

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to
Advance Demand Flexibility
Through Electric Rates.

Rulemaking 22-07-005
(Filed July 14, 2022)

**REPLY COMMENTS OF
THE CALIFORNIA EFFICIENCY + DEMAND MANAGEMENT COUNCIL ON
ADMINISTRATIVE LAW JUDGE'S RULING ON THE IMPLEMENTATION
PATHWAY FOR INCOME-GRADUATED FIXED CHARGES**

Dated: August 21, 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
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I. INTRODUCTION

The California Efficiency + Demand Management Council (“the Council”) respectfully submits these Reply Comments on the Administrative Law Judge’s Ruling on the Implementation Pathway for Income-Graduated Fixed Charges, issued in this proceeding on June 19, 2023 (“ALJ Ruling”). These Reply Comments are timely filed and served pursuant to the Commission’s Rules of Practice and Procedure, the ALJ Ruling, and the ALJ Ruling, dated July 18, 2023 which extended the due date of Opening Comments to July 31, 2023 and Reply Comments to August 21, 2023.

II. ASSUMPTIONS THAT INCREASED FIXED CHARGES AND REDUCED VOLUMETRIC CHARGES WOULD LEAD TO ELECTRIFICATION AMONG RATEPAYERS HAS NOT BEEN VALIDATED

The Joint Investor-Owned Utilities (“IOUs”) Pacific Gas and Electric Company (“PG&E”), San Diego Gas & Electric Company (“SDG&E”) and Southern California Edison Company (“SCE”) (collectively “the Joint IOUs”) assert, without any pilot support,¹ that a reduction in volumetric rates will result in consumers, including low-income consumers, pursuing beneficial electrification (“BE”) measures.²

The Council agrees with Advanced Energy United (“AEU”) that “[c]onservation, energy efficiency, beneficial electrification, and greenhouse gas reductions are key tactics and objectives to meeting our goal of achieving 100% clean energy and transportation.”³ Furthermore, as noted by AEU:

¹ Joint Case Management Statement for Track A, submitted in this proceeding on August 11, 2023, at p. 8 (Stipulated Fact 3).

² See, e.g., Joint IOUs Response to ALJ Ruling, at p. 13.

³ AEU Opening Comments on ALJ Ruling, at p. 4.

Although one might expect that lower volumetric rates would encourage more beneficial electrification, there is a relative lack of research and evidence on the scale of this effect, especially relative to other factors that influence fuel-switching and electrification adoption, or the influence of default rate reductions vs. opt-in electrification rates and other alternative rate designs.⁴

Arguably, it is more reasonable to assume that most consumers across all income brackets will consider total bill impacts as a key input when considering investment in electrification. In fact, related research paints a far more complex picture. The Energy Coalition in its presentation “Achieving Equitable Decarbonization: Lessons from Policy and Pilot Projects” identified 19 additional criteria beyond bill impacts when considering BE, energy efficiency (“EE”), and distributed energy resources (“DERs”) associated with a Disadvantaged Community (DAC) pilot program whose goals were to: electrify homes and power with on-site DERs; harness DERs for non-wires wires solutions; create value and generate economic benefits for customers; and, better the lives of those that need it most.⁵

Data Needs for Activating DACs

| People | Assets | Grid |
|---|--|---|
| <ul style="list-style-type: none"> ● Income Eligibility Screening ● Own/rent ● Tech savvy ● Medical needs ● Other needs ● Preferences | <ul style="list-style-type: none"> ● Roof condition ● Existing HVAC ● Existing WH ● Roof condition ● Panel size ● Wifi ● Other conditions | <ul style="list-style-type: none"> ● Line voltage ● Reliability ● Violation triggers ● Harmonics ● Interconnection capacity ● Aggregation potential |

Image Source: The Energy Coalition

Furthermore, the Council agrees with the Solar Energy Industries Association (“SEIA”) that:

There are additional rate design tools – in addition to and perhaps better than fixed charges – available to meet the goals of this rulemaking, including promoting electrification. These include rate design changes that enhance the effectiveness of TOU pricing and that respond dynamically to system conditions.⁶

III. FORECASTED RATES PRESENT A CHALLENGE TO ELECTRIFICATION AND AFFORDABILITY FOR BUNDLED RESIDENTIAL CUSTOMERS

As noted by AEU:

⁴ *Id.*, at p. 7.

