



California Public
Utilities Commission

CPUC Affordability Metrics EPIC Impact Analysis Workshop

Energy Division | April 2, 2024



Affordability Proceeding (R.18-07-006)

- Phase 1: Develop standardized measures of utility affordability
 - How should we gauge vulnerable households' ability to pay while accounting for the wide range of living costs?
 - How do we define what level of usage is needed to meet basic needs?
 - How do we account for the cost of other essential services?
 - [D.20-07-032](#)
- Phase 2: Establish framework for using metrics in relevant proceedings
 - How do we ensure that all parties have a common method for calculating the metrics?
 - Which proceedings should incorporate these metrics?
 - How do we improve transparency into the cumulative impact of rate changes?
 - [D.22-08-023](#)

Overview of Affordability Metrics

Affordability Ratio (AR)



$$\frac{\$ \text{ essential services bill}}{\$ \text{ household income} - \text{non-discretionary expenses (housing and other utilities)}} = \text{AR}$$

where utility services are least affordable for households at a particular point of the income distribution (e.g., AR₂₀ is households at the lowest 20th percentile of income)

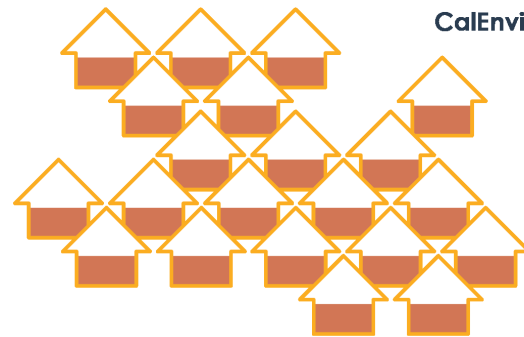
Hours at Minimum Wage (HM)



hours of earned employment at the local minimum wage needed to pay for essential services.

= HM where low-income households will have the most difficulty paying for essential services, regardless of the socioeconomic condition of the neighbors.

CalEnviroScreen (CES)



relative standing of community (census tract) based on:

- population characteristics
- pollution burden

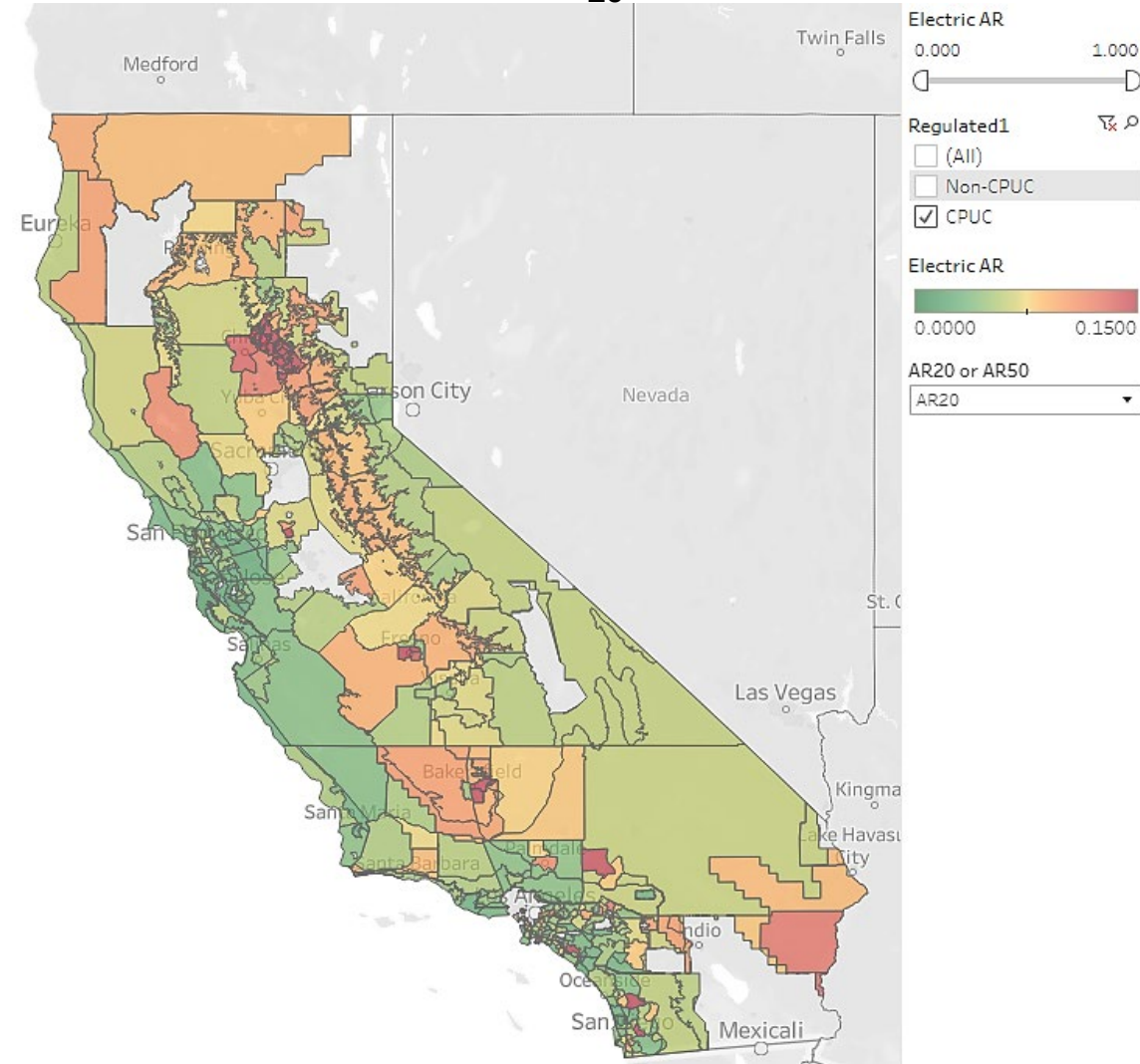
= CES identifies communities least able to afford increases in charges for essential services

