



BERKELEY LAB



TRACKING ROOFTOP SOLAR DEMOGRAPHICS

Solar-energy equipment prices have fallen dramatically, but low- and moderate-income households remain less likely than high-income households to go solar. Closing gaps in clean energy equity starts with understanding who is – and who isn't — participating in the solar energy boom.

THE PROJECT

Researchers in the Energy Technology Area's Energy Markets & Policy Department at Berkeley Lab have compiled a demographic data set covering roughly 85% of all U.S. households that have installed rooftop solar. For each household, researchers gather and annually update information on income, race and ethnicity, language preference, urban/rural status, education level, occupation, age, home value, and whether or not each home is in a disadvantaged community. They release an annual report — **Residential Solar-Adopter Income and Demographic Trends** — and accompanying data-visualization tools that can inform clean energy policies, and potentially make them more equitable for families in lower income brackets.



85%

ANALYZED
U.S. residential solar adopters



BETTER TRACKING
of clean energy equity gap



UNDERSTANDING
rooftop solar demographics



+ WE PARTNERED WITH +



U.S. DEPARTMENT OF
ENERGY

Office of Solar
Energy Technologies

BACKGROUND

As a National Laboratory funded by the U.S. Department of Energy, Berkeley Lab is committed to a just and equitable energy transition. We strive to ensure that the impacts of our research benefit all communities, as well as future generations. To meet these goals, we partner with community-based organizations, public, and private agencies to help make clean energy technologies and resources accessible to all.

In this project, Berkeley Lab researchers supported by DOE's Solar Energy Technologies Office track data that illuminate energy equity issues and subject it to rigorous analysis. Their efforts contribute to developing effective policies that support a transition to a clean, efficient, reliable and affordable electricity sector.

[Visit Berkeley Lab's Residential Solar-Adopter Income and Demographic Trends Website](#) ▶



GALEN BARBOSE

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TECHNICAL POINT OF CONTACT

Galen Barbose conducts research and analysis on renewable energy, energy efficiency, and electric system planning. In addition to his work on the annual Residential Solar-Adopter Income and Demographic Trends report, he leads the report series Tracking the Sun and an annual renewable portfolio standards status report. He also manages projects analyzing regulatory and policy issues associated with distributed solar. Galen has presented his work hundreds of times and authored over 100 publications. He holds bachelor's degrees in mechanical engineering and philosophy from UC Berkeley and UC Santa Cruz, respectively, and a master's degree from the Energy and Resources Group at UC Berkeley.

Naïm R Darghouth, Eric O'Shaughnessy, Sydney Forrester, Galen L Barbose. [Characterizing local rooftop solar adoption inequity in the US](#). 2022.

Sydney Forrester, Galen L Barbose, Eric O'Shaughnessy, Naïm R Darghouth, Cristina Crespo Montañés. [Residential Solar-Adopter Income and Demographic Trends: November 2022 Update](#). 2022.

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