

FROM POWER TO EMPOWERMENT

Plugging Low Income Communities
Into The Clean Energy Economy

By Patrick Sabol

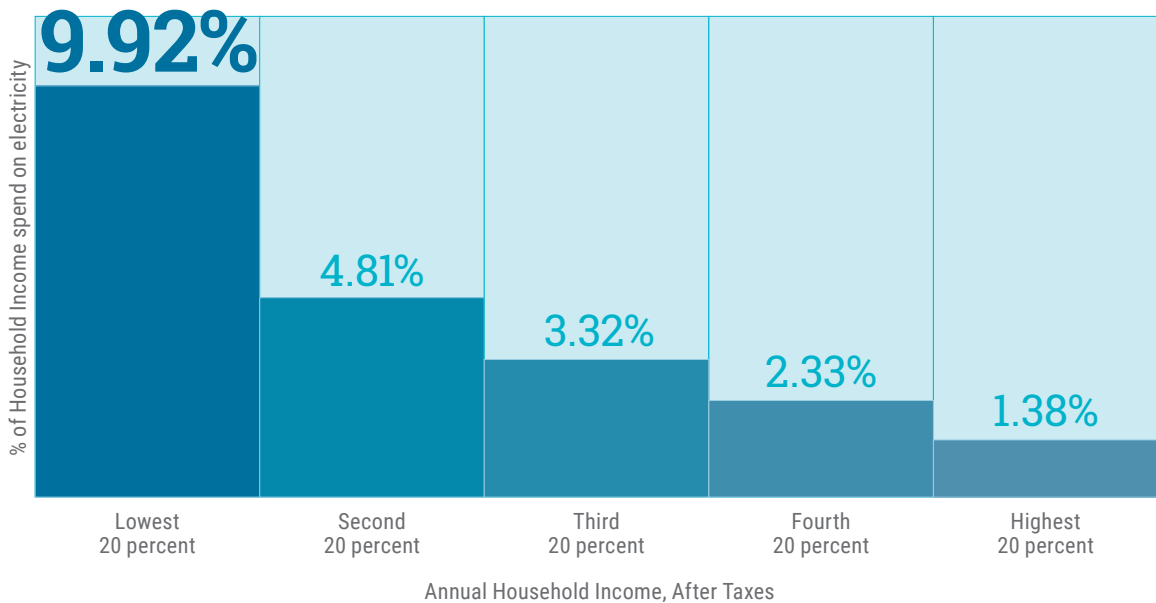
SUMMARY

Just as far sighted regulators and entrepreneurs leveraged universal access to electricity to drive inclusive economic growth in the 20th century, today's leaders must take significant strides to make renewable energy accessible for all Americans. This is not simply a matter of fairness and equity. Existing market practices and public policies in both renewable energy production and energy efficiency are failing to benefit low and moderate income families, resulting in missed opportunities for economic growth. This white paper details the critical relationship between energy and economic opportunity in the United States, as well as a call to action to accelerate the adoption of community solar legislation, to expand and support energy efficiency programs that align with community solar, and to drive consumer adoption of these programs through place-based community organizations.

WHY ENERGY MATTERS TO WORKING FAMILIES

Utility bills are an essential and increasingly burdensome expense for America's working families. Low income households already spend 10% of their income on electricity, which is over four times higher than the average consumer.¹ Despite advances in energy efficiency and decreasing per capita demand for power, America's working families are still spending more money every year on their utility bills. Over the last decade alone, electricity expenditures as a proportion of low-income household budgets increased by a third, while falling for higher earners.²

Electricity Expenditures by Income Quintile³



The consequences of increasingly expensive utility bills are acute. Costly power bills not only consume scarce resources that may be better invested in education, personal savings, or debt reduction, but also present increased risk for financial or health crises.

