



The Residential Energy Consumption Survey: A look back at 2020, looking ahead to 2024

For: National Energy Assistance Directors Association (NEADA)

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Residential Energy Consumption Survey (RECS)

- The Residential Energy Consumption Survey (RECS) is a comprehensive study of the energy characteristics, consumption, and expenditures of homes occupied as a primary residence
- The RECS was first conducted in 1978 and has been administered 15 times, most recently in 2020
- 2024 RECS data collection will begin in September
- Two-phased data collection: Household Survey + Energy Supplier Bills
- Household Survey conducted using self-administered Web and paper questionnaires

2020 RECS first to feature estimates for all states and DC; results available at www.eia.gov/recs

RESIDENTIAL ENERGY CONSUMPTION SURVEY (RECS)

OVERVIEW DATA ANALYSIS & PROJECTIONS

2020 RECS Survey Data

2020 | 2015 | 2009 | 2005 | 2001 | 1997 | 1993 | PREVIOUS

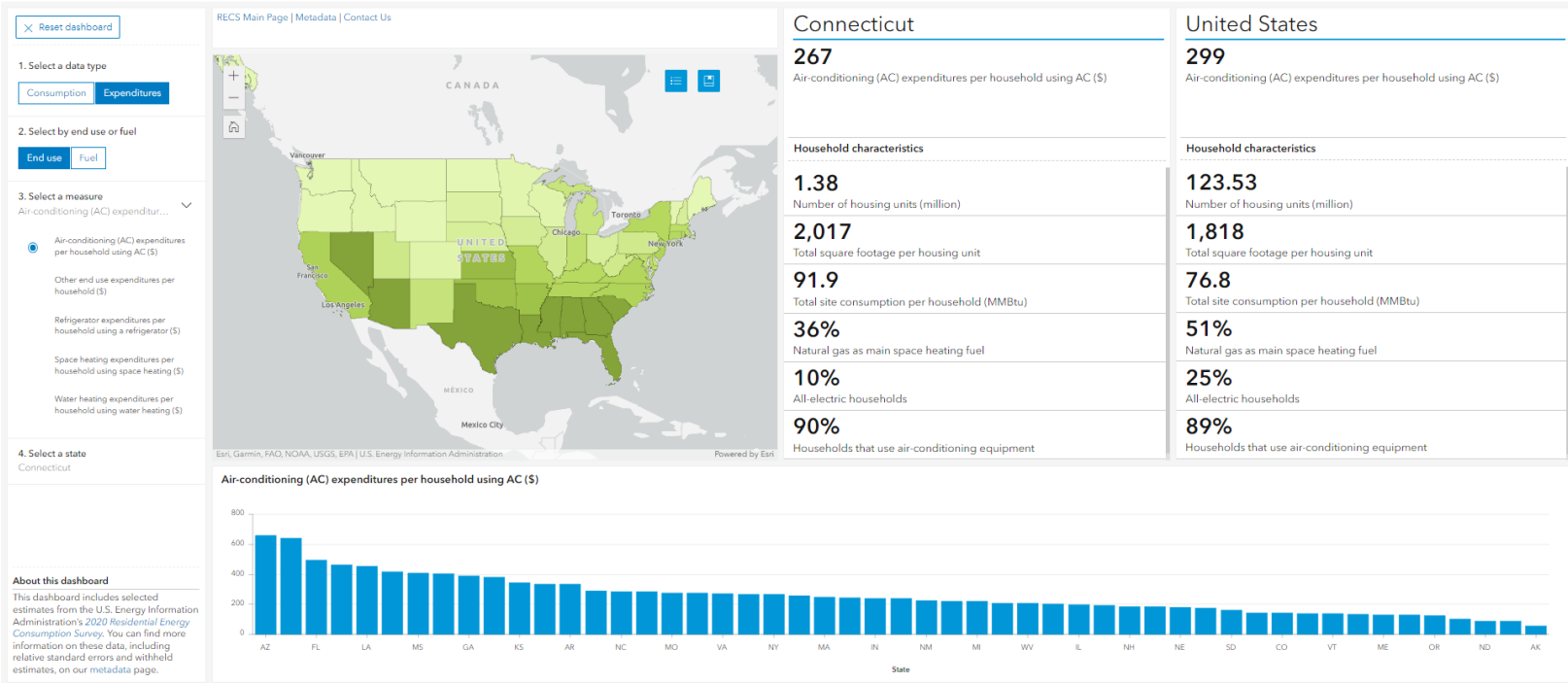
Housing characteristics Consumption & expenditures Microdata Methodology **State Data**

