

How affordable housing can reduce energy burdens



Energy costs in the United States are rising—fast. In the next five years, electricity rates are projected to rise 15–40%.

Households with the highest energy burdens, or those who spend a disproportionate amount of their income on utility bills, spend three times more of their income on energy than higher-income households.

They also face some of the worst impacts of the climate crisis. This leaves many communities with fewer resources to adapt to rising costs and greater exposure to risk from extreme weather events.

At the same time, federal support for clean and renewable energy and decarbonization is shrinking, making these challenges even worse. Many IRS tax credits for energy-efficient appliances and upgrades sunset at the end of 2025.

Even outside of the climate landscape, rising health care costs and a steadily upward trend in cost of living continue to put undue pressure on many Americans.

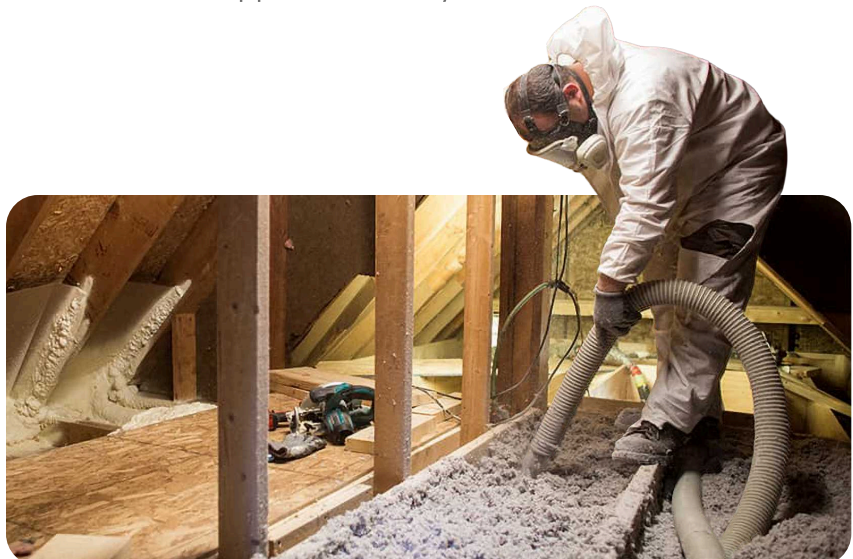
Though the energy burden and affordability crises are worsening, these issues are not new. And that means the solutions don't have to be, either. One proven solution we already have? Decarbonizing affordable housing.

EXPANDING ACCESS TO EXISTING CLEAN ENERGY FUNDING

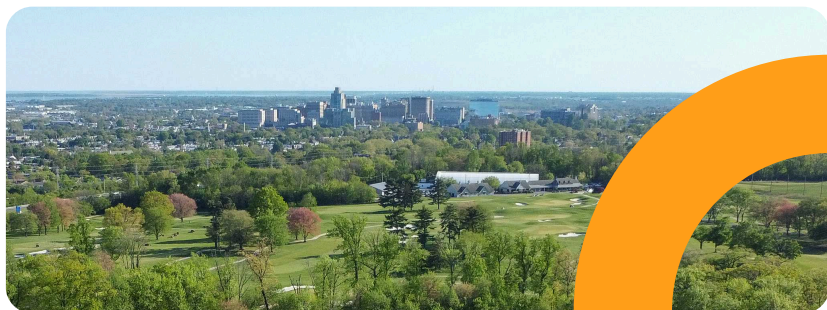
VEIC works across the country to help reduce energy burdens and make clean energy more affordable and accessible, especially for low- and moderate-income residents. Through our work running Efficiency Vermont, an energy efficiency program supporting Vermont residents and businesses, we've learned to reach these residents, we need to help overcome specific barriers.

Despite available incentives, many low- and moderate-income Vermonters cannot access clean energy solutions like electrification and weatherization because they'd need to tackle costly home repairs first.

In 2024, Efficiency Vermont expanded its weatherization program to cover home repairs to address roofing issues, structural concerns, and health hazards like asbestos. The organization also expanded its home electrification program to cover panel upgrades, enabling residents to replace gas equipment with more efficient, electric appliances safely.



VEIC tested a different approach in Delaware. On a limited income, housing and utility costs can be an extreme burden. Energize Delaware asked VEIC to understand if Zero Energy Modular (ZEM) homes are a feasible solution to both housing and energy costs. These homes have a higher upfront cost, but they're more durable, have better air quality, and use significantly less energy than mobile and manufactured homes.