⁵ [Achieving Equitable Decarbonization: Lessons from Policy and Pilot Projects](#), The Energy Coalition, CalTF Data Charette, June 21, 2023, at p. 6.

⁶ SEIA Opening Comments on ALJ Ruling, at p. 2.

[A]ny [(Income Graduated Fixed Charge (“IGFC”)] that increases the fixed portion of the bill will result in lower volumetric rates, which will reduce the incentive for conservation and EE... Fixed charges and lower volumetric rates increase the payback period for efficiency investments, a key metric and determinant of customer adoption... Moreover, lower volumetric rates act as a direct disincentive for energy conservation[.]”⁷

The Commission “forecasts show rates rapidly outstripping inflation over the next decade.”⁸ Between Q3 of 2022 and year-end 2025, bundled residential average rates are expected to rise: PG&E – 11.8% annually; SCE – 6.8% annually; SDG&E – 10.4% annually.⁹ Household energy costs are projected to increasingly exceed inflation over the next decade, with wildfire related and transportation electrification capital expenses as the current primary drivers of revenue requirement and rates. Other factors include kWh sales decline, behind-the-meter resources; load departure, economies of scale issues.¹⁰ The rate at which increased electrification and decreasing reliance on natural gas and gasoline may increase load to offset climbing revenue requirements is unknown.

IV. ELECTRIFICATION AND ENERGY EFFICIENCY ARE NOT COMPETING POLICY OBJECTIVES

The Council disagrees with the Joint IOUs characterization that electrification and energy efficiency are opposing goals,¹¹ and disagree with the IOUs suggestion the Commission should consider newly added AB 205 goals a higher priority,¹² and the Council takes strong exception to the claim that conservation and energy efficiency are continuing to diminish in importance in California.¹³

The Council agrees with The Utility Reform Network (“TURN”) and Natural Resources Defense Council (“NRDC”), and supported by SEIA, that “[t]he goals of encouraging

⁷ AEU Opening Comments on ALJ Ruling, at pp. 4-5.

⁸ Commission Energy Division Presentation: California Demand Flexibility and the Calf USE Proposal, CEDMC Spring Symposium May 24, 2023, at Slide 2.

⁹ *Id.*, at Slide 4.

¹⁰ *Id.*, at Slide 3.

¹¹ Joint IOUs Response to ALJ Ruling, at p.14. Whereas a maximally electricity conservation-incentivizing rate design would feature very high volumetric rates, a maximally electrification-incentivizing rate design would feature very low volumetric rates. Therefore, AB 205’s introduction of these competing policy objectives requires the Commission to directly address at what point a rate design “unreasonably impairs” either objective, as a means of determining an appropriate balance between these opposing goals.”

¹² *Id.*, at p. 15.

¹³ Joint IOUs Response to ALJ Ruling, at p. 16.

electrification and conservation may seem in conflict but they are not.”¹⁴ SEIA also notes that rate design changes to promote electrification are not strategic if they result in peak demand increases that degrade reliability, and grid utilization will not improve if high IGFCs lower rates and raise demand in all hours.¹⁵

Coincidentally, these issues are the subject of American Council for an Energy-Efficient Economy’s (“ACEEE’s”) latest report: “Energy Efficiency in a High Renewable Energy Future” which examines the role that a demand-side intervention—energy efficiency—will play in helping enable this decarbonized high renewable energy future.¹⁶ This report is the result of a literature review; quantitative modeling of the benefits of energy efficiency on the future, high renewable energy electric grid; and expert consultation.