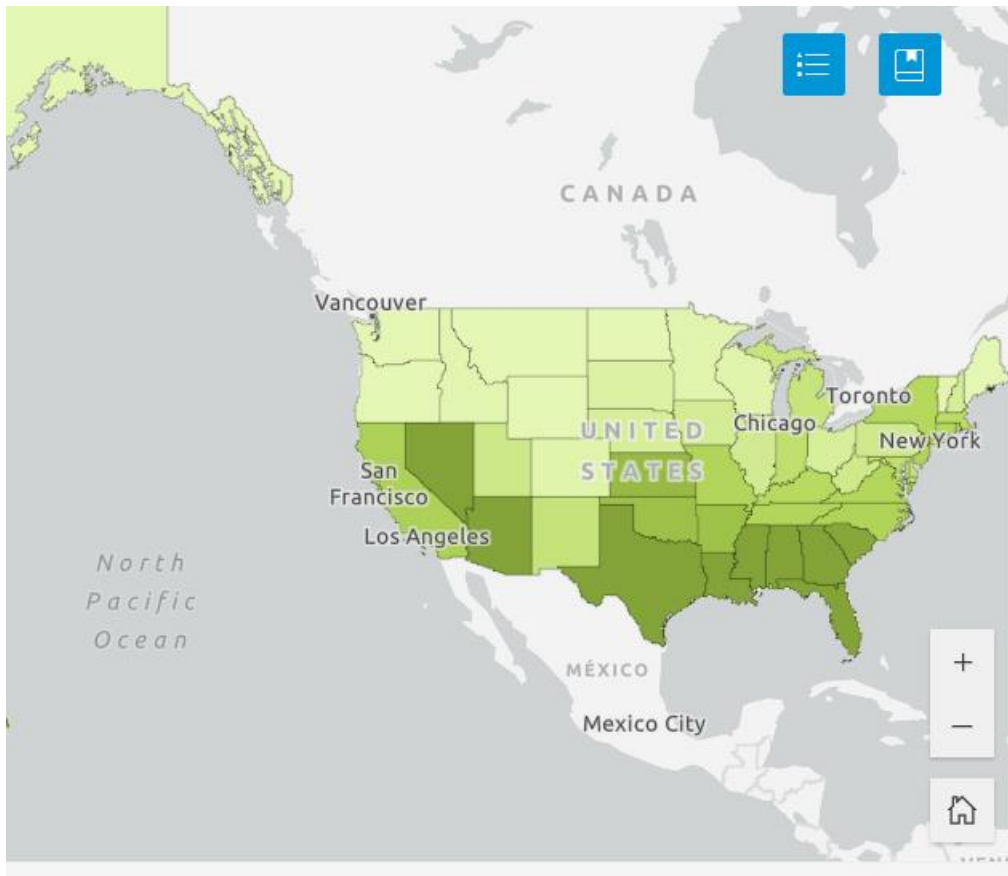
State Data

Highlights for air conditioning in U.S. homes by state, 2020	PDF	XLS
Highlights for appliances in U.S. homes by state, 2020	PDF	XLS
Highlights for electronics and lighting in U.S. homes by state, 2020	PDF	XLS
Highlights for fuels used in U.S. homes by state, 2020	PDF	XLS
Highlights for household characteristics of U.S. homes by state, 2020	PDF	XLS
Highlights for space heating fuel in U.S. homes by state, 2020	PDF	XLS