Affordability Ratio: Methodology

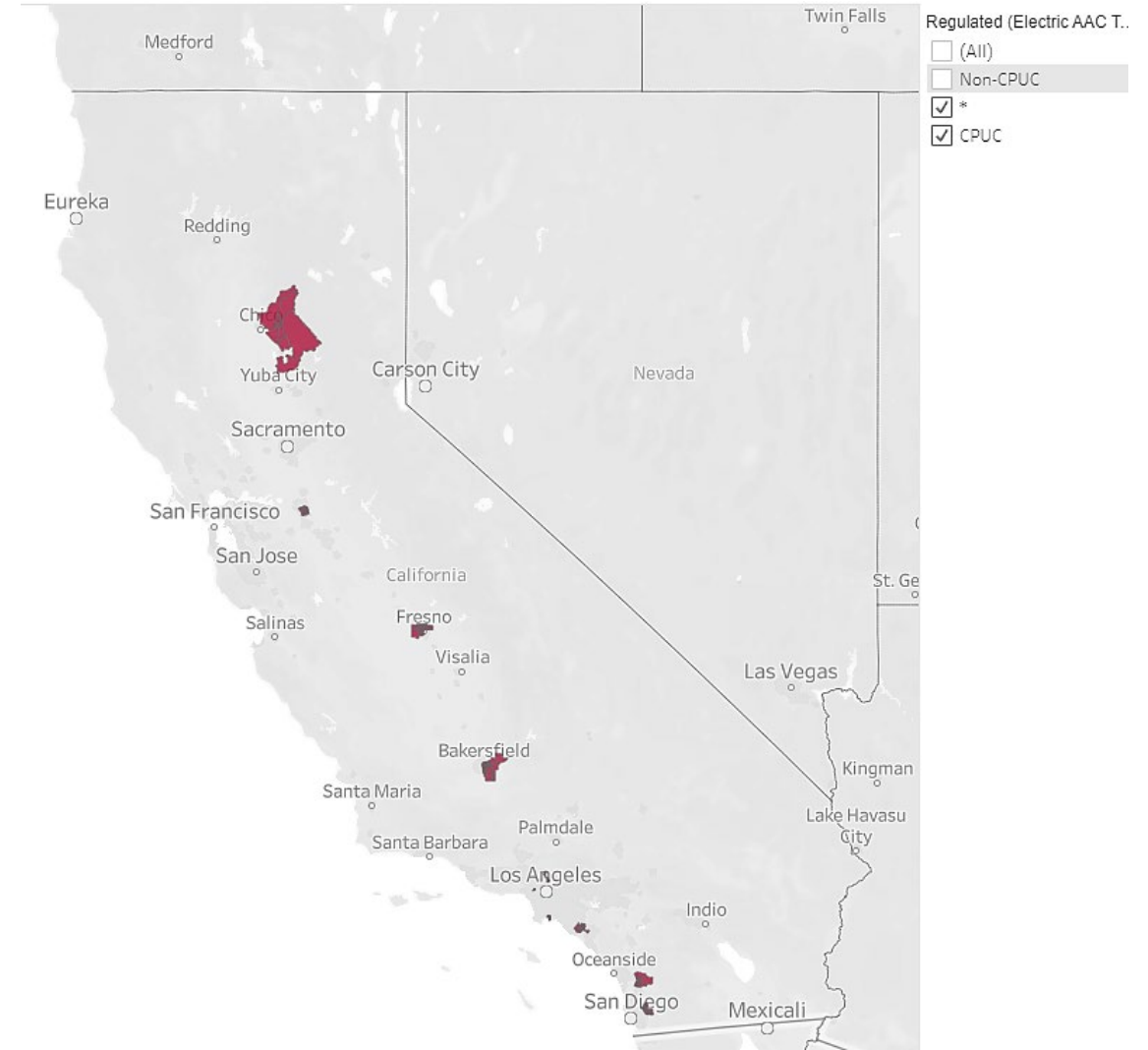
- Income and housing cost data from the American Community Survey microdata used to estimate relationship between income and housing cost within each Public Use Microdata Area (265 PUMAs in CA); estimates for 20th and 50th percentiles of income distribution within each PUMA are generated
- Electricity, natural gas, water, and telecommunications bill data requested from service providers for an “essential” level of usage
- PUMA and service territory/climate zone boundaries are overlaid using GIS analysis to identify unique combination of providers for each census tract
- AR values are calculated for households at the 20th and 50th percentiles of the income distribution for each census tract (AR₂₀ and AR₅₀, respectively)
- Customer-weighted averages are generated for more aggregated reporting areas

