

**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

**REBUTTAL TESTIMONY OF ROBERT EARLE ON BEHALF OF THE
COALITION OF CALIFORNIA UTILITY EMPLOYEES**

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1 **I. INTRODUCTION**

2 This rebuttal testimony covers certain proposed updates to the ACC with the following
3 recommendations:

- 4 • The Commission should reject the Solar Energy Industry Association (SEIA)
5 proposal to include \$2.5 billion in prospective transmission investments in the
6 ACC.
- 7 • The Commission should accept the Joint IOUs' proposal to exclude secondary
8 distribution costs from the ACC.
- 9 • The Commission should exclude non-energy benefits and social costs from the
10 ACC.
- 11 • The Commission should accept the Joint IOUs' proposal to limit use of the
12 methane adder to fuel substitution programs.

13 In addition, this rebuttal testimony discusses modifications to the biennial update process,
14 and consideration of equity issues in evaluating DER cost effectiveness.

1 **II. PROPOSED UPDATES TO THE ACC**

2 **A. Transmission and Distribution**

3 **1. Transmission**

4 SEIA claims that the IRP modeling does not include the costs for \$2.5 billion of
 5 transmission investments needed for utility-scale renewable generation.¹ SEIA goes on to claim
 6 without justification that these costs should be considered avoidable by DERs.

7 SEIA’s proposal is without merit and should be rejected. SEIA offers no evidence that
 8 these investments are avoidable by DERs either on a specific or non-specific basis. SEIA says
 9 transmission projects are often cancelled but offers no nexus to DERs. Indeed, transmission
 10 projects are often cancelled for a variety of reasons having nothing to do with DERs.

11 The Commission should reject SEIA’s proposal.

12 **2. Distribution**

13 The Commission and Staff have recognized that using total distribution marginal costs as
 14 an avoided cost in the ACC is problematic because “they are not [all] necessarily avoidable
 15 costs.”² The Joint IOUs propose to ameliorate this problem by distinguishing coincident
 16 demand-related and non-coincident demand-related costs, excluding non-coincident demand
 17 driven distribution costs from the ACC, and, instead, consider non-coincident demand-related
 18 costs on a case by case basis in DER specific proceedings.³

¹ Prepared Direct Testimony of R. Thomas Beach on Behalf of The Solar Energy Industries Association, October 30, 2023 (SEIA), p. iii.

² 2020 Distributed Energy Resources Avoided Cost Calculator Documentation, June 24, 2020, version 1c.

³ Pacific Gas and Electric Company (U 39-M), San Diego Gas & Electric Company (U 902-M), and Southern California Edison Company (U-338-E), Opening Testimony in Response to Administrative Law (footnote cont'd...)

1 SEIA opposes the Joint IOUs’ proposal,⁴ arguing that separating out secondary
 2 distribution costs adds “complexity.” This is an absurd reason to oppose the Joint IOUs’
 3 proposal. Instead, SEIA suggests having secondary distribution costs be treated as a separate
 4 component in future ACC updates, contradicting its own argument about complexity with a
 5 separate hourly allocation for secondary distribution costs. A separate allocation of hours for
 6 secondary distribution costs does not address the problem that not all DERs avoid all of the costs
 7 currently included in the ACC. SEIA does not argue against that fact nor does its
 8 counterproposal address it.

9 SEIA’s arguments should be rejected, and the Commission should approve the Joint
 10 IOUs’ proposal on secondary distribution costs.

11 **B. Non-Energy Benefits and Social Costs**

12 The Center for Biological Diversity argues that non-energy benefits (NEBs) and social
 13 costs be included in the ACC and that the Commission is required to do so.⁵ CBD, however,
 14 overlooks that the Commission examined the impact of including broader societal benefits in its
 15 report on the Societal Cost Test (SCT). The report concluded that “any increased benefits shown
 16 by an SCT relative to a TRC are societal benefits, rather than ratepayer benefits, and therefore
 17 basing cost effectiveness on an SCT could cause an increase to rates.”⁶ CBD’s proposal would
 18 increase rates and have negative impacts on those least able to afford rate increases. As the Joint
 19 IOUs’ note: “such societal concerns are better addressed from tax proceeds that are collected

Judge’s Ruling Issuing the 2024 Avoided Cost Calculator Staff Proposal for Party Input, October 30, 2023 (Joint IOUs) at 25:22-27:14.

