

Energy at a Crossroad: Affordability, Fairness, and Transition

Housekeeping

- The event is being recorded. The recording and relevant links will be posted online after the event.
- The biographies for today's speakers are available on the event webpage as well.
- Live captions are on and adjustable at the bottom of your media player.
- In-person attendees: you can use the QR code at the back of the agenda to submit questions. Virtual audience can type questions into the Q&A box at any time.

Energy at a Crossroad: Affordability, Fairness, and Transition



Energy Insecurity in a Time of Rapid Energy Transition

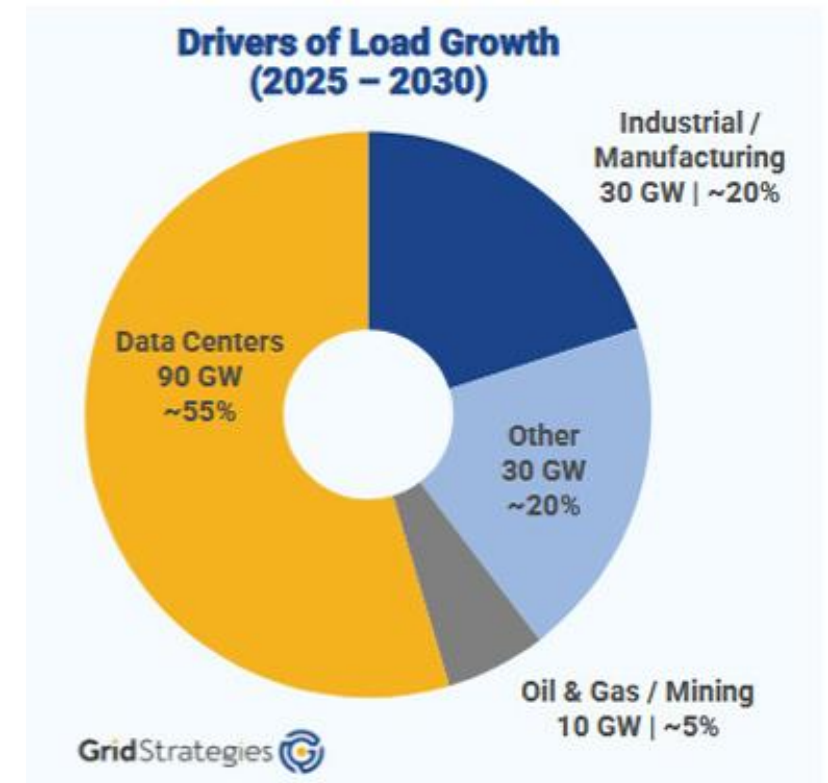
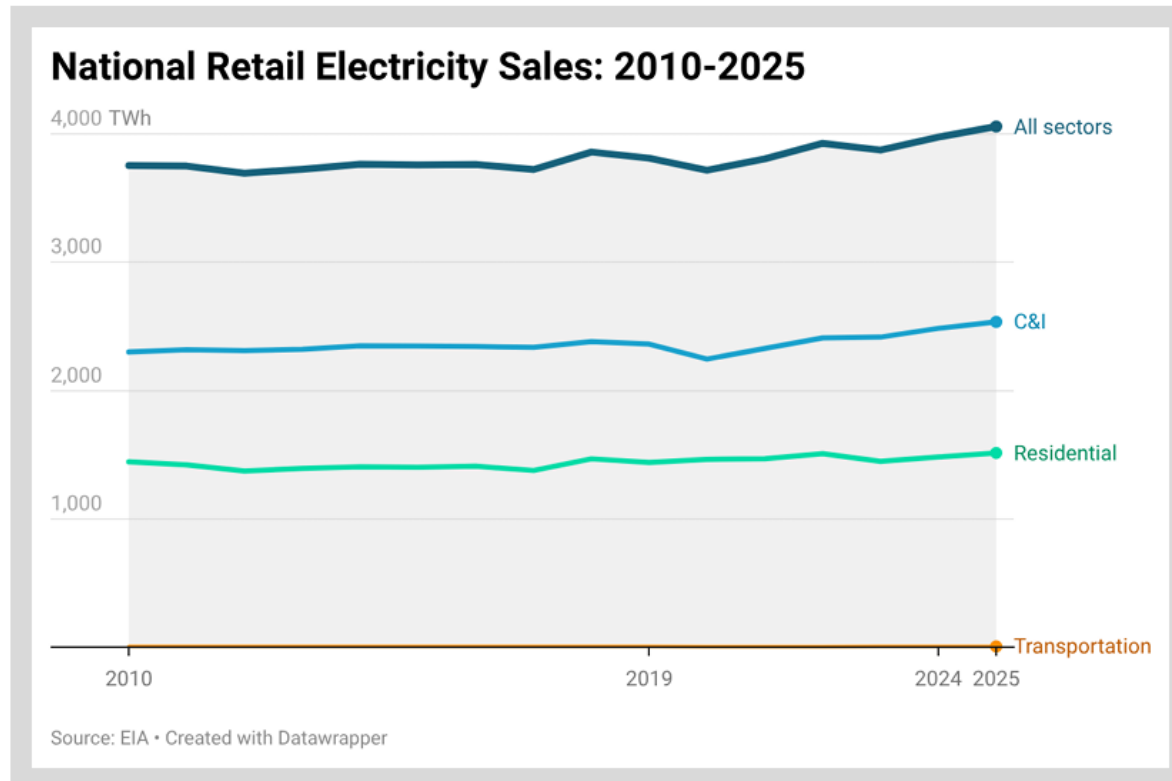
Rising energy costs create serious consequences for household health and financial well-being

- Energy-burdened households face greater risk of utility disconnections and utility debt
- Many energy insecure households make difficult financial tradeoffs, foregoing or reducing spending on food and medicine to pay their energy bills
- Energy insecure households are more likely to leave their homes at unsafe indoor temperatures

Energy affordability is influenced by **energy prices**, household **energy use**, and a household's **ability to pay**

Energy Prices

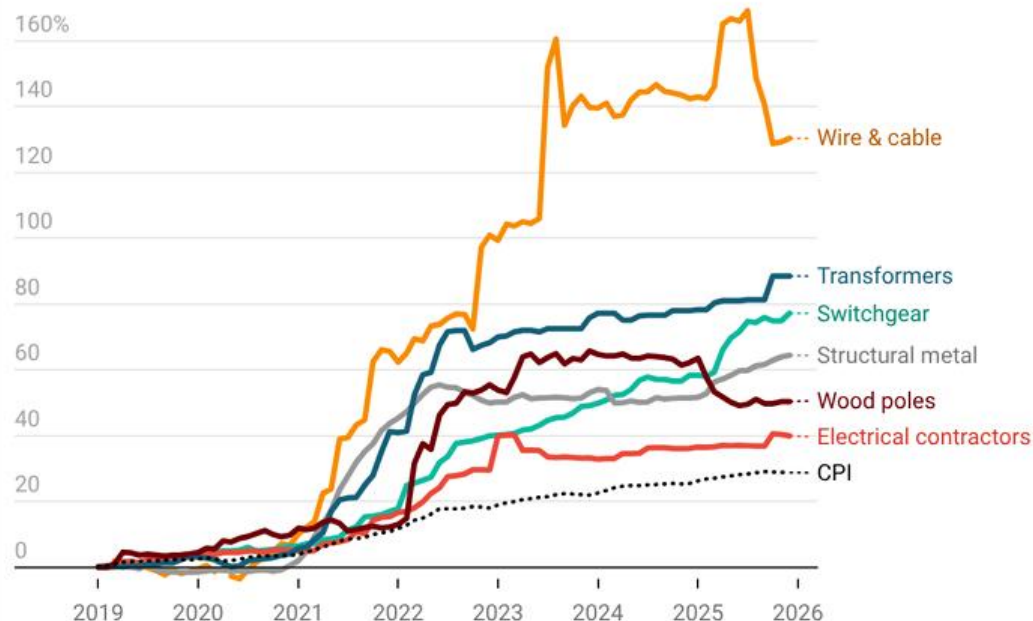
After a decade of stable demand, **uptick in year-over-year growth in electricity demand**, projected to **grow 5.7 % per year through 2030**.