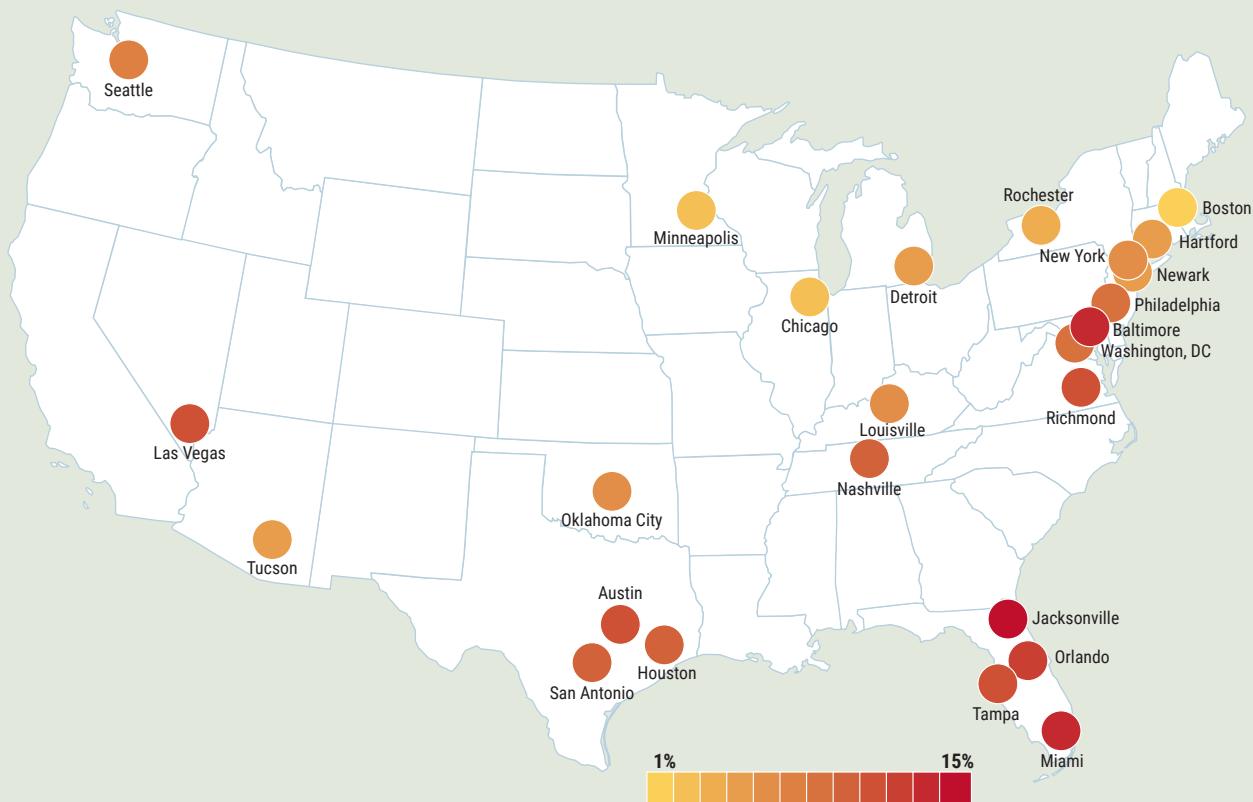
High utility bills put low-income families in situations that can spiral into serious financial difficulties. The majority of these households rely on unpredictable revenue streams due to the necessity of working multiple part-time jobs and a higher propensity to hold hourly positions, which makes low-income households particularly vulnerable to sudden fluctuations in their monthly power bills.⁴ A sudden cold snap, seasonally variable utility pricing, or a host of other factors can lead an otherwise stable family to quickly fall behind on their utilities.⁵

The results can be catastrophic. Households with high energy burdens are at increased likelihood of accumulating unsustainable debt, trading off other essential purchases like food to pay their utility bill, home eviction, and even homelessness.⁶