Key Findings from the report are:

- Energy efficiency has a crucial role in decarbonizing the electricity system and paving the way for a high renewable energy future. This result holds even if low levels of building electrification depress future electricity demand.
- Energy efficiency provides more value the more quickly electricity generation decarbonizes by offsetting the escalating costs of fossil-based energy and carbon capture under high renewable energy scenarios.
- Analysis of 5 of the 20 grid regions covering the continental United States (i.e., **California**, Texas, the Pacific Northwest, the Southeast, and the Midwest) found that energy efficiency reduces costs that would otherwise be passed on to customers by avoiding energy, generation capacity, and transmission costs, with estimated savings of \$10–19 billion annually per grid region analyzed by 2050.
- Energy efficiency can reduce the maximum annual load that must be met with nonrenewable sources (i.e., net peak load) 31–46% in 2030 and 39–86% in 2050 even in the absence of widespread electrification.
- Energy efficiency measures that affect thermal space conditioning loads (i.e., heating and cooling) are likely to have the greatest impact on both energy savings and avoided electricity system costs through 2050. Delivering these benefits to low-

¹⁴ TURN and NRDC Opening Comments on ALJ Ruling, at p.4 and SEIA Opening Comments, at pp. 5-6.

¹⁵ SEIA Opening Comments on ALJ Ruling, at p. 6

¹⁶ Special, M., and A. Bell-Pashto. 2023. Energy Efficiency in a High Renewable Energy Future. Washington, DC: ACEEE. This Report can be found here: <https://www.aceee.org/research-report/u2303>.

income customers may require overcoming additional impediments like mold and structural damage to their homes.

- After thermal space conditioning measures, the energy efficiency measure with the highest potential to reduce electric system costs through mid-century is the installation of residential heat pump water heaters.
- The electricity system benefits provided by energy efficiency grow through midcentury as old equipment wears out and more efficient equipment is installed.¹⁷

V. EMPHASIS TO DATE ON THE IGFC AVERAGE BILL IMPACT METRIC OBFUSCATES UNINTENTIONAL CONSEQUENCES

The Council is concerned that reliance upon an Average Bill Impact for households other than California Alternate Rates for Energy (“CARE”) and Family Electric Rate Assistance Program (“FERA”) risks burdening many of the households the IGCF proposal are intended to help.¹⁸ This is best illustrated in the California Solar & Storage Association’s (“CALSSA’s”) discussion¹⁹ and charts²⁰ about Balance Point Implications²¹ from the analysis prepared by Flagstaff Research.

Apartment residents with low electricity usage would face higher bills, as would customers in small single-family homes. Single-family homes with high existing electricity consumption would experience significant decreases in their bills. As a general rule, small efficient homes would subsidize larger, less-efficient homes; the most severe negative impact sees a rate increase of 62%.

Within most large, urbanized service territories,²² if you plot the frequency distribution customers by their total usage you will probably see something that looks like this:²³

¹⁷ Energy Efficiency in a High Renewable Energy Future, at p. v.

¹⁸ CALSSA Opening Comments on ALJ Ruling,

¹⁹ CALSSA Opening Comments on ALJ Ruling, Attachment A. Flagstaff Research Analysis, at p. 7.

²⁰ *Id.* The bubble charts in Figures 5-7 demonstrate the winners and losers under the three modeled proposals. The size of the bubbles represents the number of customers in each of the customer groups from the 2019 California Energy Commission (“CEC”) study on California residential electricity consumption.

²¹ *Id.*

²² California’s low-income households live primarily in urban areas: 93 percent urban versus 7 percent rural (Evergreen Economics, 2013).