Updating and expanding the grid to meet demand is **costly** in the current environment - high **transmission and distribution costs** one key reason.

Producer Price Index for T&D Equipment and Services

Shown as percentage change relative to January 1, 2019, also compared to CPI



Source: FRED, BLS • Created with Datawrapper

...alongside replacement and resilience investments, fuel sources, regional energy market dynamics (e.g. PJM capacity market), and high cost of capital, among others.

Drivers of Distribution and Transmission Investment

Adaptation, hardening, resilience Replacement Expansion Other

Transmission



Distribution



Source: EEI • Created with Datawrapper

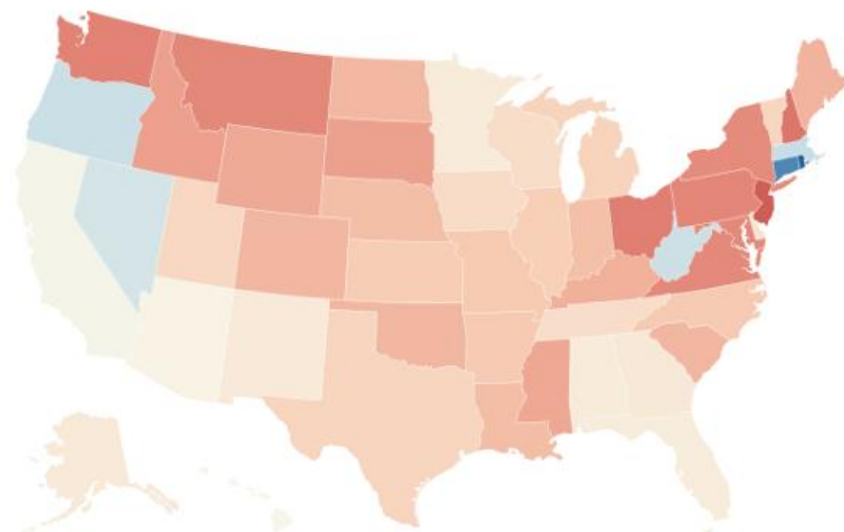
This demand growth, coupled with high inflation and constrained energy markets, are **driving up residential retail electricity prices**

RESIDENTIAL

Percentage Change in Residential Retail Electricity Prices: January-April 2025 to January-April 2026

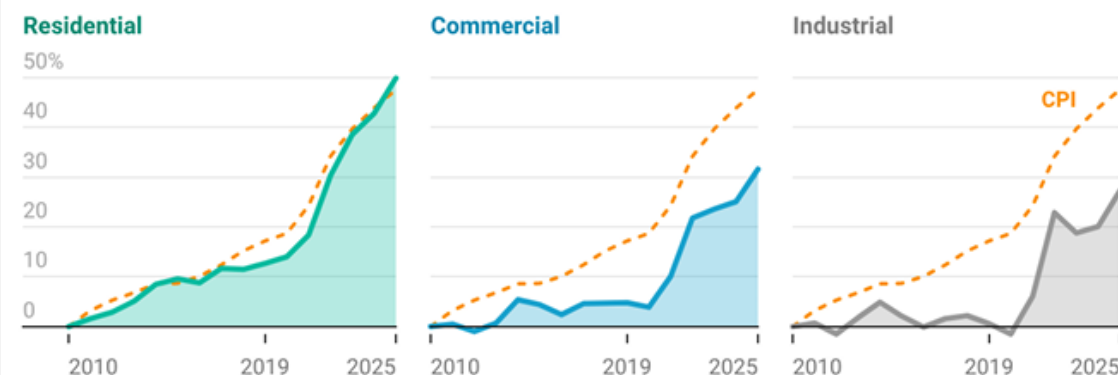
Percentage change, adjusted for inflation in 2025\$

-10% 0% 20%



Percent Increase in National Average Retail Prices, by Sector

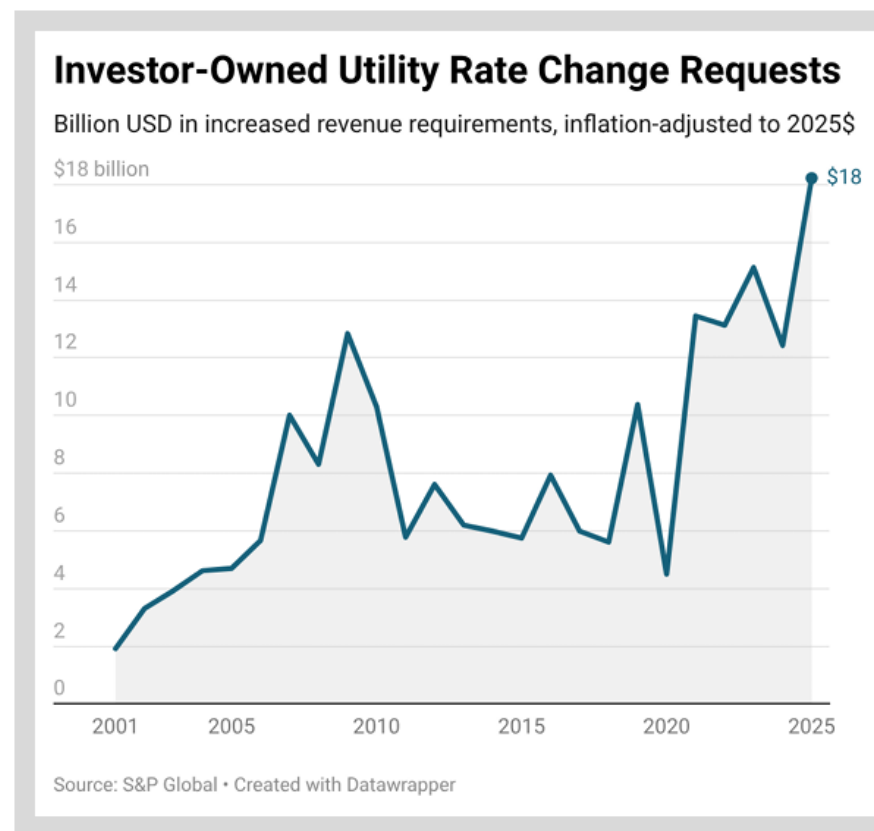
Percent increase since 2010 in nominal cents/kWh (not adjusted for inflation), compared to CPI



Source: EIA, BLS • Created with Datawrapper

And **2025 rate requests** from investor-owned utilities suggest this **trend will only continue into 2026**

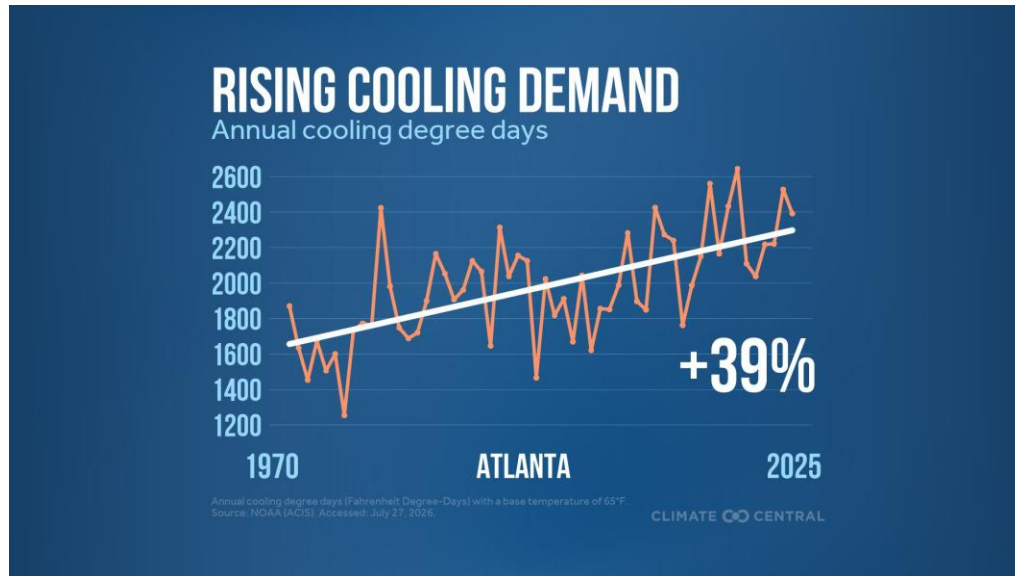
Investor-owned utilities requested **\$18 billion** in revenue rate increases in 2025



Notes: (1) Source: S&P Global, LBNL Analysis; (2) Rate case sample includes all "major" rate cases that impact base rates and would result in a rate change of at least \$5 million, inclusive of some limited issue rider cases. Fuel cost adjustments and limited-term rate riders are not generally captured.