New RECS dashboard highlights state-level estimates

eia Residential Energy Consumption Survey (RECS) Dashboard





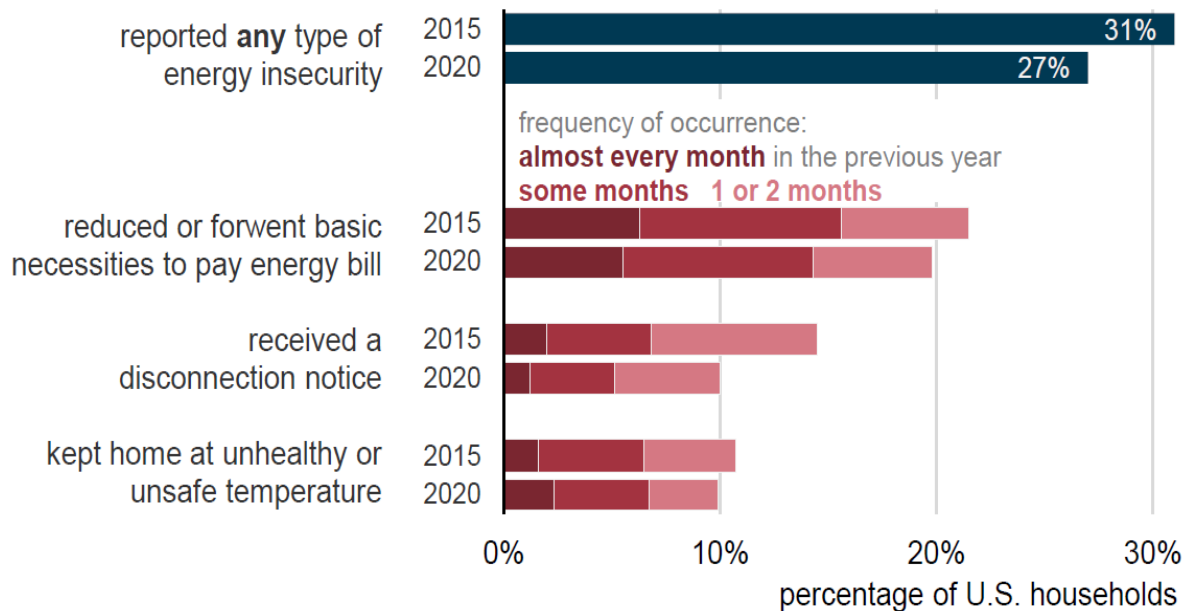
Air-conditioning (AC) expenditures per household using AC (\$)

RECS has included a series of Energy Insecurity questions since the 1980s

- Supports coordinated effort with HHS for LIHEAP and LIHEAP-eligible household energy-use analysis
- Originally, solely in support of LIHEAP analysis; no public estimates from EIA
- Beginning in 2015, these questions asked of ALL respondents; EIA begins releasing public estimates

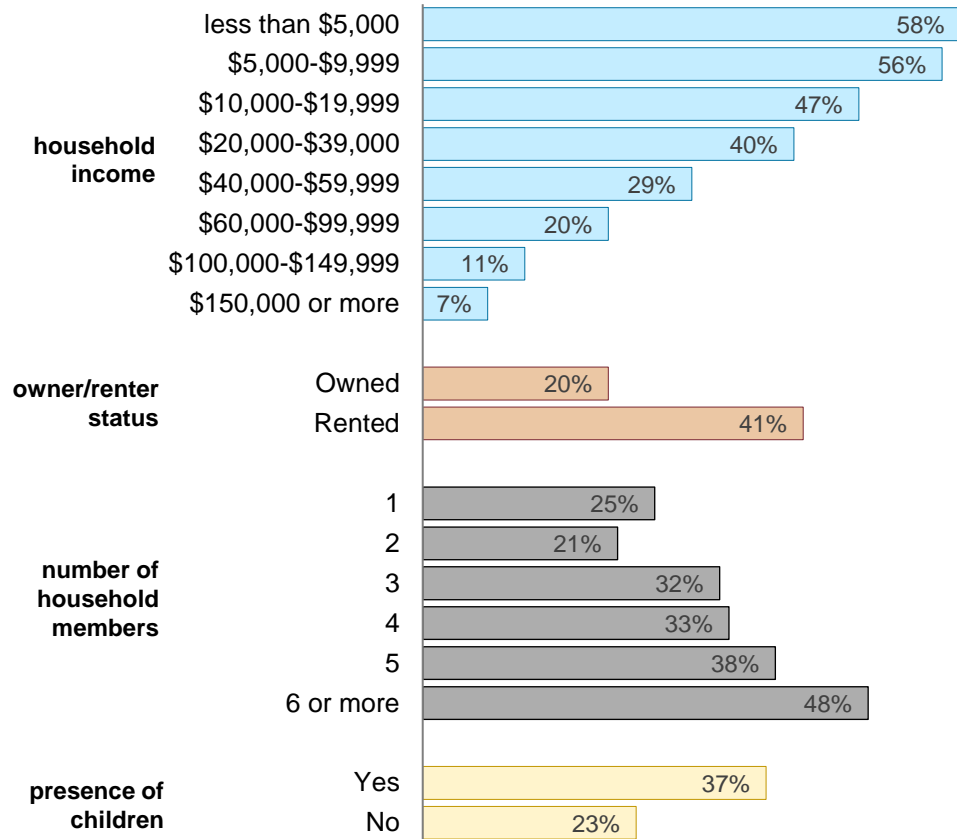
In 2020, 27% of households reported any type of energy insecurity

