

**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 Performance Standards.

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

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

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I. INTRODUCTION

Pursuant to Rule 6.2 of the Rules of Practice and Procedure of the California Public Utilities Commission (“Commission”) the Clean Coalition respectfully submits these comments in response to the *Administrative Law Judge’s (“ALJ”) Ruling Seeking Comments From Parties On The Societal Cost Test and Air Quality Research Results*, issued at the Commission on February 13, 2023.

Clean Coalition appreciates the opportunity to comment on the adoption of a Societal Cost Test and urges the Commission to adopt the test as one of the main cost-effectiveness tests swiftly. The way that cost-effectiveness is calculated is fundamental to decision making and achieving the states’ numerous climate goals, including the decarbonization of the energy sector and electrification of transportation and buildings. The existing process values success in dollars, while ignoring the fact that the consequences of prioritizing lowest-cost portfolios include lives lost. In addition, because load growth occurs on a local level, the community benefits of distributed generation are inherently localized as well, to say nothing of the systemwide energy benefits.¹ Discussing the adoption of a Societal Cost Test represents a huge step forward in melding goals that the Commission has espoused in planning documents, namely the DER Action Plan 2.0 and the Environmental Social Justice (“ESJ”) Action Plan, with a practical method to monetize those goals in a way that will benefit the ratepayers. Too many Californians, particularly those located in or near disadvantaged communities (“DACs”), are living with the consequences of a time when the real effects of generating energy were secondary to the cost of

¹ <https://clean-coalition.org/news/local-solar-is-the-best-solution-for-reducing-peak-transmission-usage-and-electricity-costs-for-ratepayers/>

generating the energy itself. While decision making has evolved greatly since that period and the resource portfolios selected in the Integrated Resources Planning (“IRP”) proceeding are cleaner than ever, the legacy of that time still exists. Creating a framework that is truly modern, in that it is reflective of equity goals while continuing to balance essential needs such as grid reliability and resilience, necessitates a wholistic conversation about incorporating externalities into the decision-making process. Granted, the Commission—and other regulatory agencies—have been working to address some of these issues in specific proceedings or by securing a certain percentage of program dollars for ratepayers in DACs. Yet, those actions are generally focused at ensuring that specific communities (or groups) are not left behind in the clean energy transition with a grid planning process that continues to primarily be a top-down exercise, led by aggregated data from the Commission, the California Independent System Operator (“CAISO”), the California Energy Commission (“CEC”), and the utility companies. The concept of a Societal Cost Test is fundamentally different; it considers community needs and local benefits as inputs into the traditional cost-effectiveness methodology, adding the bottom-up perspective that is currently missing. Clean Coalition comments will underscore why the Commission should adopt a Societal Cost Test promptly and provide answers to the questions posed in the ALJ’s ruling.

- The Societal Cost Test will evolve over time, especially as the Commission is more effectively able to quantify/monetize benefits that are known to have nonzero values, such as resilience.
- Since the Societal Cost Test is described in the Commission’s Standard Practice Manual as a structurally similar variation that goes beyond the Total Resource Cost Test, it should be used as a primary test in determining cost-effectiveness.
- The High Social Cost of Carbon scenario should be implemented, given questions lawmakers and experts have had about the effectiveness of current carbon pricing and the states’ cap-and-trade program in reaching carbon reduction goals on time.²
- The Commission should implement an out-of-state methane leakage adder, as proposed by Solar Energy Industries Association (“SEIA”) in comments on the

² <https://sd13.senate.ca.gov/news/in-the-news/august-20-2021/lawmakers-question-california-cap-and-trade-policies-citing>
<https://calmatters.org/environment/2022/02/california-climate-cap-trade/>

Proposed Decision (“PD”) Adopting Changes to the Avoided Cost Calculator. This proceeding is an appropriate forum to fully discuss this issue.

- The Societal Cost Test should consider California-specific tax credits to be transfer payments and any other credits that would otherwise not be realized by Californians without DER deployments (federal credits) to be benefits.
- Results from the Air Quality Impacts Study must be re-evaluated using current pricing information as inputs given the significant changes over the last few years due to high inflation.