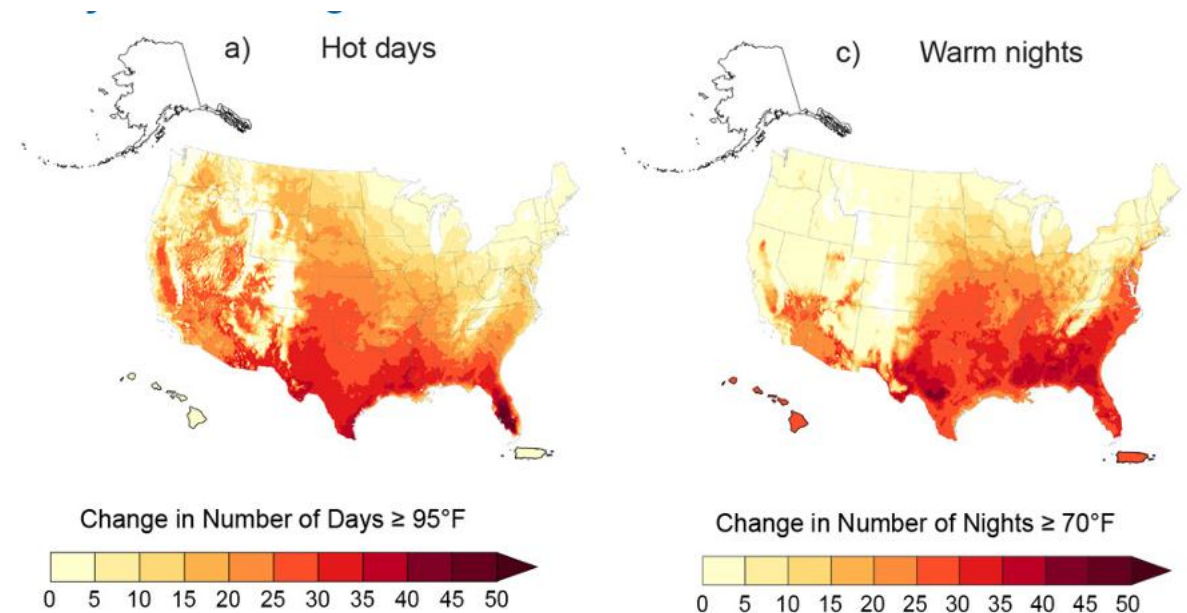
Household Energy Use

Climate change is shifting the geography and demand for household energy use



Source: Climate Central tabulations of NOAA (ACIS) data

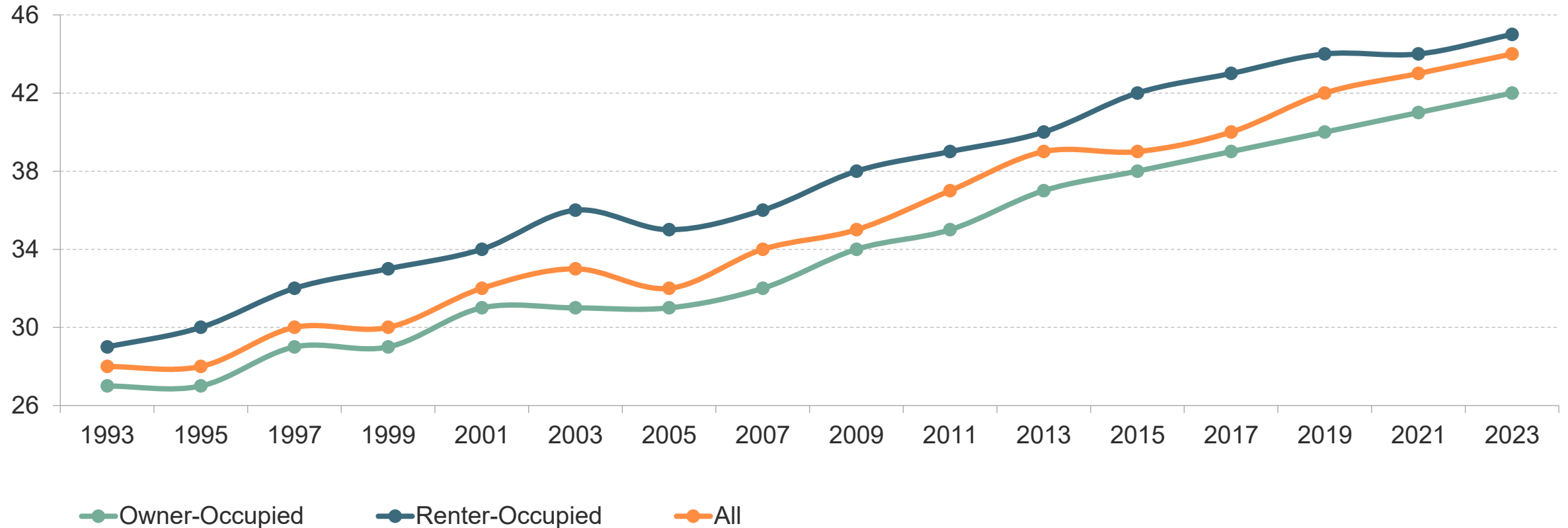
Project Changes to Hot Extremes at 2°C of global warming



Source: 5th National Climate Assessment; Ch 2. Climate Trends,
U.S. Global Change Research Program

The nation's **existing stock** continues to **age**

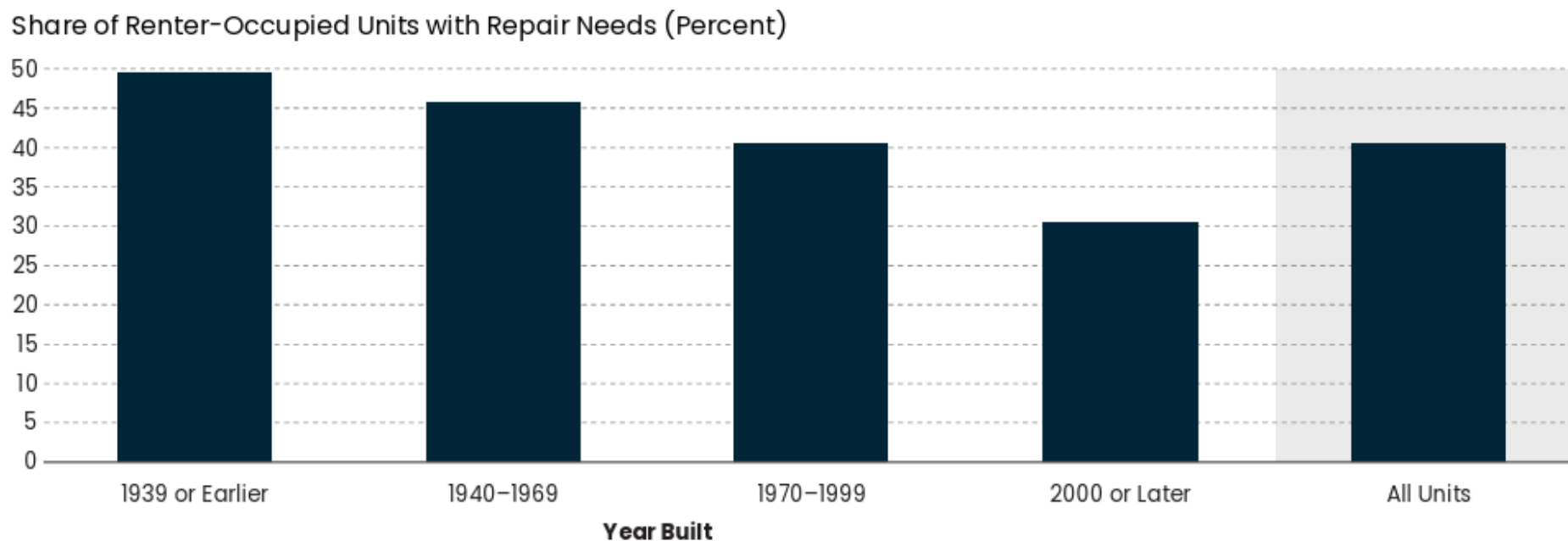
Median Age of Housing Units (Years)



Note: All includes vacant units.