U.S. household energy insecurity measures (2015 and 2020)



Source: U.S. Energy Information Administration, 2015 and 2020 Residential Energy Consumption Survey

Demographics and household energy insecurity

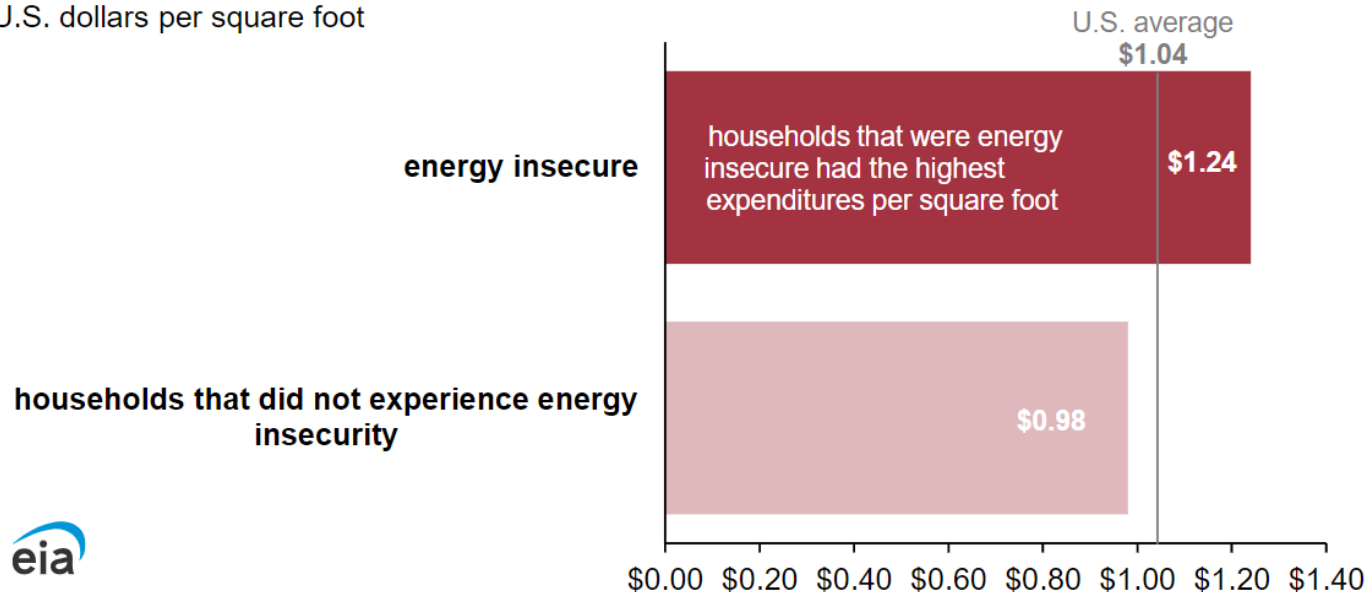


Source: U.S. Energy Information Administration, 2020 Residential Energy Consumption Survey