II. DESCRIPTION OF PARTY

The Clean Coalition is a nonprofit organization whose mission is to accelerate the transition to renewable energy and a modern grid through technical, policy, and project development expertise. The Clean Coalition drives policy innovation to remove barriers to procurement and interconnection of distributed energy resources (“DER”) — such as local renewables, demand response, and energy storage — and we establish market mechanisms that realize the full potential of integrating these solutions for optimized economic, environmental, and resilience benefits. The Clean Coalition also collaborates with utilities, municipalities, property owners, and other stakeholders to create near-term deployment opportunities that prove the unparalleled benefits of local renewables and other DER.

III. COMMENTS

A. Societal Cost Test (“SCT”)

1. Should the Commission adopt an SCT?

The Clean Coalition strongly advocates that the Commission adopt a SCT as a necessary step to ensure that California meets its climate goals on time and properly values several externalities that still exist. When discussing what the roadmap for electrification of buildings and transportation will look like, many parties have rightly expressed concerns that electric rates cannot be the only vehicle through which capital investments are made nor can rates shoulder the full cost burdens of ensuring that the energy transition occurs. Similarly, there have been multiple discussions about the fact that intrinsically linked industries—such as electricity and housing or electricity and transportation—are still operating in silos and require much greater

coordination. The Clean Coalition concurs and cautions that the Commission should not find arguments about the use of a SCT increasing rates to be persuasive because the SCT is an essential tool to fully address the full range of costs and benefits involved with the transition to clean energy. Armed with an accurate cost evaluation, regulators and lawmakers can better select financing options outside of rates, including leveraging funding from the general fund, federal sources/grants, or the private sector. On the other hand, knowingly continuing to allow externalities to persist does not mean that the costs will not be paid by the ratepayers, it simply means that the state decision making processes will turn a blind eye as communities that do not have the necessary tools or finances continue to shoulder the burden alone. The studies published by Energy Division staff and UCI/E3 clearly show that continuing to treat these costs as externalities will result in significantly higher costs over time, in both dollars and lives lost, than if the state were to actively address these costs where they originate.

Consider the example of the value of resilience (VOR). In multiple proceedings, including Net Energy Metering (“NEM”), the Renewable Market Adjusting Tariff (“ReMAT”), and the distribution deferral pilots (State of Charge and Partnership Pilot) the Commission has declined to include any monetary benefit for projects providing resilience. In the microgrids proceeding (“R. 19-09-009”), on-the-record discussions about the VOR have been avoided in the first four tracks of the proceeding and are not currently scheduled for Track 5. Though there is a general understanding that resilience provides a nonzero benefit, questions about how to practically apply and standardize such a value have not yet been addressed, which is indicative of the difficulty with quantifying some of the values that would be included in a SCT. The National Standard Practice Manual For Benefit-Cost Analysis of Distributed Energy Resources (“DER”) addresses this by explaining that while some of the benefits that accrue to the host customer, “can be difficult to quantify and monetize does not mean that they should be ignored in cost-effectiveness analyses.”³ Not acknowledging any benefit at all is a statement about the value in and of itself; doing so incorrectly concludes that resilience has zero value.

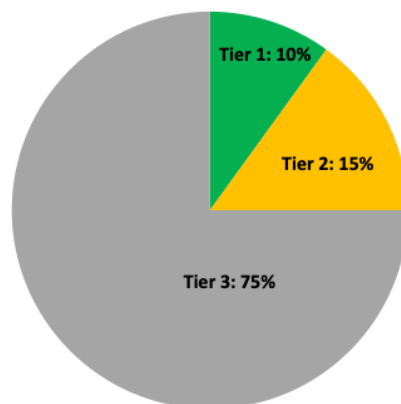
The Clean Coalition’s methodology for valuing resilience—called the Value of Resilience 123 (“VOR123”)—is mentioned in Energy Division’s Microgrids Track 2 Concept

³ National Standard Practice Manual For Benefit-Cost Analysis of Distributed Energy Resources, National Energy Screening Project (NESP), August 2020 at p. 4-18

Paper⁴ and proves that resilience **can** be valued for individual facilities through our load tiering methodology. Moreover, we have determined an effective way to apply VOR123 to an entire distribution area through the Resilient Energy Subscription⁵ market mechanism, which will allow the Commission to quantify resilience impacts for customers siting DER and the broader grid.