Source: JCHS tabulations of HUD, American Housing Surveys.

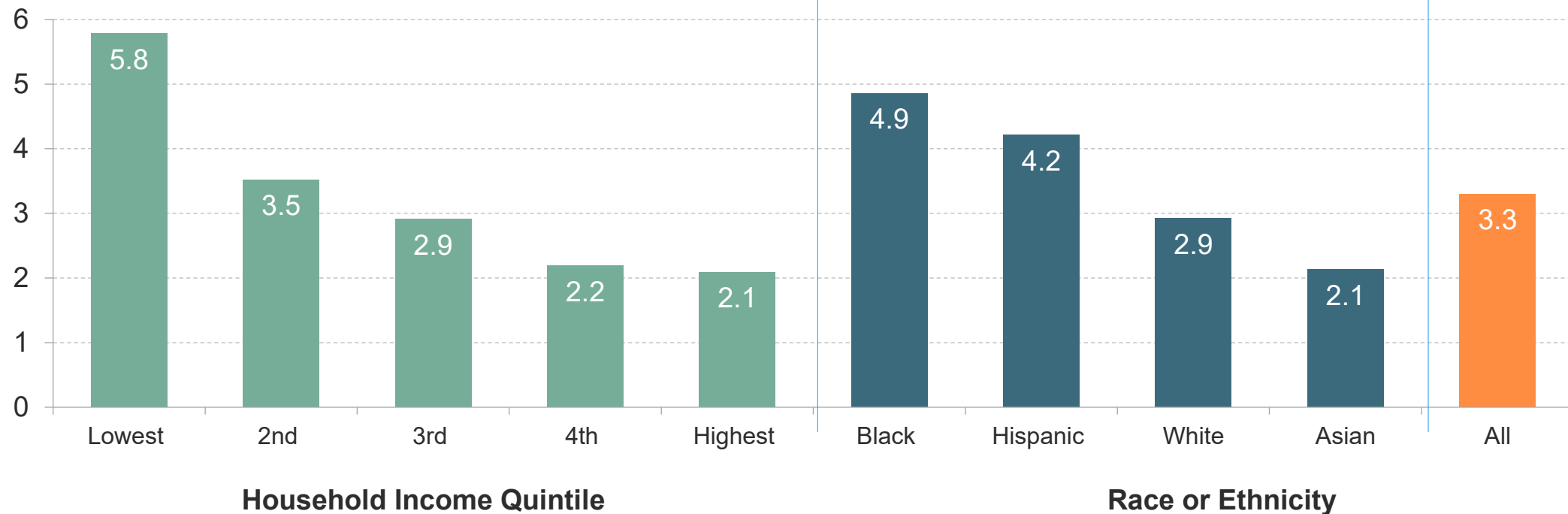
40 percent of renter-occupied units need repairs



Source: Federal Reserve Bank of Philadelphia, *Home Repair Costs 2025: Updated Estimates and New Measures of Cooling Needs*.

Lower-income owners and owners of color are more likely to occupy inadequate homes

Share of Owners in Inadequate Housing (Percent)



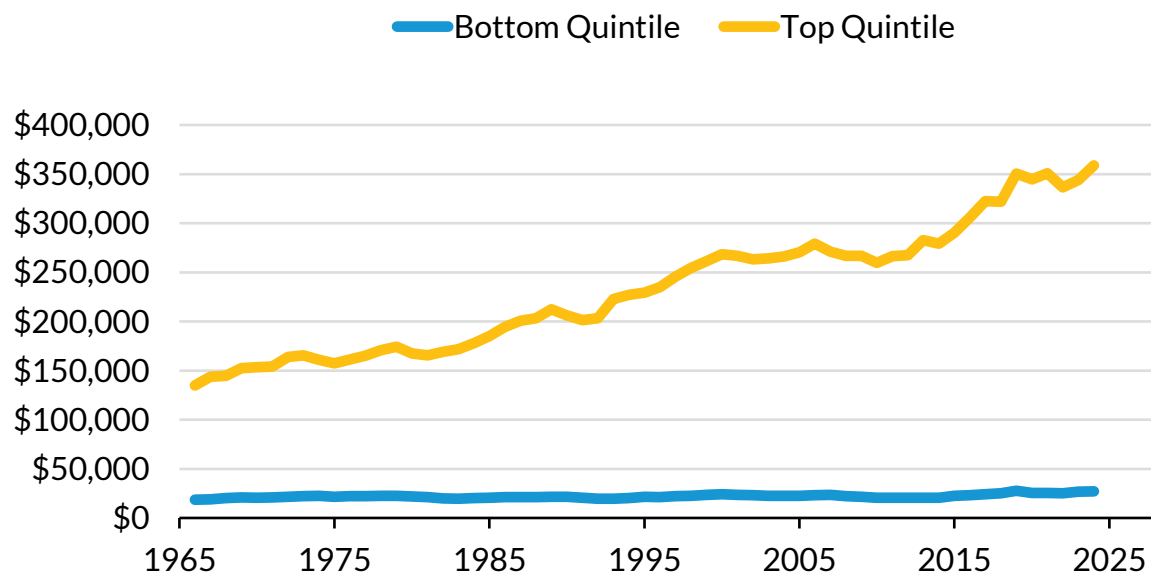
Notes: Quintiles are equal fifths of owners ranked by total household income. The lowest quintile includes incomes of less than \$37,500 and the highest quintile includes incomes of more than \$172,000. Asian, Black, and white householders are non-Hispanic. Hispanic householders may be of any race. Inadequate units are those with multiple structural deficiencies, such as water leaks, large open cracks, and holes in the floor, or serious problems with any basic features such as plumbing, electrical, and heating. Inadequacy is considered moderate or severe depending on the number and types of these problems.

Source: JCHS tabulations of HUD, 2023 American Housing Survey.

Ability to Pay

The nation's experienced wage growth, but not equally across **income groups** or **places**

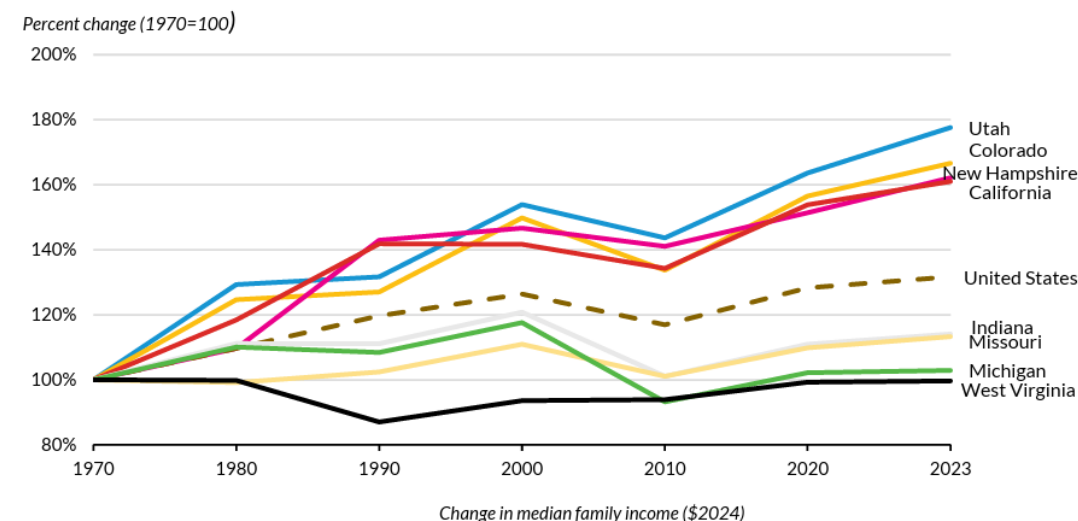
Inflation-Adjusted Median Family Income (\$2024)



Source: U.S. Census Bureau, Current Population Survey, 1967 to 2025 Annual Social and Economic Supplements (CPS ASEC). From [Theodos et al. 2026](#).