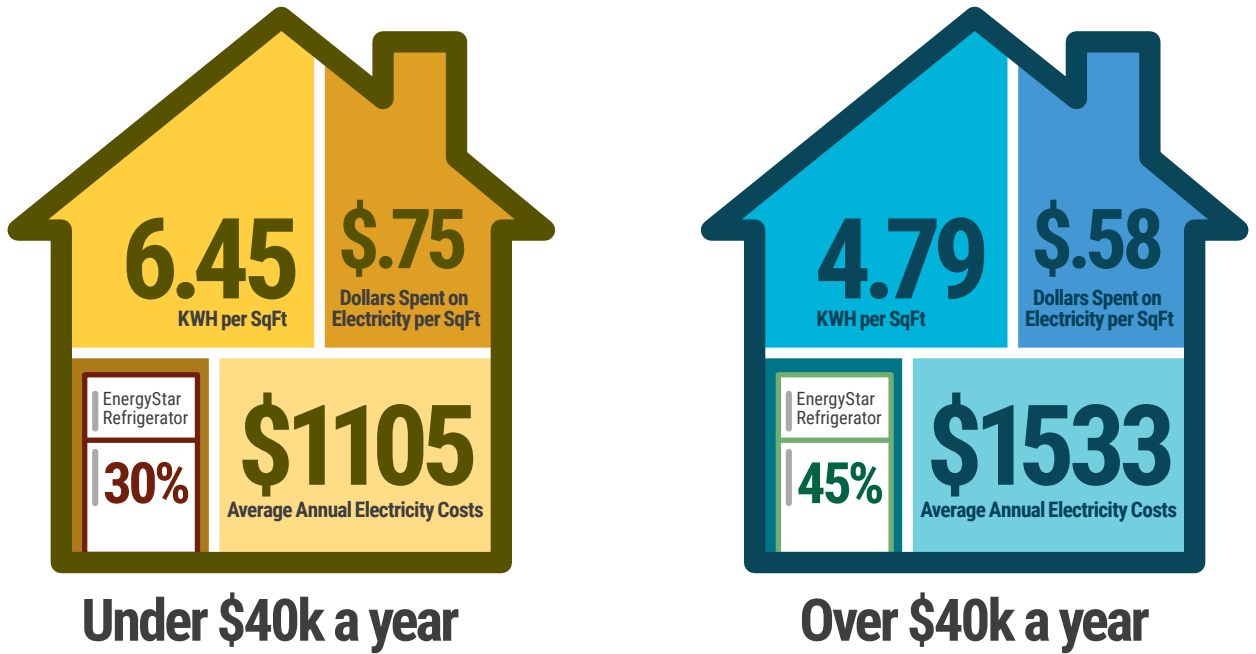
Personal health is also put at risk. Chronic diseases like diabetes are often exacerbated in low-income households with high energy burdens due to the challenges of refrigerating essential medications.⁷ Even otherwise healthy children in these situations face increased chances of food insecurity, hospitalization, and developmental disorders.⁸

Percentage of Families Living in Poverty Paying More than \$200 a Month on Electricity⁹

While the median electricity bill in the United States in 2013 was approximately \$114 a month, a large number of low income families pay more than \$200 a month on electricity.^{10 11} This is a serious burden for these households considering that a family of four living in poverty earns \$24,250 a year.¹² There are five cities where over 10% of those living in poverty pay in excess of \$200 a month on their power bills: Jacksonville, Baltimore, Miami, Orlando, and Austin.¹³ The map below shows metro areas with the highest percentage of low-income families with disproportionately high electricity bills.



Understanding How Working Families Use Energy¹⁴



These energy related financial and health risks hit low income families the hardest—nearly 67% of those at or below the federal poverty line face energy insecurity.¹⁵ However, even households with relatively high earnings still struggle with their utility bills. Seven percent of families making more than 200% of the federal poverty line, or approximately \$50,000 a year for a family of four, still pay disproportionately high energy costs.¹⁶ In total, an estimated 16 million Americans pay more than 10% of their total income on utility bills.

This burden is not uniformly shared by region or race. Forty-six percent of all households with high energy burdens are in the South and 50% of all families struggling with disproportionately high power bills are African American.¹⁷ Addressing America’s growing and concentrated energy cost challenges is essential to unlocking the full economic potential of low and moderate communities.

MISSED OPPORTUNITIES FOR AMERICAN FAMILIES

The root causes of America’s growing energy cost inequalities are related to a wide variety of social and economic factors, but low property ownership rates, lack of access to capital, and lack of awareness of existing programs are among the most addressable by policy makers and advocates.