The Clean Coalition’s VOR123 approach standardizes resilience values for three tiers of loads, regardless of facility type or location. **Tier 1, usually about 10% of the total load, are mission-critical, life-sustaining loads** that warrant 100% resilience. **Tier 2, or priority loads, usually about 15% of the total load,** should be maintained if doing so does not threaten the ability to maintain Tier 1 loads. **Tier 3 are discretionary loads** that make up the remaining loads, usually about 75% of the total load, are only maintained when doing so does not threaten Tier 1 and 2 resilience.

Typical VOR123 tier percentages of total load



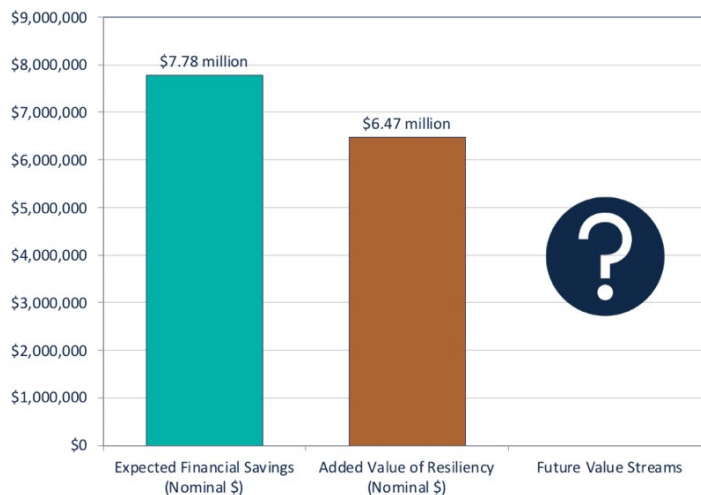
Based on this tiering system, the Clean Coalition arrived at 25% as the typical VOR123 adder that a site should be willing to pay for resilience and has validated the 25% adder using four approaches: cost-of-service, the Department of Energy (“DOE”) multiplier, market-based, and avoided diesel generator cost.⁶ In addition, we also applied this approach to the Solar Microgrids deployed through the Santa Barbara Unified School District (“SBUSD”), which is helping the district realize significant resilience benefits for free, in addition to energy bill savings. There is also value in ensuring that certain classes of host customers (such as the elderly or medical

⁴ <https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M344/K038/344038386.PDF> on p. 94 and 112

⁵ <https://clean-coalition.org/news/webinar-resilient-energy-subscription-res-a-streamlined-market-based-approach-to-financing-community-microgrids-wednesday-31-august-2022/>

⁶ See <https://clean-coalition.org/disaster-resilience/#adder> for more information.

baseline customers) can comfortably shelter in place and retain electrical service during outages, rather crowding emergency shelter sites.

