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**Title:** Are We Approaching Equity in the US Residential Solar Market? Income and Demographic Trends of Residential Solar Adopters

**Abstract:** The residential photovoltaic (PV) market has expanded rapidly over the past decade, but questions exist about how equitably that growth has occurred across income groups. Prior studies have investigated this question, but are often limited by narrow geographic study regions, now-dated analysis timeframes, or coarse estimates of PV-adopter incomes. At the same time, a spate of new programs and initiatives, as well as innovations in business models and product design, have emerged in recent years with the aim of making solar more accessible and affordable to broader segments of the population. Yet, many of those efforts are proceeding without robust underlying information about the income characteristics of recent residential PV adopters. This presentation is based on an upcoming Berkeley Lab study aiming to establish basic factual information about income trends among U.S. residential solar adopters, with some emphasis on low- and moderate-income (LMI) households. The analysis is unique in its extensive coverage of the U.S. solar market, relying on Berkeley Lab's Tracking the Sun dataset, which contains project-level data for the vast majority of all residential PV systems in the country (a subset of which are ultimately included in the analysis sample). This work builds upon an initial effort from 2018 but includes new analysis with a dramatically augmented data set with almost national coverage, resulting from the integration of the Tracking the Sun data set with solar adopter addresses extracted from permitting data collected from municipalities throughout the US (from Buildzoom). This analysis is also unique in its use of household-level income estimates that provide a more-precise characterization of PV-adopter incomes than in most prior studies which have relied on income averages over geographical areas. Household-level income estimates for each PV-adopter street address were provided by Experian, based on the company's proprietary income model. We compare those PV-adopter income estimates to the broader population, based on data from the U.S. Census. This work provides unique insights on equity in rooftop solar adoption and whether dramatically lower prices and new business models in the past decade have ultimately led to greater solar adoption levels among economically disadvantaged populations. Access to clean technologies for all is not only an equity issue but also a necessity if we are to massively scale up clean technology and decarbonize our economy.