Renters are Missing Out

Unlike their wealthier peers, low-income families are far more likely to rent their properties than own. This presents a number of fundamental barriers to lowering their energy burden, particularly because 88% of property owners pass the utility bill directly to their tenants.¹⁸ Renters have limited incentives or opportunities to invest in a property they do not own and owners are unlikely to make upgrades when they do not pay the power bill.

Failing to bridge the gap between renters and owners is a costly problem. Low-income renters consume nearly 9% of all residential energy at a personal cost of nearly \$20 billion per year.¹⁹ Installation of basic energy efficiency upgrades for low-income renters could save these households \$4 billion a year that could be used to stimulate job intensive industries (see “Building the Inclusive Clean Energy Economy Builds Good Jobs” on page five) and provides significant savings for these working families.²⁰

Financing Tools are Inadequate

Even low-income homeowners and the minority of renters capable of making efficiency upgrades or purchasing solar often lack access to financing tools that make these improvements affordable. High credit score requirements, deferred home maintenance issues, and complicated payback programs severely limit participation from the 50 million American families that make less than \$40,000 a year.

These issues block access for many energy efficiency initiatives, particularly property assessed clean energy (PACE) programs that necessitate special mortgage terms. However, they are especially challenging in the rooftop solar space, where consumer credit FICO scores of 650 and above are usually required. These stringent requirements automatically exclude the 30% of American households that have imperfect credit from readily accessing solar, and that statistic does not even capture the millions of families who would need to make serious structural improvements to their homes before even considering on site energy production.²¹

The impact of high credit score requirements and other barriers to entry are readily evident in the current distribution of solar installations across the United States. While low and moderate income families make up 40% of the population, they only account for 5% of all residential solar installations.²²



Building the Inclusive Clean Energy Economy Builds Good Jobs

Expanding access to renewable energy and efficiency benefits low and moderate income families directly by lowering their energy bills, but also has the potential to provide a new pathway to relatively high paying jobs. Solar on its own is one of the most job intensive energy investments in the United States, generating over 7 new positions for every megawatt of installed panels.²³ Importantly, these projects do not just create a large number of jobs, they create high paying jobs.

Solar installers without college diplomas earn \$40,020 a year with primarily on the job training—a \$5,000 a year premium over the median income for those with just a high school degree.²⁴ While the overall employment footprint for solar installer remains small, approximately 5,900 individuals currently work in the market, the projected growth in the industry is incredibly high. Community solar, which represents only a segment of the overall renewables landscape, has the potential to create nearly 40,000 jobs nationally by 2020.²⁵

Other renewable and energy efficiency occupations have similar profiles, including insulation workers who are seeing a 13% annual growth rate and are compensated nearly \$3,000 more a year than their similarly educated peers in different fields.²⁶ Furthermore, these types of positions present ladders of opportunity for high performing individuals to move up into oversight and management opportunities that present even higher pay.

These good, high paying jobs are critical for helping low and moderate income families re-enter the middle class and to bridge the .5% gap in unemployment between those with high school diplomas and individuals with college degrees.²⁷ Critically, realizing the full potential of these so-called “green-collar” jobs will require broad adoption of renewable energy for everyone.

Lack of solar uptake among these households is not in and of itself a problem. However, the failure of solar models to address working families' needs does mean that many of the households that stand to benefit most from solar lack the tools to access it.

In many states, rooftop solar offers a way for consumers to reduce their utility costs on a per kilowatt hour basis and to lock in long-term, stable pricing. Estimates show that if all moderate and low income families adopted modest solar arrays (approximately 4 kilowatt systems) they could collectively save between \$17.9 billion and \$23.3 billion annually.²⁸

Community Awareness of Energy Programs Remains Low

While many solar and energy efficiency programs can be challenging, if not impossible, for many working families to utilize, there are a wide variety of existing ways to effectively lower their utility bills. Unfortunately, awareness and uptake of these opportunities remains low due to poor community level engagement.