⁴ SEIA at v., 30:8-31:10.

⁵ Prepared Direct Testimony of Roger Lin on Behalf of the Center for Biological Diversity, October 30, 2023 (CBD) at 3-7:5:13.

⁶ Societal Cost Test Impact Evaluation, January 2022, p. 31.

1 progressively from all Californians rather than th[r]ough rates for essential utility services that
 2 have regressive impacts.”⁷

3 Moreover, CBD misunderstands the ACC. CBD quotes from the 2024 ACC Staff
 4 Proposal that “the primary goal of the ACC is to inform decision-making on DER investment”⁸
 5 but ignores the context of that statement which is the paragraph headed by “the IRP’s latest
 6 adopted system plan establishes level playing field to evaluate all types of DER.”⁹ Indeed, much
 7 of the motivation for Staff’s proposals are to align or integrate the ACC with the IRP.¹⁰ CBD’s
 8 proposal to include NEBs and social costs would disconnect the ACC from the IRP process and
 9 not appropriately value DERs in comparison with supply-side resources. If NEBs or social costs
 10 are not used in the IRP process (and they should not), they should not be used in the ACC. If
 11 they were, supply-side resources and DERs would not be evaluated on an equal basis and there
 12 would be inefficient outcomes harmful to ratepayers and California’s policy goals.

13 For instance, CBD recommends that job creation be considered as a benefit to be
 14 included in the ACC. Setting aside the fact that the creation of jobs that do not pay livable wages
 15 or benefits should not be considered a benefit, the IRP process does not evaluate the creation of
 16 jobs in evaluating supply-side resources. Each of the NEBs or social costs that CBD proposes
 17 should not be included in the ACC because they are not a cost borne by the utilities and included
 18 in the IRP process. To do otherwise would make any cost-effective measurement of DERs
 19 through the ACC impossible. A DER measure is cost-effective only in comparison with the

⁷ Joint IOUs at 55:18-56:1.

⁸ CBD at 4:7-8.

⁹ Staff Report, p. 3.

¹⁰ Staff Report, p. 6-7, 14, 17.

1 alternative (other DERs or supply-side resources). To disconnect comparisons with alternatives
 2 would make the ACC useless.

3 The remainder of this section addresses each of CBD’s examples of NEBs and social
 4 costs that it says should be included in the ACC.

5 **1. Avoided Fuel Price Uncertainty**

6 CBD states that the Commission should consider the supposed value of avoided fuel
 7 price uncertainty in the ACC.¹¹ However, CBD does not propose a value or a valuation method
 8 for avoided fuel price uncertainty for the ACC. CBD cites the use of water in natural gas
 9 extraction and the operation of pipeline infrastructure and gas fired power plants as the problem.
 10 CBD’s analysis has several other fundamental problems.

11 The first problem is that the substitution for natural gas-fired generation by DERs is not
 12 unique to DERs. Nuclear power, hydro-electric power, geothermal power, utility-scale solar,
 13 wind power, and utility-scale storage all have the potential to decrease the output of natural gas-
 14 fired generation. Indeed, in the ACC 2020 proceeding, SEIA cites the paper “Utility-scale Wind
 15 and Natural Gas Volatility: Unlocking the Hedge Value of Wind” as a method to calculate
 16 hedging value provided by DERs.¹² As discussed above, DERs and other resources should be
 17 considered on an equal basis so that the best mix of resources to meet planning goals can be
 18 obtained. Therefore, to the degree that DERs provide hedging value, the hedging value of other
 19 resources should also be taken into account. There are two solutions to this problem, if indeed,
 20 there is hedging value to DERs. First, DERs could be incorporated directly into the IRP process

¹¹ CBD at 7:3-7.