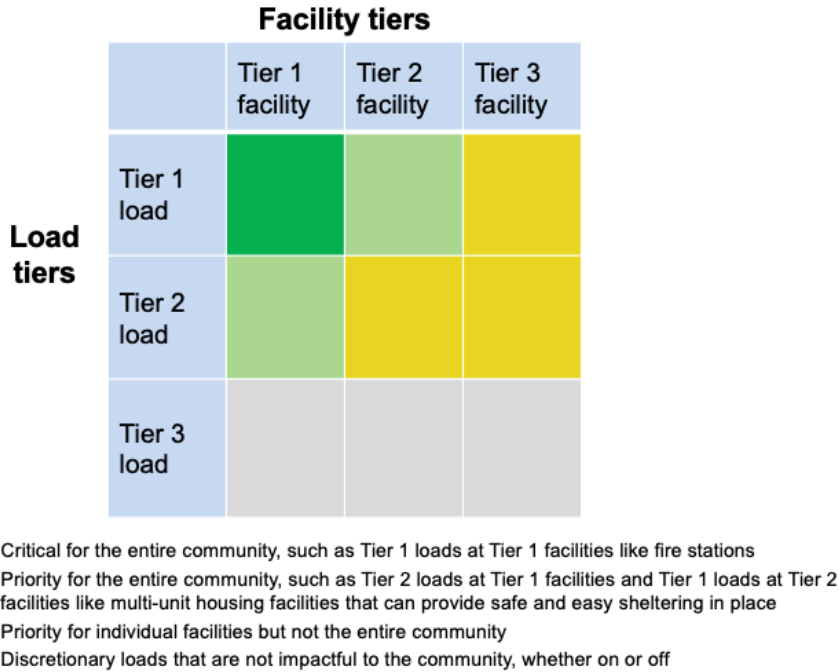


Bill savings and resilience value accruing to the SBUSD from six Solar Microgrid sites plus eight additional solar-only sites.

The VOR123 principles for an individual facility can also be applied to a larger distribution grid area by tiering the importance of facilities in addition to tiering individual loads. As seen in the image below, the top emphasis is to provision 100% resilience for Tier 1 loads at Tier 1 facilities (shown by the dark green square). Tier 1 facilities include Critical Community Facilities (“CCFs”) such as fire stations, police stations, schools, water districts, and emergency shelters—and can also include grocery stores, data centers, pharmacies, gas stations, EV charging stations, and apartment complexes that can provide sheltering-in-place during grid outages.⁷ The more our society electrifies, the more important that resilience will become.

Due to the critical role and societal value of Tier 1 facilities for a community, the cost-of-service (“COS”) for serving all Tier 1 loads at Tier 1 facilities should be socialized, in the same way that costs for transmission and distribution infrastructure are recovered (though not on such a broad basis). The secondary emphasis for resilience is for Tier 1 loads at Tier 2 facilities and Tier 2 loads at Tier 1 facilities (the lighter green squares). Arguably, due to the value provided to society, the COS to ensure Tier 2 loads at Tier 1 facilities and Tier 1 loads at Tier 2 facilities are resilient could also be rate based especially if a Community Microgrid is deployed.

⁷ <https://clean-coalition.org/community-microgrids/valencia-gardens-energy-storage-project/>



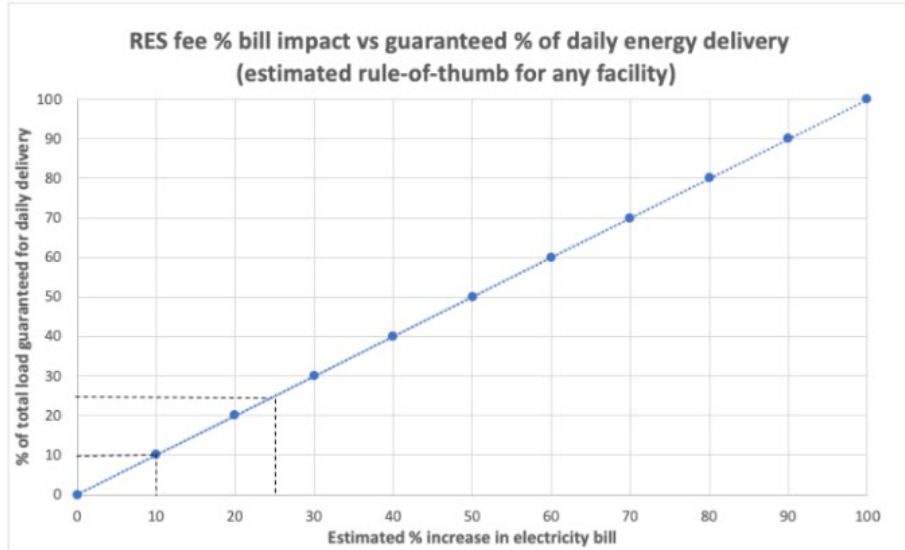
Tiering facilities and loads by importance for a distribution area

The way to properly allocate the costs for provisioning resilience at CCFs, while ensuring that only participating ratepayers are contributing is through the Resilient Energy Subscription (“RES”), which is a straightforward fee-based (\$/kWh) market mechanism that finances the deployment of Community Microgrids. Under normal grid conditions, subscribed facilities will operate with all loads served, but during grid outages, facilities will get at minimum their contracted RES allocations, and will often receive more than these minimums due to the way that Community Microgrids are sized.