VEIC found that ZEM homes in Delaware would:

- **Lower energy bills and use less than one third of the energy of a typical mobile home**
- **Help residents save between \$200 to \$300 each month**
- **Be more durable and resilient to weather events**
- **Reduce greenhouse gas emissions**
- **Improve indoor air quality**

Based on these findings, Delaware started a pilot program to create 25 ZEM homes on land that is fully owned or long-term leased from a land trust.

DECARBONIZING THE DISTRICT'S AFFORDABLE HOUSING

Another proven model for decarbonization began in D.C. In fiscal year 2020, the District of Columbia Sustainable Energy Utility (DCSEU)—an energy efficiency program administered by VEIC on behalf of the District Department of Energy and Environment (DOEE)—set out to improve energy affordability and advance progress toward D.C.'s ambitious climate goals. The team launched the Low-Income Decarbonization Pilot program, which aimed to learn how decarbonizing homes could reduce energy burdens for the District's low-income residents while also meaningfully reducing greenhouse gas (GHG) emissions.

Participating households—who make below 80% of the area median income—received a free home energy audit, electric appliances, and other electrification measures (like heat pump installation) for space heating and cooling. The pilot also supported electric panel upgrades for nearly every participating home to safely manage the higher electric load.

The first-of-its-kind program delivered inspiring results. Participants reported:

- **Greater home comfort**
- **Improved indoor air quality**
- **More manageable utility bills**



The electrification projects also helped residents significantly lower their carbon footprint. The ten homes electrified in the initial study have reduced their annual GHG emissions (CO₂e) by 31.9 metric tons, equivalent to eliminating the emissions from the burning of 35,305 pounds of coal every year.

Building on this success, the DCSEU has created a permanent Affordable Home Electrification Program (AHEP), which focuses on single-family homes and small multifamily buildings. The DCSEU also launched the Affordable Housing Retrofit Accelerator (AHRA) program in 2022 with the goal of helping large multifamily residential buildings meet D.C. Building Energy Performance Standards, delivering 20% to 35% energy savings, and supporting electrification of systems and appliances. Both programs cover up to 100% of project costs.



Living on social security, energy bills factor greatly. When I was paying the full price, I had to budget, and the budget was much tighter, and some things you must do without, but now I have more money in my pocket that I can do more things with.”

– Cerise Turner

District resident who participated in AHEP and Solar for All in fiscal year 2023

Through fiscal years 2024 and 2025, the DCSEU team has supported electrification projects for 130 income-qualified District households through AHEP. It served more than 4,000 low-to moderate-income tenant households in the District through AHRA. Many AHEP program participants also joined Solar for All, a DOE program administered in partnership with the DCSEU that provides no-cost rooftop solar to income-qualified residents. By fueling efficient electric equipment with solar energy, participants can see even greater utility bill savings while supporting a thriving clean energy economy.

TAKING AFFORDABLE HOUSING DECARBONIZATION FURTHER, TOGETHER

Now, VEIC wants to take what we have learned from our work across the country and scale low-income decarbonization programs in other communities. We know this program model can deliver essential affordability, grid relief, public health, and climate benefits. So we are expanding our efforts to meet the urgency of the moment.

The Affordable Housing Decarbonization Accelerator is an initiative to scale our work and bring it to the communities who need it most. It's designed to reduce energy burdens, improve housing quality, and build local capacity for climate resilience—right now, not decades from now.



The Affordable Housing

Decarbonization Accelerator offers:

- A replicable model for decarbonizing affordable housing
- Strategies to cut household energy bills by 15–25%
- Tools to strengthen community resilience and equity
- Workforce development support
- Support in driving the market toward clean, efficient energy systems

The works includes:

- **Landscape assessment:** We dive deep to understand local housing, energy, and funding conditions.
- **Program design:** We develop pilots tailored to specific community needs.
- **Implementation support:** We provide technical assistance, coordination, and capacity-building.
- **Technology deployment:** We test and demonstrate emerging decarbonization solutions.
- **Stakeholder engagement:** We build trust and support through local partnerships and community outreach.
- **Evaluation & knowledge sharing:** We track outcomes and publish our findings and data-driven recommendations for replication.
- **Financial innovation:** We explore equitable financing tools to support scaling and mobilize more capital to support broader market shifts.

WHY NOW

For nearly 40 years, VEIC has decarbonized the nation's buildings, transportation systems, and utility grids through programs like the Low-Income Decarbonization Pilot. With diminishing federal support and rising energy demand, the need for this work has never been greater. Partners are essential to help us scale and maintain momentum.

If you share our commitment to addressing the growing energy and affordability challenges, join us. Together, we can co-create scalable, community-driven strategies that not only protect our planet but also improve community health and everyday lives.

**Reach out to learn
more about the
program and how
to get involved.**

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