¹² R.14-10-003. Prepared Direct Testimony R. Thomas Beach on behalf of the Solar Energy Industries Association and Vote Solar, October 7, 2019 at 61, footnote 81.

1 so that their usefulness, including any value of hedging, is directly compared with other
 2 resources. Or, the hedging value of DERs is set to zero because other resources are not credited
 3 with hedging value thus leveling the playing field amongst resources.

4 Moreover, while CBD does not spell out how to calculate the hedging value supposedly
 5 provided by DERs, the value, if any, is subject to declining marginal returns. One way to
 6 understand this is that even in the relatively short term when markets provide opportunities to
 7 hedge fuel costs, few users of natural gas fully hedge their fuel risk. Most users of natural gas are
 8 willing to accept some volatility in the price of natural gas. The California State Auditor
 9 describes an example of the dangers of entering into long-term arrangements that fully hedge the
 10 price of natural gas.¹³ Financial calamity overtook the City of Vernon, in part, because they
 11 entered into a fixed price contract of 15 years for natural gas at the price of \$6.45/MMBtu in
 12 2006.¹⁴ Because Vernon sold its natural gas power plant two years later, it needed to sell the
 13 natural gas it had paid a fixed price for, back to the market. When market prices dropped, Vernon
 14 lost millions of dollars. Therefore, if there is any avoided hedging value from either utility-scale
 15 or DER resources, it is not the value of fully hedging fuel costs. At most, it is the value of
 16 whatever partial hedging a customer might want done on their behalf.

17 The Commission should reject including avoided fuel price uncertainty in the ACC.

¹³ “City of Vernon: Although Reform is Ongoing, Past Poor Decision Making Threatens Its Financial Stability,” California State Auditor, June 2012 Report 2011-131, p. 90.

¹⁴ California State Auditor, p. 90.

1 **2. Avoided Water Use and Pollution**

2 CBD advocates for including water use and pollution in the ACC. However, CBD does
 3 not propose values or a valuation method for avoided water use and pollution in the ACC. There
 4 are several other problems with CBD’s analysis.

5 First, as with the gas price volatility issue, CBD appears to not understand that the
 6 substitution for natural gas-fired generation by DERs is not unique to DERS. Nuclear power,
 7 hydro-electric power, geothermal power, utility-scale solar, wind power, and utility-scale storage
 8 all have the potential to decrease the output of natural gas-fired generation and thus any water
 9 impacts. Only to the extent water impacts are analyzed in the IRP process should they be
 10 included in the ACC to preserve a comparison of resources on an equal basis so that cost
 11 effective decisions can be made based on the ACC.

12 Second, the water impact costs that CBD is concerned with are not a cost that the IOUs
 13 avoid. That is, they are not avoided costs and should not go into the ACC. They may be costs to
 14 society at large or to particular places such as the Permian Basin in Texas, but they are not a
 15 utility avoidable cost.

16 Third, while the water costs in places like the Permian Basin may be regrettable and
 17 worthy of consideration, why stop there? Why not consider the water impacts of roof-top solar
 18 panel manufacturing in China and include those in the IRP and ACC? The reason is that
 19 consideration of water-related costs in China (and Texas) are not part of a legislative or
 20 regulatory mandate for either the IRP or the ACC. CBD mischaracterizes the requirements of
 21 SB100. The part that CBD quotes in part states:¹⁵

22 **(b)** The commission, Energy Commission, State Air Resources
 23 Board, and all other state agencies shall ensure that actions taken in

¹⁵ Cal. Pub. Util. Code § 454.53(b)(1)(2).

1 furtherance of subdivision (a) do all of the following: **(1)** Maintain
 2 and protect the safety, reliable operation, and balancing of the
 3 electric system. **(2)** Prevent unreasonable impacts to electricity,
 4 gas, and water customer rates and bills resulting from
 5 implementation of this section, taking into full consideration the
 6 economic and environmental costs and benefits of renewable
 7 energy and zero-carbon resources.