AR₂₀ Results and Areas of Affordability Concern

Electric AR₂₀

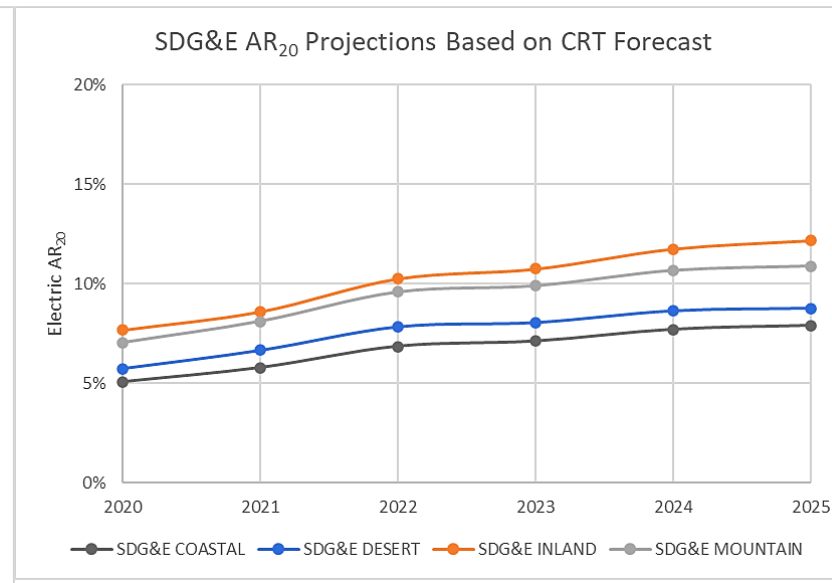
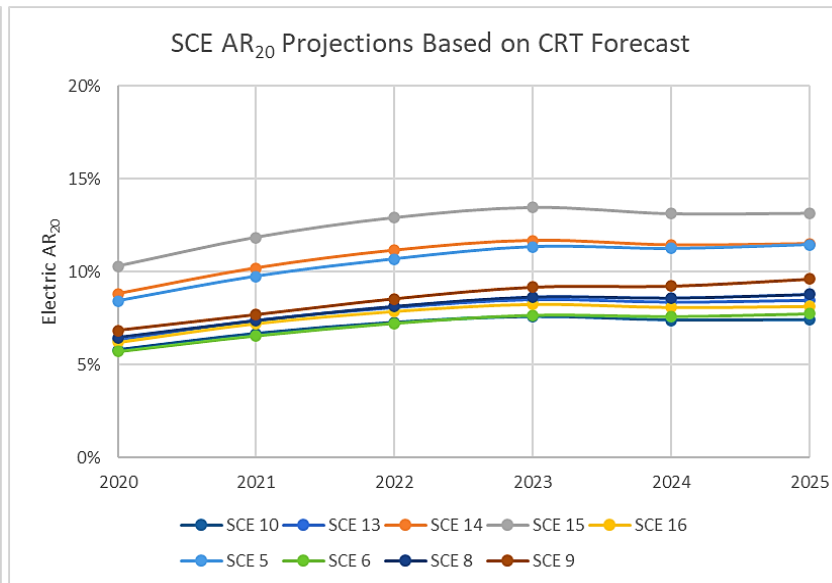
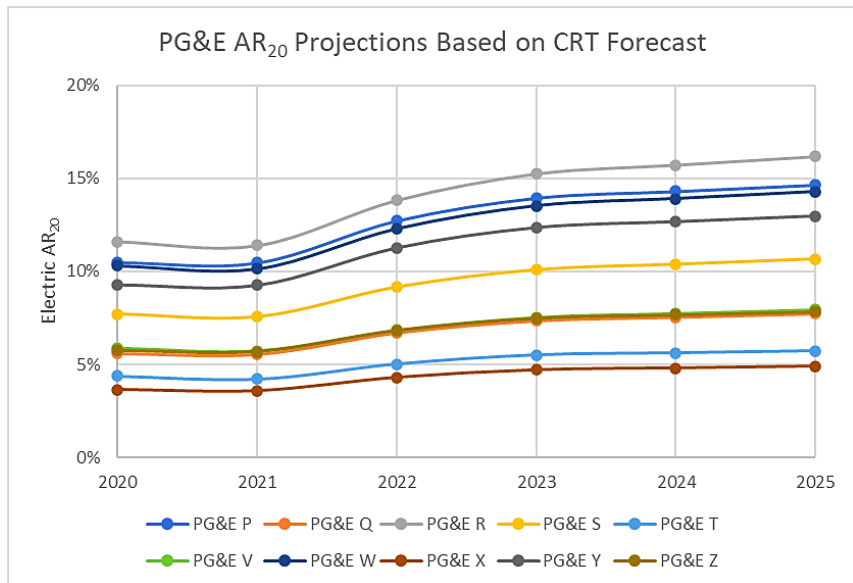