Expenditures intensity, by square foot, higher for energy insecure households

Average U.S. household energy expenditures per square foot (2020)

U.S. dollars per square foot



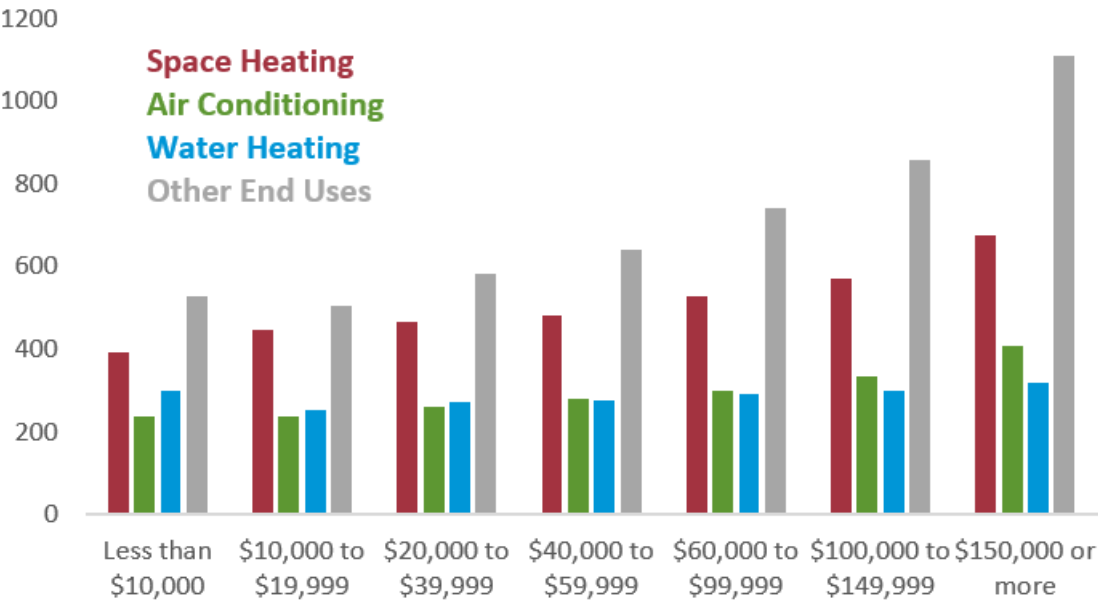
Data source: U.S. Energy Information Administration, 2020 [Residential Energy Consumption Survey](#) (RECS)

Note: Square footage is derived from RECS respondent estimates and represents the energy-consuming area of housing units.

Energy end-use expenditures, by income

Average annual end-use expenditures, by household income, 2020

U.S. dollars



Difference between lowest and highest income levels:

- Space Heating...+72%
- AC.....+72%
- Water Heating....+8%
- Other End-Uses..+111%

Source: U.S. Energy Information Administration, 2020 Residential Energy Consumption Survey

We're preparing for the 2024 RECS!

- Data collection to begin Fall 2024
- Building on 2020 RECS successes—maintaining larger sample, web and mail data collection modes, estimates for all 50 states and DC
- Making updates to questionnaire to account for changes in household energy use
 - Adding new energy insecurity question focused on partial payments of bills
 - Remove VCRs



EIA targeting estimates for 10 metro areas

Metropolitan Statistical Areas (MSAs) chosen based on geographic diversity, demographic mix, and sample design considerations:

- Atlanta–Sandy Springs–Roswell, GA
- Baltimore–Columbia–Towson, MD
- Birmingham, AL
- Detroit–Warren–Dearborn, MI
- Houston–Pasadena–The Woodlands, TX
- Miami–Fort Lauderdale–West Palm Beach, FL
- Oklahoma City, OK
- Phoenix–Mesa–Chandler, AZ
- Riverside–San Bernardino–Ontario, CA
- Rochester, NY

RECS program initiatives also include...

- Continuing to expand ArcGIS mapping dashboard
- Exploring small-area estimation for lower-level geographies
 - All MSAs or counties
 - For key metrics (e.g., energy insecurity, average expenditures)
- Publishing monthly consumption and expenditures estimates for electricity and natural gas



Contact us!

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