8 There is no requirement to include avoided water use and pollution in the IRP or ACC.

9 The statute requires a balancing of considerations across electricity, gas, and water customer
 10 rates and bills because of SB 100's requirement to procure renewable energy resources and zero-
 11 carbon resources.

12 The Commission should reject including water use and pollution in the ACC.

13 **3. Local Economic Development**

14 CBD suggests that the benefits of local economic development should be considered in
 15 the ACC.¹⁶ Again, CBD does not propose values or a valuation method for avoided water use
 16 and pollution in the ACC. There are a couple of other problems with CBD's proposal for local
 17 economic development.

18 The first problem is that the local economic development by DERs is not unique to
 19 DERs. Nuclear power, hydro-electric power, geothermal power, utility-scale solar, wind power,
 20 and utility-scale storage all have the potential to stimulate local economic development.
 21 Moreover, given the low quality of jobs provided by the roof-top solar industry, any suggestion
 22 that DERs provide better jobs than supply-side resources is ludicrous. The IRP does not choose
 23 resources based on local economic development, and neither should the ACC. To include local

¹⁶ CBD at 10:12-14.

1 economic development in the ACC would contribute to the disconnection of the ACC from the
 2 IRP and result in economic inefficiency and unnecessarily higher costs for ratepayers.

3 Second, local economic development is not a cost avoided by the utilities, nor should it
 4 be a criterion in choosing resources. Resources should be chosen to meet legislative and
 5 regulatory requirements while minimizing costs for ratepayers.

6 The Commission should reject including local economic development in the ACC.

7 **4. Avoided Land Use Impacts**

8 CBD suggests that avoided land use impacts should be considered in the ACC.¹⁷

9 However, CBD does not propose values or a valuation method for avoided land use impacts in
 10 the ACC. CBD focuses its argument for including avoided land use impacts on ecological
 11 impacts.¹⁸ It paints the problem with a broad brush, saying, for instance, that “poorly sited large-
 12 scale solar development can result in habitat fragmentation, loss of connectivity for terrestrial
 13 wildlife, destruction of carbon sequestration of soils, and introduction of predators and invasive
 14 weed species on intact habitat.” But not all large-scale solar developments are poorly sited, so a
 15 MW of solar DER does not displace a MW of poorly sited utility-scale solar. Nor can the
 16 modeling process in the IRP incorporate all the possible sites that have acceptable ecological
 17 impacts. The role of the IRP and the IRP/ACC process is to consider tradeoffs and find the most
 18 efficient way to meet California’s energy goals. In realization of the IRP, utility-scale projects
 19 are subject to California Environmental Quality Act (CEQA) review to avoid deleterious

¹⁷ CBD at 12:10-11.

¹⁸ CBD at 12:22-14:2.

1 ecological impacts if a project is poorly sited. The Commission should reject including land use
 2 impacts in the ACC.

3 **5. Resiliency Benefits**

4 CBD proposes to add “resiliency benefits” to the ACC.¹⁹ CBD defines resiliency as “the
 5 ability to prepare for and adapt to changing conditions and withstand and recover rapidly from
 6 disruptions.”²⁰ Resiliency is a private value or benefit that accrues to the private party who owns
 7 the DER.²¹ As such, including it in the ACC is inappropriate. Ratepayers who do not benefit
 8 from a value should not have to pay for it. Having ratepayers pay for private resiliency
 9 infrastructure is akin to my neighbor asking me to help pay for a new fuel pump on his car. He
 10 might benefit from a new fuel pump, and replacing the fuel pump might pass a total resource cost
 11 test, but that does not mean I should have to pay for it.