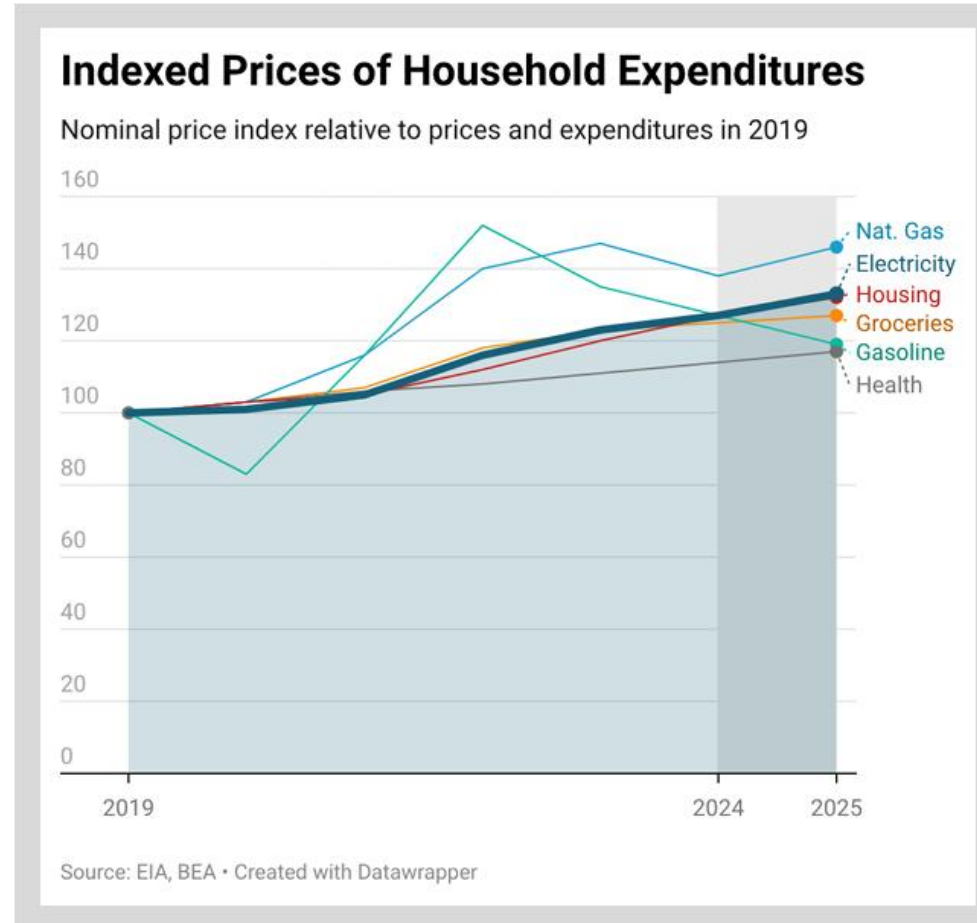
State and National Median Household Income Percent Change by Decade, 1970–2023

The four states with the strongest growth compared with the four states with the weakest growth



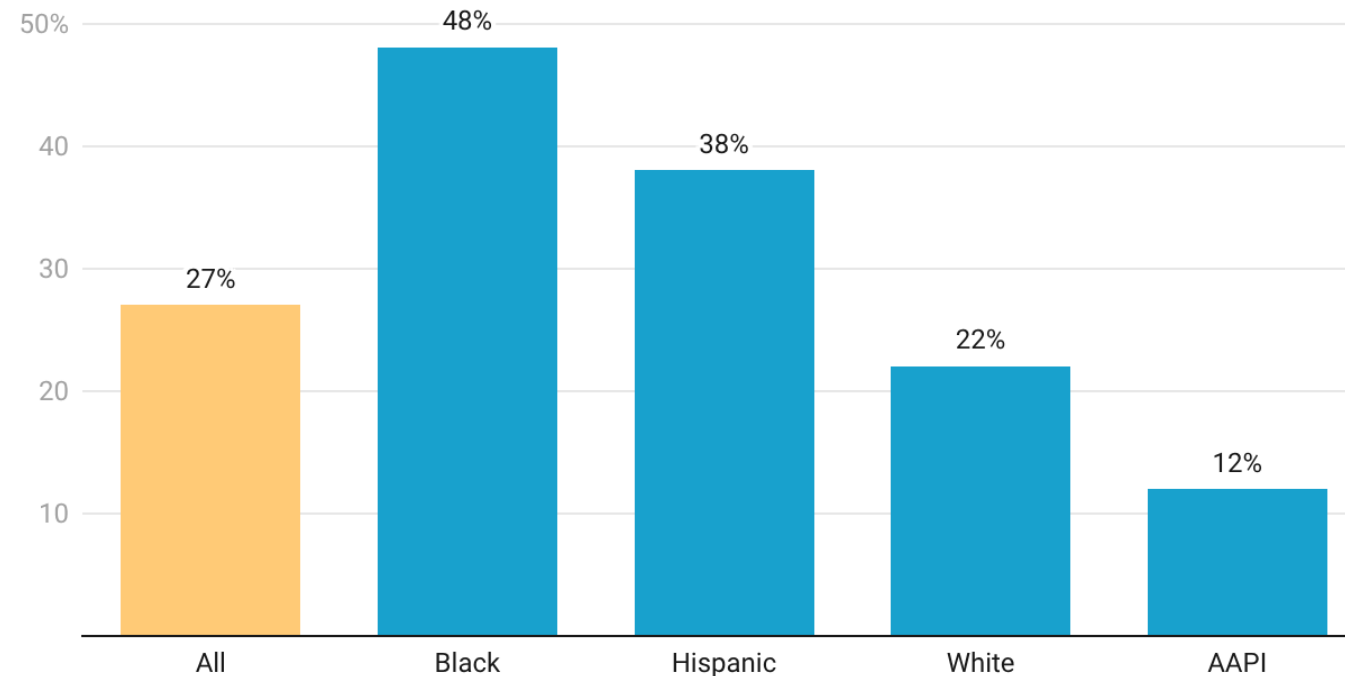
Source: US Census Bureau decennial censuses 1980 to 2010, 2023 one-year American Community Survey, and 1970 microdata from IPUMS USA.

Household energy cost pressures are happening in the context of **rising prices for other essential needs**



And many Americans **do not have the financial buffer** to absorb these rising costs

Share of US adults that do not have \$2,000 in emergency savings, by race and ethnicity (2022)

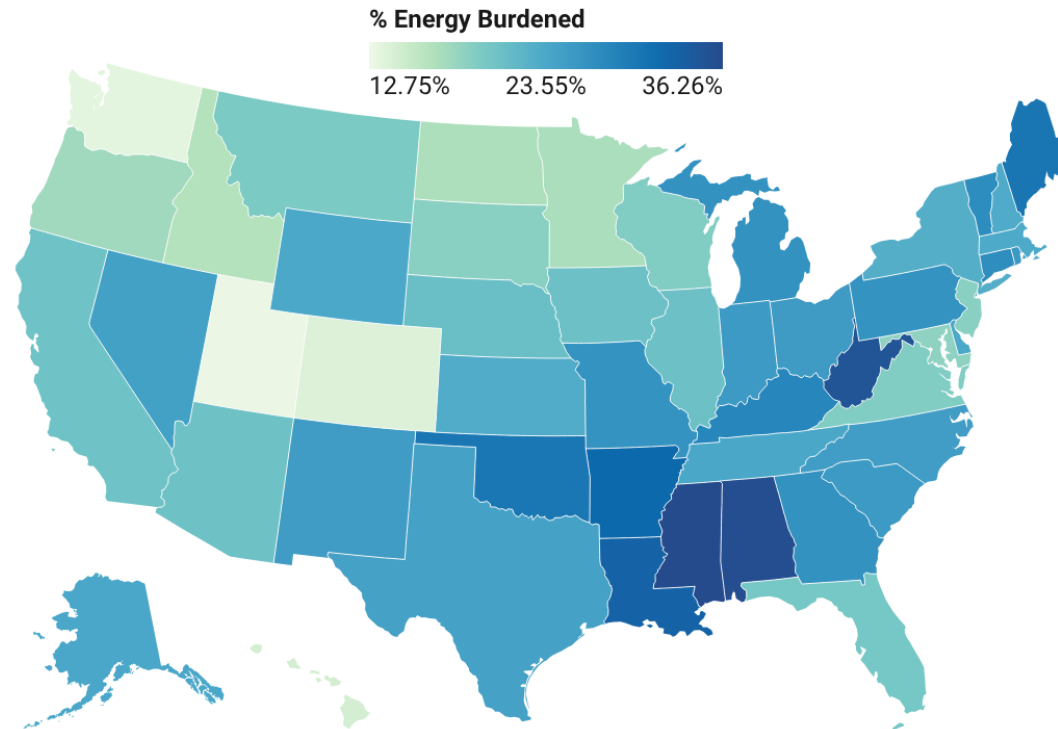


Source: Urban Institute, Financial Health and Wealth Dashboard • Created with Datawrapper

Energy Burden and Energy Insecurity

In 2024, more than **one fifth of households** were energy burdened. Energy burden **varied widely by state**.