The RES helps finance Community Microgrids while properly valuing their significant resilience benefits, addressing these three challenges:

1. **Establishing** initial Community Microgrids to provide resilience to CCFs.
2. **Enhancing** Community Microgrids to offer resilience opportunities within the footprint of the initial Community Microgrid footprint.
3. **Expanding** Community Microgrids to larger footprints that can guarantee resilience to a wider list of facilities and include additional communities.

Once an initial Community Microgrid is established for serving the CCFs, the incremental COS will be low for expanding the Community Microgrid via the market-based RES. The general rule of thumb for determining a facility’s willingness to pay for resilience is that each 1% of load that a facility secures via a RES will result in an approximately 1% electricity bill increase.



When considering broader grid resilience and the deployment of a Community Microgrid via RES the key question must be: is RES feasible for both Community Microgrid owner-operators and subscribed facilities? Using this framework, the costs and benefits of provisioning resilience can be effectively applied as input in the SCT.

1. For Community Microgrid owner-operators, RES is feasible if the income from RES subscription fees ensures a positive return on the Community Microgrid COS.⁸
2. For RES subscribers, RES is feasible if it results in value-appropriate, guaranteed locally generated resilient energy.

Only if both these conditions are met is the RES feasible, which makes it a practical methodology that can be applied to a SCT. The RES properly considers resilience benefits for both the subscribers and the Community Microgrid Owner-Operator, addressing situations where customers do and do not have DER deployed onsite while considering the broader resilience benefits to the grid and society.

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 Clean Coalition supports the adoption of an SCT as the primary cost-effectiveness test used by the Commission across all DER proceedings, with other tests being used for more informational purposes. The SCT is another version of the TRC, which is currently considered

⁸ In the Clean Coalition’s modeling of the expenses and income of a Community Microgrid deployed via RES, **the Community Microgrid owner will see an internal rate of return (IRR) of at least 9%.**

the main cost-effectiveness test for DER and is a forward-looking test, whereas other tests—such as the Ratepayer Impact Measure (“RIM”) test—primarily look at historical impacts on rates.⁹ Moreover, as Energy Division explains, “Considering the impact of an SCT on ratepayers is crucial to ensuring that disadvantaged communities, who have historically been disproportionately affected by non-monetized costs of energy use such as air pollution impacts, do not suffer substantial hardship in order to mitigate these impacts.”¹⁰ In addition to the higher costs of remedying historically disproportionate consequences of energy production, “The *magnitude* of some of these benefits are often greater for low-income customers than for non-low-income customers.”¹¹ Only relying on the SCT for informational purposes undercuts the significance that resource-production choices will have on DACs going forward and the investments needed to address the consequences of a lack of equitable and just procurement decisions made in the past. The Clean Coalition understands that developing an SCT that is both accurate and granular will be an ongoing process, but starting the work now and swiftly adopting an SCT is one of the biggest steps the Commission can take to help California move toward a decarbonization path that is feasible and just.

3. *Do you agree with inputs used for discount rates, the air quality adder, the social 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 Clean Coalition supports adopting a High Social Cost of Carbon in the SCT to ensure that California will reach its climate goals on time. There are numerous critiques of the existing carbon pricing (and cap-and-trade scheme) from lawmakers, economists, and environmentalists which we will not go into here due to the added complexity.¹² With that being said, the Energy Division graphs clearly show that the High Social Cost of Carbon scenario will result in stricter standards or resource selection that will guarantee that the state achieves decarbonization and electrification goals.