12 The Commission should reject the inclusion of resiliency in the ACC.

13 **6. Local Air Quality Benefits**

14 CBD proposes to add “local air quality benefits” to the ACC.²² These benefits are not
 15 costs avoided by utilities and therefore should be excluded from the ACC. Unlike GHG costs,

¹⁹ CBD at 14:9-15; Google joined CBD in advocating for the inclusion of “resiliency benefits.” This rebuttal applies equally to Google’s proposal. 2024 Avoided Cost Calculator Prepared Testimony of Aaron Berndt on Behalf of Google, LLC, October 30, 2023 at 11:9 - 13.

²⁰ CBD at 14:21-23 citing Natalie Mims Frick et. al., *Quantifying grid reliability and resilience impacts of energy efficiency: Examples and opportunities*, Berkeley Lab, Electricity Markets & Policy (December 2021) available at https://eta-publications.lbl.gov/sites/default/files/ee_reliability_resilience_2022_11_10.pdf.

²¹ This applies equally well to a single individual or DERs that provide “community resiliency.” Community resiliency is a benefit confined to a community and not the grid as a whole.

²² CBD at 18:11-13.

1 the air quality that CBD appears to reference are not costs that the utilities incur and therefore
 2 they are not costs that can be avoided.

3 The Commission should reject including local air quality benefits in the ACC.

4 **7. Conclusion**

5 The ACC, of course, also omits certain costs. For example, the ACC does not include the
 6 costs and land use impacts of future disposal of DER solar panels. It also excludes costs
 7 imposed on taxpayers from subsidies needed for the MediCal and Affordable Care Act plans
 8 used by low-wage, low-benefit workers installing rooftop solar panels. Further, the ACC omits
 9 the moral costs of relying on foreign labor to manufacture solar panels in places without
 10 adequate labor laws and safety regulations. The point is not that these costs should be included in
 11 the ACC. Rather, the ACC should be aligned with the IRP in the costs considered so that the
 12 most economically beneficial choices are made. The Commission should reject including NEBs
 13 and social costs in the ACC.

14 **C. Methane Leakage Adders**

15 The Joint IOUs propose that methane leakage adders be applied only for fuel substitution
 16 programs,²³ pointing out that ratepayer-funded methane emissions reductions efforts do not
 17 appear to avoid the costs of these efforts.²⁴ Moreover, the 2020 ACC documentation justifies
 18 methane leakage as an avoided cost because as large-scale electrification occurs, parts of the
 19 natural gas system could be decommissioned with resulting lower methane leakage.²⁵ CUE

²³ Joint IOUs at 32:25-33:19.

²⁴ Joint IOUs at 34:18-35:3.

²⁵ Joint IOUs at 35:4-21.

1 supports the Joint IOUs’ proposal because it properly targets any methane leakage adder to fuel
 2 substitution programs.

3 The Commission should adopt the Joint IOUs’ proposal for methane leakage adders and,
 4 at the very least, update the leakage rates with the most recent reporting to CARB and the
 5 Commission.²⁶

6 **III. MODIFICATIONS TO THE BIENNIAL UPDATE PROCESS**

7 As CUE discussed in its opening testimony, the current biennial update process does not
 8 allow for sufficient input from stakeholders on major changes to the ACC, nor sufficient vetting
 9 of Staff proposals.

10 The California Large Energy Association (CLECA) appears to share some of CUE’s
 11 concerns stating that “the biennial update process should ensure stakeholders have sufficient time
 12 to review and comment on major process updates, including the actual proposed results, to avoid
 13 unanticipated policy outcomes when underlying assumptions change dramatically.”²⁷ “The
 14 biennial update process should ensure stakeholders have sufficient time to review and comment
 15 on major process updates, specifically including the actual impact based on the current ACC year
 16 underlying assumptions.”²⁸

17 In their discussion of Staff’s proposal for the integrated calculation of generation capacity
 18 and greenhouse gas avoided costs (Integrated Calculation), the Joint IOUs note, in agreement
 19 with Staff, that the final results of the Integrated Calculation “will likely produce significantly

²⁶ Joint IOUs at 40:1-18.

