER Compensation which can be found here: https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/energy-division/documents/demand-response/demand-response-workshops/advanced-der---demand-flexibility-management/ed-white-paper---advanced-strategies-for-demand-flexibility-management.pdf

The CEC's analysis addressed in their April 19 workshop shows California is experiencing more "peak days" and those peak days are "lasting longer."[11] Though the Commission clearly is thinking about the changing climate and energy consumption, in part as acknowledged earlier in this document, there are many other factors to take into consideration. As the climate continues to change the state's interaction with and consumption of energy will change as well. The Commission must ensure an appropriate and reasonable understanding of those shifts are incorporated into their CE Tests. That incorporation would better align the state's CE Test(s) with a key statement made in the Commission's Staff Report: "Societal costs, in this context, are the "indirect" costs of electricity service that are borne by all of society, including future generations, rather than directly borne by ratepayers."[12] In order to capture these societal costs, the Commission must revise and expand the current considerations of the SCT beyond its current limitations. That is particularly important as DERs continue to play an important role in the state's energy changes and the value of DERs' role need to be accurately captured in the modernized SCT.

Components of Existing CE Tests Should be Incorporated Into the Modernized SCT

According to the current CSPM, adopted in 2001, the current SCT is a variation of the current Total Resource Cost Test ("TRC"), which "includes the effects of externalities (e.g.,, [sic] environmental, national security), excludes tax credit benefits, and uses a different (societal) discount rate."[13] The CSPM indicates that the TRC "cannot be applied meaningfully to load building programs…"[14] It is fair to conclude that the SCT, as a variation of the TRC (though updated in 2007 to address net-to-gross ratio matters), may inherently exhibit the same weakness(es) and thus is unlikely to accurately reflect DER cost-effectiveness.

The Council urges the Commission to incorporate applicable components of existing CE Tests that reflect DER value alongside any new potential considerations. As outlined in the CSPM, the following potential adders could be considered under the modernized SCT, at least for informative and illustrative purposes of DER cost-effectiveness: (1) avoided environmental

[11] Lead Commissioner Workshop on SB 846. More information can be found here: https://www.energy.ca.gov/event/workshop/2023-04/lead-commissioner-workshop-sb-846-preliminary-load-shift-goal

[12] Societal Cost Test Impact Evaluation which can be found here: https://www.ethree.com/wp-content/uploads/2022/01/CPUC-SCT-Report-FINAL.pdf.

[13] CSPM, at p. 18.

[14] *Id*., at p. 21.

damage, (2) increased system reliability, (3) non-energy benefits, (4) non-energy benefits for low-income programs, and (5) benefits of fuel diversity.[15]

The Council suggests using the *National Standard Practice Manual for Benefit-Cost Analysis of Distributed Energy Resources* (2020) ("NSPM")[16] as a primary resource in considering any updates or changes to the modernized SCT. This NSPM:

> is designed to provide objective, policy- and technology-neutral guidance that regulators, utilities, consumer advocates, DER proponents, state energy offices, and other stakeholders can apply using a systematic approach to develop BCA practices that inform decisions regarding which DERs merit acquisition or support from utilities. The manual incorporates and expands upon the 2017 NSPM for Assessing Cost-Effectiveness of Energy Efficiency Resources (NSPM for EE).[17]

2. **If so, should the adopted SCT be used for informational purposes across all DER proceedings, as recommended by Staff, or for some other purpose?**

The Council recommends the Commission adopt the SCT for informational purposes across all DER proceedings while the Commission implements the stakeholder process above to establish a more holistic and accurate modernized SCT for DERs.

3. **Do you agree with inputs used for discount rates, the air quality adder, the societal cost of carbon, and methane leakage in the SCT as described in the *Societal Cost Test Impact Evaluation* Staff Report? If not, explain any modifications that you recommend.**

The Council provides the following recommendation but otherwise reserves the right to respond further to this question in the future. The Council recommends ensuring consistent stakeholder opportunities to review and revise the inputs and values used for the discount rates, air quality adder, societal cost of carbon, and methane leakage in the SCT at an appropriate cadence. This consistent review and revision process should mitigate the chance that inputs and values remain current and relevant.

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[15] CSPM, at p. 20.
[16] This manual and related materials, including prior NSPM publications, can be found here: www.nationalenergyscreeningproiect.orR/national-standard-practice-manual/.
[17] NSPM In March, 2022, the NSPM published, Methods, Tools and Resources:
A Handbook for Quantifying Distributed Energy Resource Impacts for Benefit-Cost Analysis, a Companion Guide to the *National Standard Practice Manual* which can be found here: www.nationalenergyscreeningproiect.orR/national-standard-practice-manual/.

4. **Should "society," as defined in the Societal Cost Test Impact Evaluation Staff Report, be specific to California, such that federal tax benefits are included in the SCT? Federal tax benefits, such as the EV tax credit, are included in the results in the Societal Cost Test Impact Evaluation Staff Report, but do not necessarily have to be included in a future SCT, if "society" is defined broadly enough such that tax payments are considered a transfer payment.**

The Commission should define "society" to be specific to California, which would incorporate federal tax benefits in the SCT. The current standard practice is to reduce participant costs by the tax benefit, thus that definition would maximize the overarching benefit of that DER program under consideration. This would also, likely, ensure a transfer payment does not incidentally occur or mitigate the CE Test benefits as currently established.

V. CONCLUSION

The Council appreciates the Commission's consideration and the opportunity to provide Opening Comments on the ALJ Ruling.

Dated: April 28, 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