²³ **Guidance on the usability-privacy tradeoff for utility customer data aggregation**

Benjamin L. Ruddell³, Dan Cheng b, Eric Daniel Fournier b, Stephanie Pincetlb, Caryn Potter³, Richard Rushforth a Northern Arizona University, School of Informatics Computing and Cyber Systems,

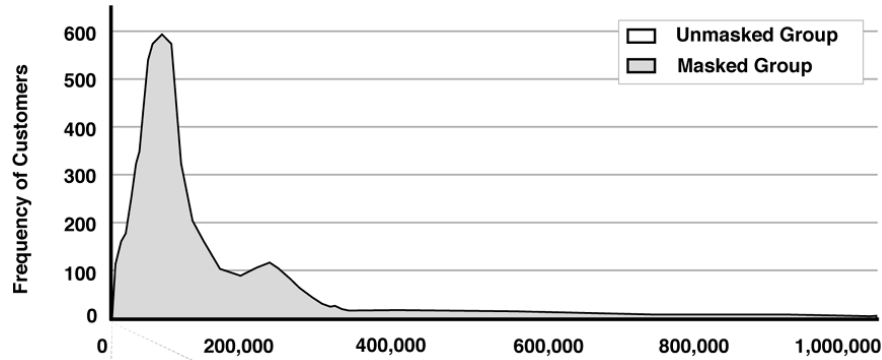


Image Source: CalTF. Annual Energy Usage above below shown in watt-hours.

In the author’s experience,²⁴ “within most large, urbanized service territories, if you plot the frequency distribution customers by their total usage you will probably see something that looks like this (top left). In our experience the distribution of customer level energy consumption data is “log-normal” – meaning that there are a small number of customers whose total usage is several orders of magnitude greater than the mean.”

VI. THE FIRST PHASE OF THE IGFC SHOULD BE A PILOT

The Council agrees with UCAN that:

The Commission must acknowledge that IGFCs are a radical departure from current rate design, and as such must be approached with customer protection and understanding foremost in mind. The last time fixed charges were considered—not income based fixed charge, just fixed charges—was in Rulemaking (“R.”)12-06-013, where they were rejected.²⁵

The potential for negative responses to many aspects of IGFC proposals requiring customers to provide confidential income data is highly probable, even with extensive outreach and education. This was best captured in UCAN’s Opening Comments in response to IGFC proposals that would default all non-CARE/FERA customers the highest tier:

But by requiring this, customers may hear, “if you do not provide to your utility, or their proxy, proof of your income, the names and proof of the income of all the residents served by the meter associated with your residence, you will be placed on the highest rate.” No matter the education materials, it is difficult to see how

Flagstaff, AZ, USA b University of California Los Angeles, California Center for Sustainable Communities at the Institute of the Environment and Sustainability, Los Angeles, CA, USA

²⁴ Presentation from Eric Daniel Fournier, PhD Research Director, Assistant Researcher California Center for Sustainable Communities (CCSC) Institute of the Environment and Sustainability (IoES) University of California Los Angeles (UCLA), [Energy Data in Context Building the UCLA Energy Atlas](#), Cal TF Data Charette June 21, 2023

²⁵ UCAN Opening Comments on ALJ Ruling, at p. 14.

this would not be the message: give us your personal information or you will have higher bills.²⁶

The Council also concurs with AEU's reasons why a pilot is so important, given:

The potential for significant miscalculation and unintended consequences is high, and that a poorly designed or implemented IGFC will have far-reaching negative impacts on electrification, energy efficiency² and other advanced energy adoption, electric system costs, and on the broad political support and social license for clean energy policy. Put simply, we are concerned that an IGFC could prove a blunt, unpopular, and risky policy that should be carefully, gradually, and minimally implemented, at least as it applies to default rates in the near term. We believe this gradual and minimal IGFC should include only those costs of providing service that do not vary with consumption: the marginal customer access charge.²⁷

VII. CONCLUSION

The Council appreciates the opportunity to submit these Reply Comments.

Dated: August 21, 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

²⁶ UCAN Opening Comments on ALJ Ruling, at p. 19.

²⁷ AEU Opening Comments on ALJ Ruling, at pp. 2-3.