Areas of Affordability Concern



Example Use: Electricity Affordability Projections

- Current forecast of residential electric bills, household incomes, and housing costs indicate that electricity will become less affordable between now and 2025 (higher AR_{20} value = less affordable)
 - Graphs show percent of income needed to pay electric bill after housing costs and other essential utility bills are deducted. Results for low-income households (20th percentile of local income distribution)
 - Hot climate zones = PG&E – P, R, S, W; SCE – 5, 10, 13, 14, 15; SDG&E – Mountain and Desert



Affordability Ratio Resources

[Affordability Proceeding web page](#)

[Home](#) › [Industries and Topics](#) › [Electrical Energy](#) › [Affordability](#)

Affordability Rulemaking

The 2022 Affordability Ratio Calculator is the most recently issued final version of the Affordability Ratio Calculator and should be used for preparing AR metrics for inclusion in applications and reports going forward, until a more updated final calculator is issued in 2024.

Background

The California Public Utilities Commission (CPUC) recognizes that consumers need affordable utility services to ensure health, safety, and participation in society. On July 12, 2018, the CPUC issued an [Order Instituting Rulemaking 18-07-006](#) to examine the impact of essential energy, water, and communications service charges for residential households, given their socioeconomic statuses.

The rulemaking is currently divided into three phases. Phase 1, which concluded in July 2020 with [Decision D.20-07-032](#), established the affordability framework by defining affordability, setting residential household essential service level for electric, natural gas, water, and communications services, and adopting three metrics to assess the affordability of these services.

Phase 2 focuses on implementation of the affordability framework in various CPUC efforts, including but not limited to rate cases, grants, and program assessments. As part of Phase 2, a [staff proposal on how to implement the affordability framework](#) in CPUC proceedings and other efforts, as well as how to forecast future values of the affordability metrics and the process by which the metrics will be calculated, was issued in November 2021.

Phase 3 explores some of the energy rate mitigation proposals that were discussed at recent En Banc hearings held in February/March 2022 on California's ongoing energy affordability concerns. For specifics on this phase, please refer to the [Fifth Amended Scoping Memo and Ruling](#) issued in June 2022.

For details on the affordability framework and the three phases of the proceeding, please see below.

AFFORDABILITY

[Affordability Rulemaking Phase 1](#)

[Affordability Rulemaking Phase 2](#)

[Affordability Rulemaking Phase 3](#)

[2021 and 2022 Annual Affordability Refresh](#)

[Implementation Staff Proposal](#)

[Itemized List of Revenue Requests](#)

[Archive](#)

QUICK REFERENCES

[Main Affordability Page](#)

[Itemized List of Revenue Requests](#)

Proceeding Updates

[Decision 22-08-023](#)

Affordability Analysis

[2021 and 2022 Annual Affordability Refresh](#)

[2022 Affordability Ratio Calculator](#)
(Recommend to save this file onto your local drive (right-click and save) due to large file size.)

Tableau Maps

AR Calculator

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