²⁷ Direct Testimony of Samuel Harper on Behalf of the California Large Energy Consumers Association, October 30, 2023 (CLECA) at 6:22 -7:2.

²⁸ CLECA at 12:10-12.

1 different results” from the illustrative calculation provided by Staff.²⁹ The Joint IOUs point out
2 that “[i]t is difficult to substantively comment or provide technical recommendations on the
3 methodology without a more realistic calculation based on the new IRP portfolio.”³⁰

4 The Utility Reform Network (TURN) has also expressed concerns with the process:³¹

5
6 TURN recommends technical public transparency at all times, not
7 merely during the working period of ACC update. This means that
8 the assumptions and inputs to the models, the DER categories be
9 well defined, qualified and quantified, explaining for example how
10 GHG avoided costs are calculated.

11 TURN recommends that the biennial update process should
12 include initial filings that demonstrate (1) the performance and
13 accuracy of the ACC against the modeled benchmark from the
14 previous ACC filing (2) bill impacts for all participants and non-
15 participants (3) total dollars spent on DER energy by category for
16 each year² and (4) total kwh purchased by DER category.

17 CUE believes that the process it suggested in opening testimony would help alleviate the
18 concerns of these parties:

- 19 • Staff develops and writes up conceptual ideas for ACC changes with at least as
20 much detail as this ACC 2024 iteration.
- 21 • Staff holds a workshop and responds to data requests.
- 22 • Stakeholders provide comments and reply comments on the Staff conceptual
23 proposal.
- 24 • Staff amends its proposal and runs the amended proposals with real data.

²⁹ Joint IOUs at 4:1-3.

³⁰ Joint IOUs at 4:3-5.

³¹ Prepared Testimony of Jaime McGovern Addressing the 2024 Avoided Cost Calculator Methodology Submitted on Behalf of The Utility Reform Network, October 30, 2023 at 4:4-7, 4:10-14.

- 1 • Stakeholders have the opportunity for discovery with respect to the simulated
- 2 proposals.
- 3 • Stakeholders have the opportunity to provide testimony and rebuttal testimony.
- 4 • If necessary, hearings are held.
- 5 • Stakeholders have the opportunity to provide briefs and reply briefs.

6 Under this proposed process, the Commission would have a complete record with
 7 actual data and stakeholder opportunity to provide input, not just on a conceptual level, but
 8 also the implementation of the concepts.

9 **IV. CONSIDERATION OF EQUITY ISSUES IN EVALUATING DER COST**
 10 **EFFECTIVENESS**

11 Equity issues should not be part of DER cost effectiveness evaluation. If a DER is not
 12 cost-effective, ratepayers should not pay for such a program. Needlessly burdening ratepayers
 13 with wasteful programs impacts all ratepayers and disproportionately impacts disadvantaged and
 14 marginalized communities. California will not reach its clean energy goals nor its equity goals if
 15 it wastes money on inefficient programs, whether they are utility-scale solutions or demand-side
 16 solutions.

17 To avoid being misunderstood as insufficiently zealous for equity, in response to various
 18 parties’ discussion of equity and calculation of DER cost effectiveness,³² CUE wishes to
 19 emphasize that consideration of equity impacts is vitally important, but should inform policy

³² Joint IOUs at 46:11-54:11. Opening Testimony of Eric Borden Sponsored by the National Resources Defense Council Addressing 2024 Avoided Cost Calculator Proposed Updates, October 30, 2023 at 8:3-9:18.

1 choices for program design only if a measure is otherwise cost-effective.³³ As the Joint IOUs
2 suggest, use of the RIM is important for considering equity and is a standard approach in many
3 proceedings. In addition, distributional analysis along the lines of that suggested by the Joint
4 IOUs can help inform policy decisions on equity for cost-effective programs, particularly to
5 avoid cost shifts to other ratepayers.

³³ Or, if the utilities are otherwise required to make equity considerations more important than cost effectiveness.