The share of energy burdened households by state in 2024

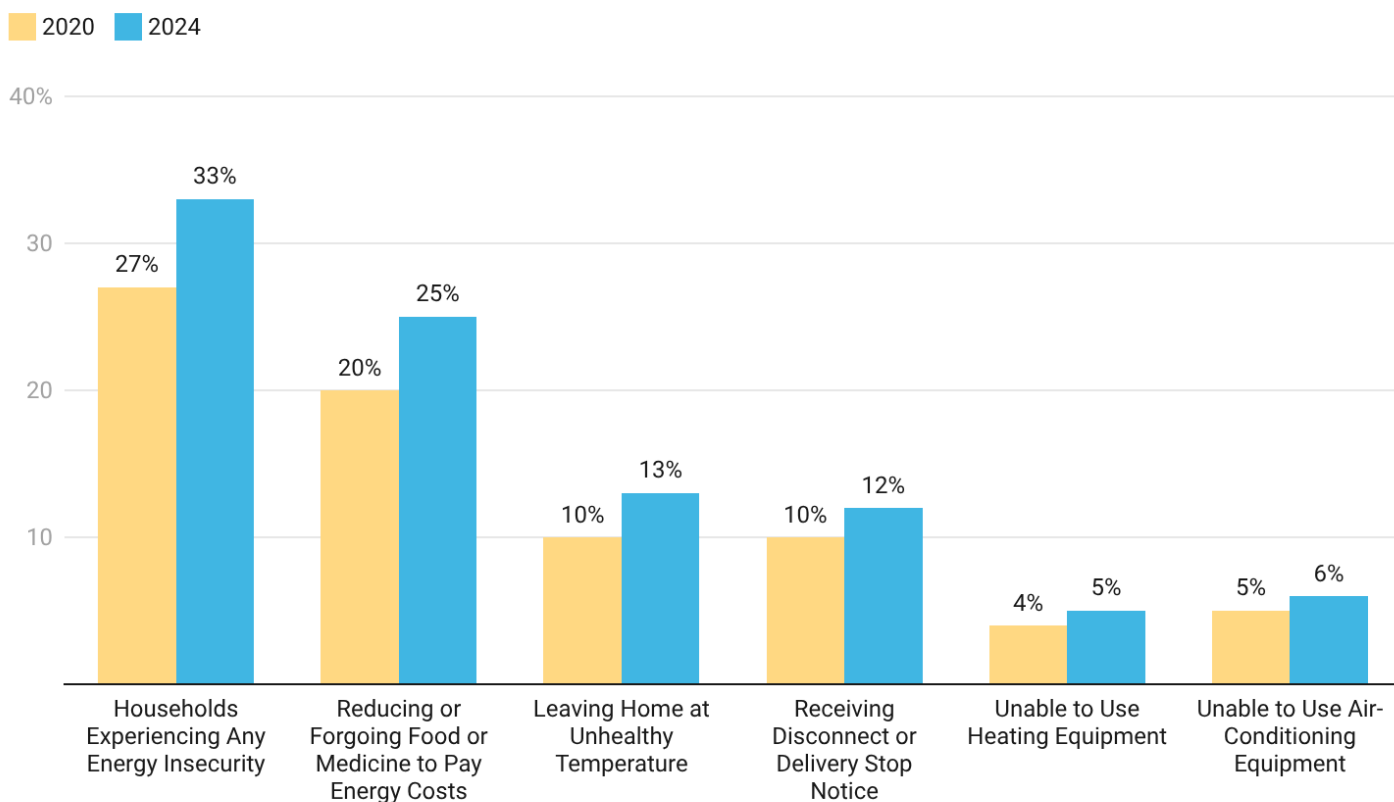


Energy burdened is defined as spending more than 6 percent of household income on home energy costs, including electricity, natural gas, and home heating fuels.

Source: ACS 1-Year Survey Data 2024 • Created with Datawrapper

But energy burdens don't tell the full story of energy insecurity

Share of Households Reporting Energy Insecurity Issues

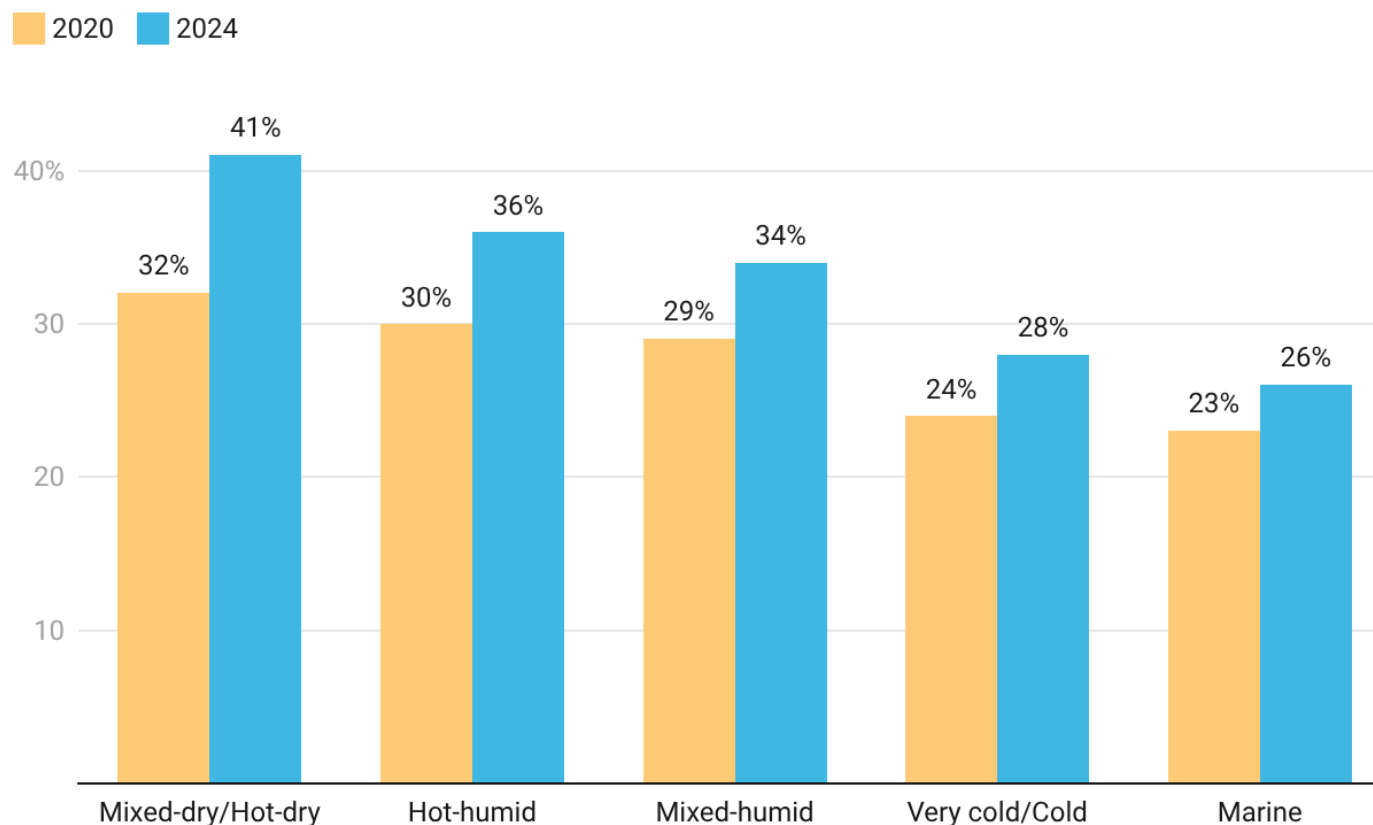


Notes: Respondents may report more than one energy insecurity issue. Inability to use heating or air conditioning equipment means household was unable to use main heating or air conditioning equipment at any time during the previous 12 months because equipment was broken and household could not have it repaired or because of an electricity, natural gas, or fuel disruption due to lack of payment.