Participation in the Low Income Home Energy Assistance Program (LIHEAP) is emblematic of the issue. This federally funded block grant program provides states with the ability to directly aid families struggling with high utility bills. Despite the program's relatively simple structure and the obvious benefits to families in need, uptake remains low—only 5.5 million of the nearly 15 million eligible households received the benefit.²⁹ Similarly, the Weatherization Assistance Program (WAP), an effort connected to LIHEAP, only reaches approximately 100,000 families a year.³⁰

When even direct subsidy programs like WAP and LIHEAP fail to reach the neediest families, it is not surprising that more complicated energy initiatives around demand management, weatherization, and solarization have struggled to connect with the communities that stand to benefit the most.

TRANSFORMING ENERGY BURDENS INTO ECONOMIC EMPOWERMENT

Big power bills have big impacts on America's working families. Financial distress, missed opportunities for investment, and even adverse health outcomes are the consequences of energy policies and market practices that keep low and moderate income families trapped by their monthly utility bill. It does not have to be this way. A new wave of best practices is emerging that help working families turn their

energy challenges into opportunities for empowerment. Enhanced community engagement strategies and community solar programs present the strongest pathways to bringing renewable energy to low and moderate income families.

Community Based Energy Outreach and Engagement

Moving from a well-intentioned energy program to energy savings at the household level requires both targeted energy literacy programs and a community led engagement strategy. Evidence from in depth on the ground community interventions show energy literacy is an essential cornerstone for launching an effective power bill reduction effort for both renters and owners.³¹

Paired with an overall financial literacy program or executed as a standalone intervention, these efforts make the case for pursuing energy savings programs at the household level. Once this foundation is laid, families are much better positioned to make the investment of time into enrolling in a wide variety of programs. These include federal subsidy programs like LIHEAP and WAP, but also more innovative locally led initiatives such as smart metering and lighting improvements.³²

Evidence from intensive engagement programs in the District of Columbia, Chicago, Iowa, and Massachusetts demonstrate that place-based interventions that bring the energy programs directly to consumers are critical to creating economic empowerment in residential energy.^{33 34 35} Critically, these types of rigorous community based programs not only connect families to existing programs, but also increase appetite for other clean energy and environmental causes.

Community Solar

Community solar, sometimes referred to as shared solar, allows individuals to purchase affordable clean energy produced close to home, without installing any new equipment. Using this model, a solar array is built in a location with good sun exposure and access to the power grid. Anyone who pays their own power bill, including renters and owners, can then buy subscriptions for a portion of the energy produced by the system, which is credited against their power bill.

Community solar benefits low and moderate income families in a wide variety of ways. First, it has the potential to reach the 49% of all households, businesses, and civic institutions that cannot host their own solar arrays.³⁶ Additionally, through power purchase agreements and alternative credit worthiness checks, working families can lock in low-cost electricity rates that do not vary by season.

By increasing electricity pricing transparency and reducing the price per kilowatt of electricity used, community solar offers families opportunities to take greater control over their energy expenditures.

CONCLUSION AND CALL TO ACTION

Eighty years ago, the United States rallied to make universal access to electricity an enabler of economic success for everyone. Today we have the opportunity to make even greater strides by bringing the clean energy economy into everyone's homes—regardless of income.

Community solar is a game-changer for expanding access to clean, affordable energy for working families. Aligning residential energy efficiency programs with community solar programs could amplify cost savings, putting money back in the pockets of people who are already carrying a disproportionate cost burden for electricity. Direct community engagement through place-based programs would be an essential strategy for transforming affordable clean energy and efficiency into greater economic empowerment.

Advancing this three-part agenda will open up new pathways for low and moderate income households to climb the economic ladder and build real wealth in their communities, ensuring that working families have a seat at the increasingly abundant clean energy table.

Endnotes

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Groundswell is a nonprofit organization that organizes community power through programs in equitable community solar, affordable wind power, and energy efficiency. Since 2009, Groundswell has engaged, organized, and connected thousands of families, small businesses, faith institutions, and local nonprofits to affordable clean energy and energy efficiency.



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