In addition, we recommend that the Commission adopt the proposal SEIA made in comments on the 2022 Avoided Cost Calculator (“ACC”) for an out-of-state methane leakage

⁹ National Standard Practice Manual For Benefit-Cost Analysis of Distributed Energy Resources, National Energy Screening Project (NESP), August 2020 at p 2-8

¹⁰ Societal Cost Test Impact Evaluation: CPUC Staff Report on the Impact of a Societal Cost Test on Resource Procurement, January 2022, at p. 6

¹¹ National Standard Practice Manual For Benefit-Cost Analysis of Distributed Energy Resources, National Energy Screening Project (NESP), August 2020 at p. 4-18

¹² See footnote 2 for more information.

adder.¹³ Since 95% of the natural gas that is used in California is imported from out of state, not considering how that gas is delivered to California is deliberately avoiding the true cost of natural gas by not considering the full range of pollution effects. Moreover, we believe that this proceeding is an appropriate forum to consider this issue since the Commission declined to include it in the last update to the ACC on the basis that, “It is prudent to ensure Commission measures align with CARB’s emissions inventory, and noted that the Decision, “authorizes the Energy Division to continue to monitor related activities...”¹⁴

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 Clean Coalition believes that the definition of society used in the SCT should apply specifically to California when it comes to considering what counts as a transfer payment. For example, tax credits from the state government are easily traced to taxes collected from California citizens and therefore directly represent a transfer. If not used as a DER-tax credit, the money would be applied to another California-specific program. On the other hand, money from the federal government cannot usually be applied on a one-to-one basis. A 2017 report by the Office of the New York State Comptroller found that on average, California residents send \$348 more in taxes to the federal government than they receive back.¹⁵ Federal tax credits are benefits that if not claimed by California citizens or developers, would likely not enter the state economy. Therefore, while they are still transfer payments if society is broadly defined as the entire United States, we believe it is more appropriate to include federal tax credits as a benefit in the SCT.

B. Air Quality Research Questions

1. *Are the data and modeling methods used in Quantifying the Air Quality Impacts of Decarbonization and Distributed Energy Programs in California reasonable and accurate? If not, how could they be improved?*

Generally, the Clean Coalition does believe that these values are reasonable and should be included in the SCT, though we reserve the right to reply to comments made by other parties.

¹³ Opening Comments of the Solar Energy Industries Association on Proposed Decision Adoption Changes to the Avoided Cost Calculator at p. 2 <https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M469/K615/469615171.PDF>

¹⁴ PD Adopting Changes to the ACC, on p. 47 <https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M463/K620/463620099.PDF>

¹⁵ <https://www.businessinsider.com/federal-taxes-federal-services-difference-by-state-2019-1>

One change that should be made before the values are adopted in a SCT is to ensure that the inputs rely on the most modern values possible. The values used in the UCI/E3 study are based on 2017 EPA values and 2020 values of capital, which do not account for inflationary changes over the last few years.¹⁶

2. *Should the results and data in Quantifying the Air Quality Impacts of Decarbonization and Distributed Energy Programs in California be used as inputs to an SCT? If so, how?*

See the answer above.

3. *Do the results and data in Quantifying the Air Quality Impacts of Decarbonization and Distributed Energy Programs in California have any implications for the Commission to consider when determining a framework for evaluating cost-effectiveness of DER?*

The results have implications for transportation and building electrification, more so than for the actual electricity sector itself, due to existing stringent requirements. Including these values in an SCT will better indicate the overall benefits and costs required to achieve electrification, which can then be used to help ensure that other sectors (besides electricity procurement) help shoulder the cost burden and that significant rate increase do not occur.

IV. CONCLUSION

The Clean Coalition respectfully submits these comments and urges the Commission to adopt a SCT to help policymakers and regulators fully consider the benefits and costs of electrification and decarbonization.

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¹⁶ Quantifying the Air Quality Impacts of Decarbonization and Distributed Energy Programs in California, 2021, at p. 34