Source: U.S. Energy Information Administration Residential Energy Consumption Survey (RECS) • Created with Datawrapper

Energy insecurity is increasingly concentrated in hotter climates

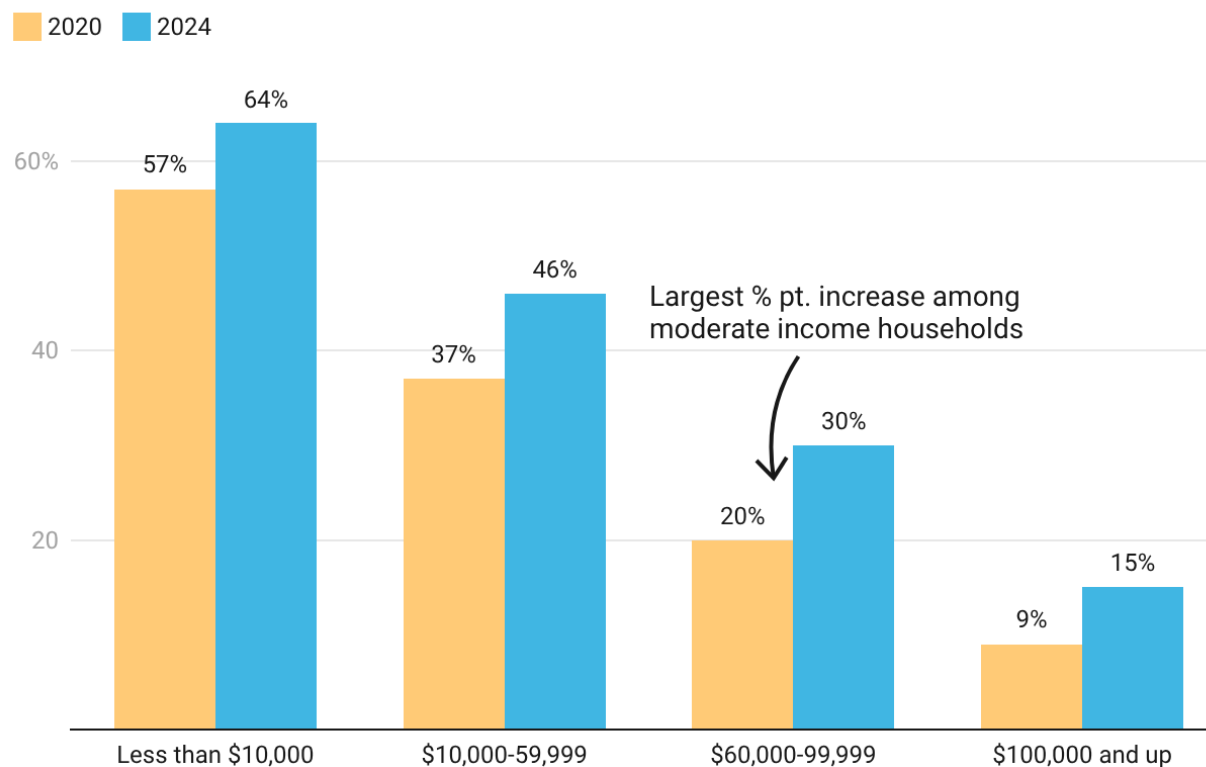
Share of Households Experiencing Any Energy Insecurity by Climate Region



Source: U.S. Energy Information Administration Residential Energy Consumption Survey (RECS) • Created with Datawrapper

It's moving up the income ladder...

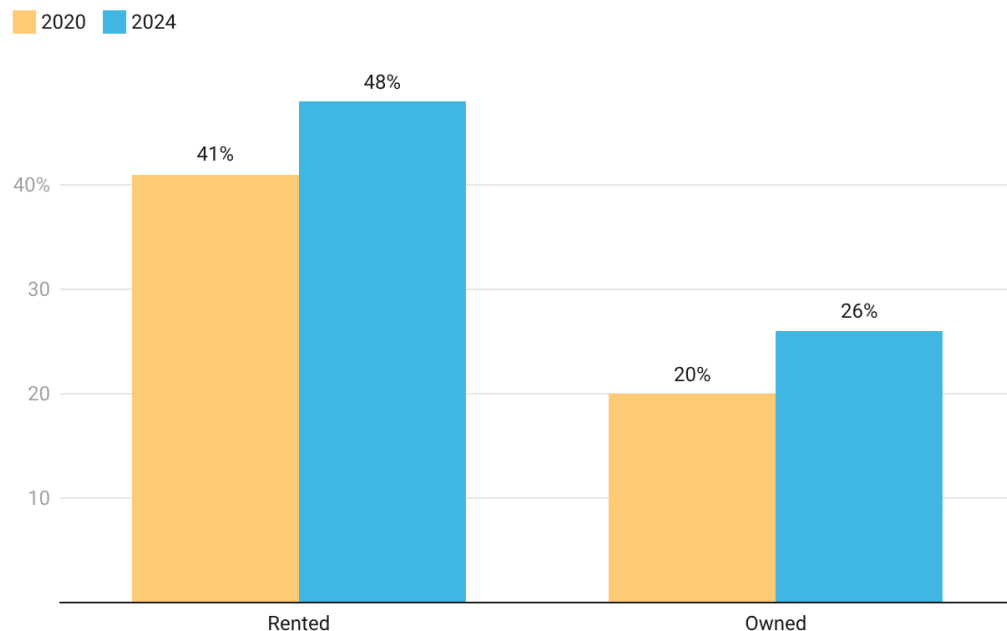
Share of Households Experiencing Any Energy Insecurity by Income



Source: U.S. Energy Information Administration Residential Energy Consumption Survey (RECS) • Created with Datawrapper

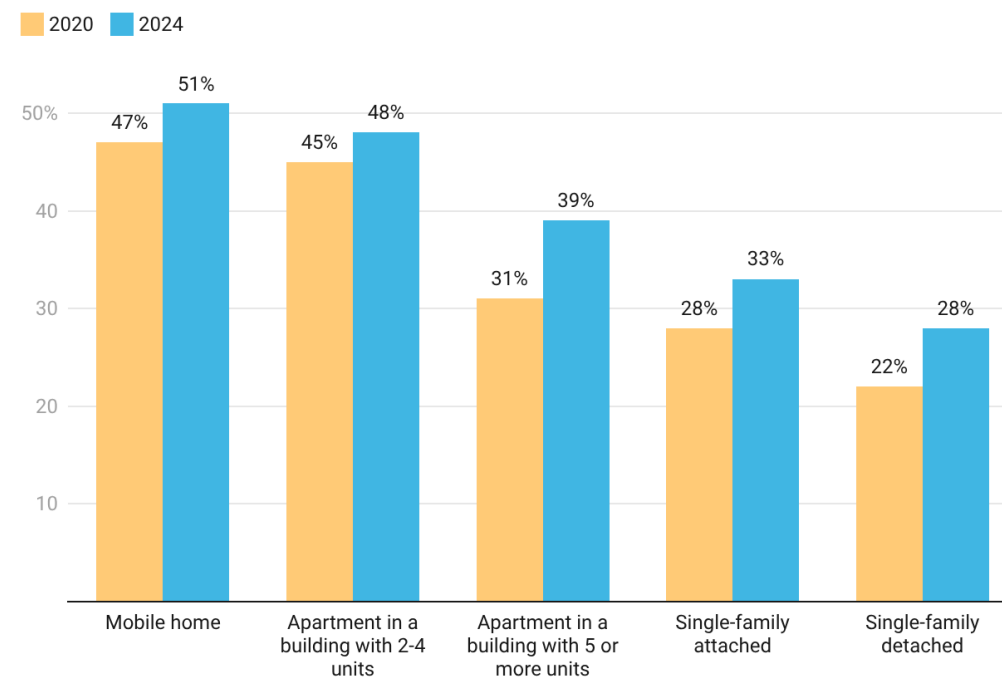
More prevalent among **renters** and households living in **mobile homes** and **2-4 unit apartment buildings**...

