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Title: Energy Justice and Equity in Solar Development: How Solstice is developing and piloting an alternative credit metric to qualify community shared solar customers

Abstract: Solar is booming and for the first time in America, it is cheap enough that it can save households money on their electricity bills. Yet 80% of Americans are locked out of the solar market. Those who rent homes or possess a non-optimal roof are unable to install rooftop systems. Community shared solar (CSS) expands access by allowing families to connect to a shared solar farm in their area and save money without a rooftop installation. However, the high credit requirements imposed by solar developers inhibit widespread adoption of CSS. Solar developers require customers to have a minimum FICO score of 680-700, yet more than 280 million Americans have no credit history, and of those that do, only 56.8% would qualify. The problem is particularly severe among low- to moderate-income (LMI) populations, as 45 million Americans in low-income neighborhoods are credit-invisible. Given that the NRDC finds that low-income households spend on average 7.2% of their income on utility costs per year, these barriers to entry represent a grave environmental injustice. Additionally, FICO is an imperfect proxy for qualifying customers. Studies show that inclusion of bill payment data in qualifying scores would improve predictions and safely expand credit to unscored consumers whose risk is currently overestimated. A recent analysis found that if payment history determined access to CSS, these products could be extended to an additional 20% of households in the lowest income group. In 2017, Solstice was awarded a Department of Energy Sunshot Initiative grant to devise new ways to qualify customers for community solar. Through a regression analysis of credit and demographic data and utility payment data, Solstice has validated the hypothesis that FICO is not the best indicator of utility payment history and should not be the sole qualifier for participation in community solar. Through a subsequent machine learning analysis, Solstice has created an alternate metric to FICO called the EnergyScore. The EnergyScore has proven to be both more inclusive of LMI households and a more accurate predictor of future energy bill payment behavior compared to FICO. Now, Solstice is partnering with solar developers and financiers to validate the EnergyScore through a variety of real-world pilot projects, proving that CSS can and should include LMI customers without additional financial risk to project owners. By doing so, Solstice will usher in an improved product that radically democratizes the community solar market for millions of new, and historically marginalized, households.