Share of Households Experiencing Any Energy Insecurity by Housing Tenure



Source: U.S. Energy Information Administration Residential Energy Consumption Survey (RECS) • Created with Datawrapper

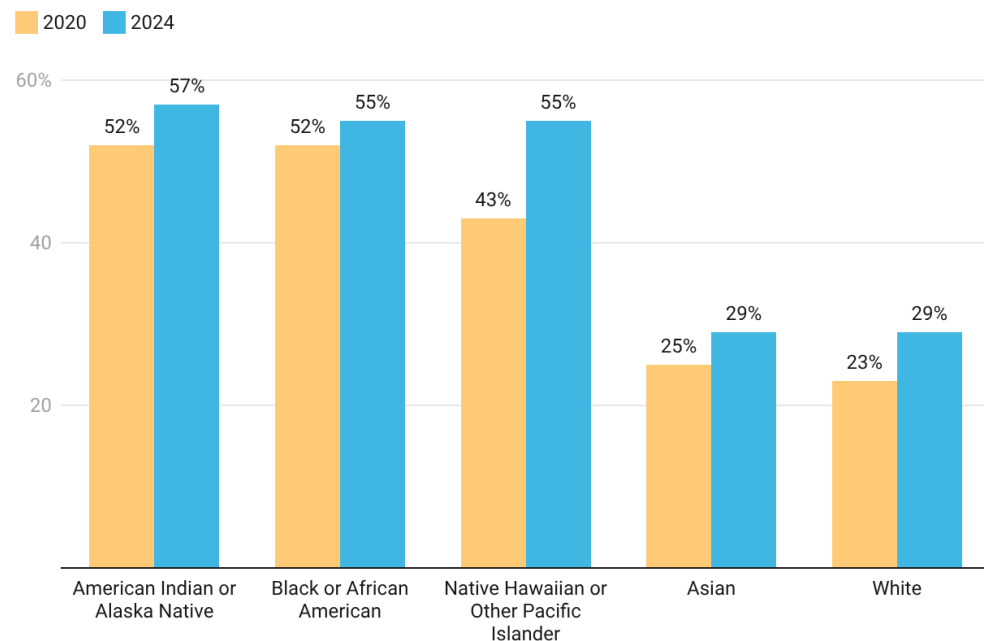
Share of Households Experiencing Any Energy Insecurity by Housing Type



Source: U.S. Energy Information Administration Residential Energy Consumption Survey (RECS) • Created with Datawrapper

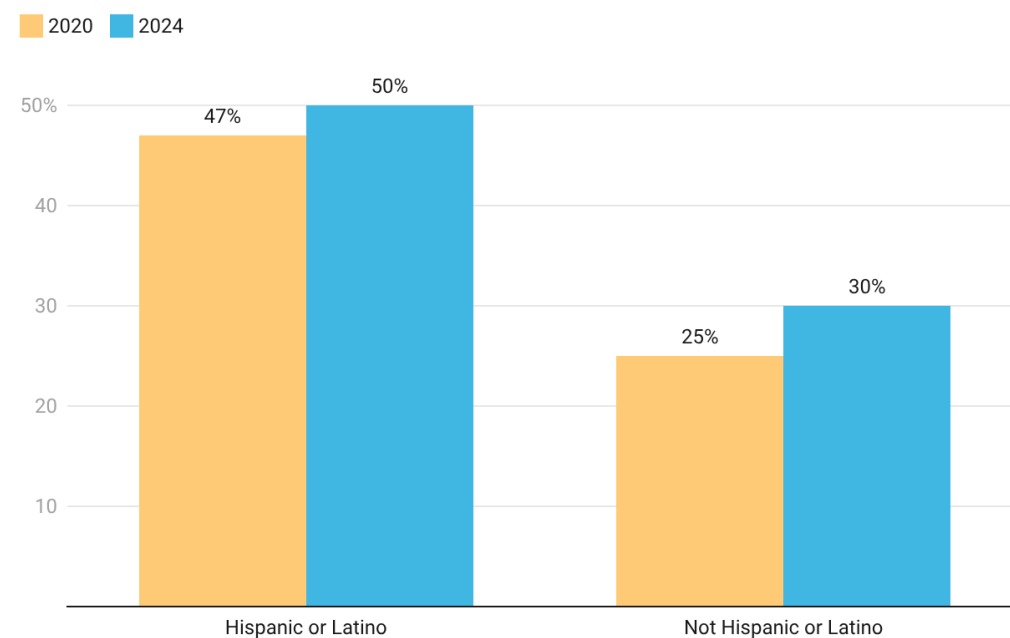
Disproportionally experienced among **Black, Native, and Pacific Islander**, and **Latino** households...

Share of Households Experiencing Any Energy Insecurity by Race



Source: U.S. Energy Information Administration Residential Energy Consumption Survey (RECS) • Created with Datawrapper

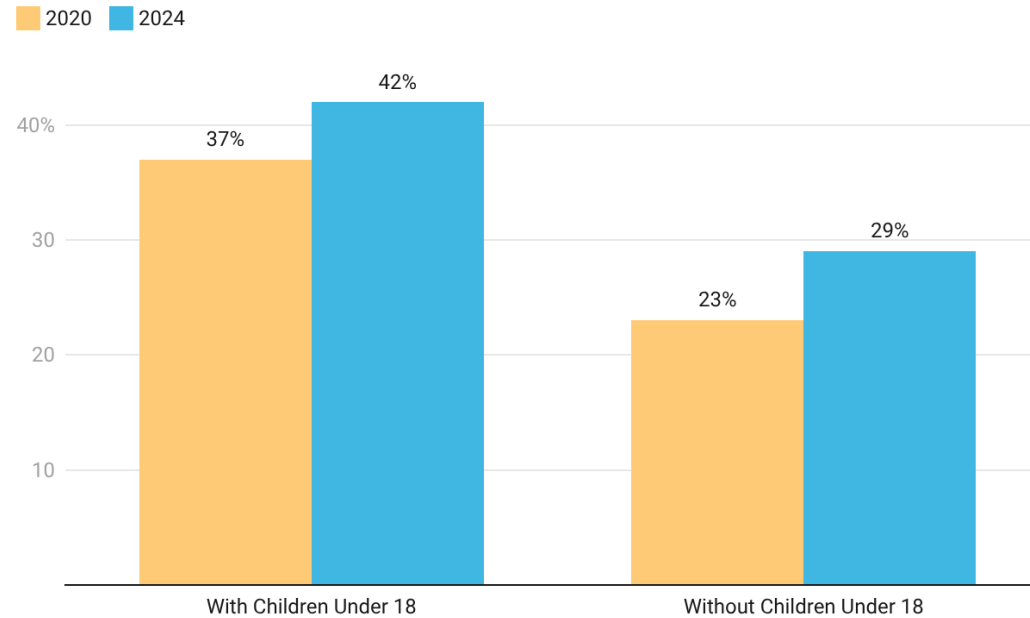
Share of Households Experiencing Any Energy Insecurity by Ethnicity



Source: U.S. Energy Information Administration Residential Energy Consumption Survey (RECS) • Created with Datawrapper

And among households with children...

Share of Households Experiencing Any Energy Insecurity by Household Composition



Source: U.S. Energy Information Administration Residential Energy Consumption Survey (RECS) • Created with Datawrapper

Questions to Guide the Day

- What will it take to address energy insecurity for the households most vulnerable to rising costs?
- How can we advance strategies that balance the urgency of short-term affordability pressures without losing sight of longer-term aspirations for a more sustainable, resilient, and fair energy system?

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