



TVA's Home Uplift program: Reaching Underserved Communities

Tennessee Valley Authority is the nation's largest public power producer, providing wholesale electricity for up to 10 million people and businesses. One hundred and fifty-three local power company partners deliver electricity across the 80,000 square mile service area.

Even though TVA's rates are among the lowest in the country, energy burdens in the southeast United States are among the greatest. Extreme or unpredictable climate changes can be challenging. Cooling demand is high during the hot, humid summers, and heating demand is high during the cold winters. Household incomes in the Southeast fall well below the national average; an estimated 34 percent of residents in the Tennessee Valley would qualify for the federal



TVA EnergyRight contractor meets with participant Claudia Mata, connected through Knoxville agency Centro Hispano, a partnership to better connect the Hispanic community of Knoxville to Home Uplift.

Weatherization Assistance Program (WAP). These families often live in homes that are inefficient and uncomfortable, and, in many cases, unhealthy for occupants.

"Technology continues to improve, but households with limited incomes aren't able to take advantage of it," says Bethany Kitch, senior program manager at TVA. "Energy costs continue to go up, and they're having to sacrifice other things just to pay their utility bills."

TVA participates in the Home Performance with ENERGY STAR® program, providing whole house improvements that reduce energy use and improve indoor air quality, focusing mostly on older homes built before efficiency standards were in place. The Weatherization

Assistance Program (WAP) provides the same type of improvements to low-income residents, free of charge. But TVA's leadership realized there are large numbers of low-income families who don't qualify for weatherization services but who can't afford home upgrades.

TVA envisioned Home Uplift as a sustainable, equitable energy efficiency and educational program that reduces energy burdens for low-income households. To be eligible, households must not exceed the 200 percent of federal poverty level (the same as the WAP Income Standard) or, in some areas, 80 percent of the area median income level. The program is available across the Tennessee Valley in partnership with local power companies and community-based organizations.

Home Performance with ENERGY STAR®

is a national program that relies on utilities and energy agencies (Sponsors) and their network of specially trained home performance contractors to offer energy efficiency improvements that reduce energy bills and provide cleaner air and more comfortable temperatures inside the home. Common upgrades include adding insulation, sealing air leaks, and replacing inefficient cooling and heating systems. More than one million homeowners have participated in the program since it began in 2001, with each saving an average of \$500 a year in energy bills.

Transferable strategies from Home Uplift:

- Targeting LMI populations to reduced energy burdens and help homeowners age in place
- Partnering with community organizations to reach underserved populations
- Partnering with to WAP affiliates to identify qualifying households
- Partnering with local power companies to leverage charitable contributions

Answering a need

TVA's large service area is diverse, ranging from remote rural pockets in Appalachia to dense urban centers like Nashville. In many households, English is not the language spoken at home (see chart). Knoxville has a sizable Hispanic population, and Nashville's Kurdish community is the largest outside of Iraq.

Up until now, the program has served a large proportion of older residents. This is because Home Uplift initially targeted homeowners.

"Some of these single-family homes have been in the same family for generations," says Frank Rapley, senior manager of TVA EnergyRight's Residential programs. "This program helps enable seniors to keep living in their homes and gives them better quality of life and a reduced energy burden."

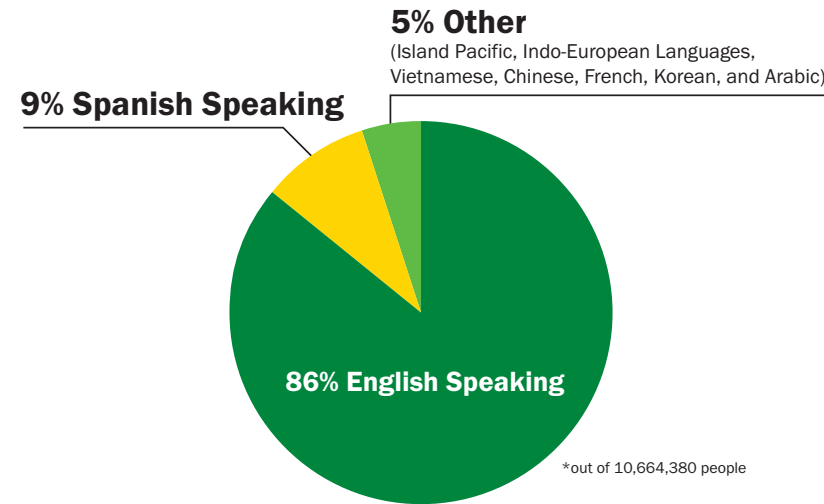
Home Uplift has broadened its scope to include households who rent single-family homes. Local power companies can direct up to 50% of their funding to rental properties. This shift will likely enable the program to capture more young families.

Recruiting households

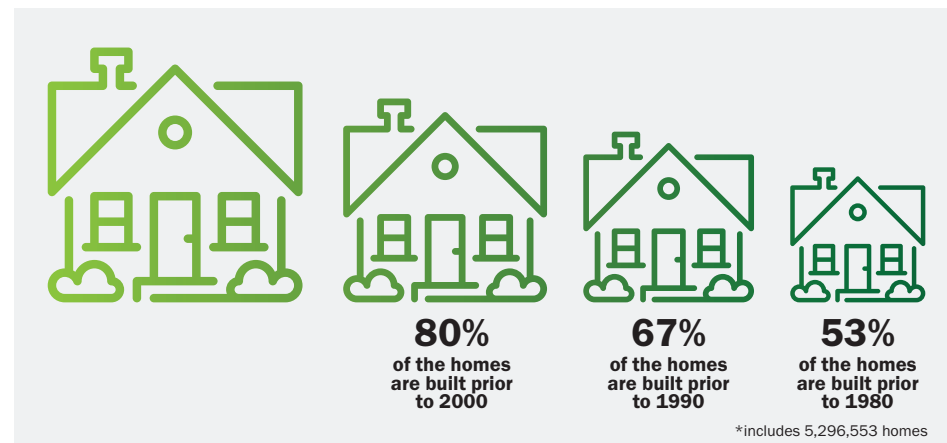
Partnerships are vital for expanding the reach of Home Uplift, and the program uses a number of strategies to recruit households.

In Memphis and other communities, Home Uplift works with the organizations that implement the WAP. By studying the programs' waiting lists, they can identify those households that will never have enough "priority points" to be served and reach out to them directly.

Home Uplift also partners with neighborhood groups, churches, and community action agencies. These trusted organizations can help overcome language



Language spoken at home in TVA Service Area



Age of Low and Moderate-Income Housing Stock in TVA Service Area



Frank Rapley, senior manager of TVA EnergyRight's Residential programs, talks with Memphis homeowner Esther Patrick. Esther's home was the first home TVA upgraded in Memphis, and she has singlehandedly recruited dozens of applicants in the area.

barriers and reduce skepticism and suspicion about the program. Often, Home Uplift gains a "neighborhood champion" who then convinces neighbors to participate.

In Cleveland, Home Uplift recruited volunteers from the AmeriCorps VISTA program to go door-to-door and tell people about the program. In Memphis, to celebrate the program's 500th upgrade, Home Uplift hosted a workshop at a church where congregation members could sign up for the program on the spot. And in Knoxville, TVA worked with Centro Hispano to better understand participation barriers in the Hispanic community. Centro Hispano has developed recommendations so the program can better serve non-English speaking communities across the valley.

"We have been successful recruiting in Knoxville because we are allied with a known community partner," says Rapley. "We are building the process and tools so we can take that model and move it into the other metro areas."

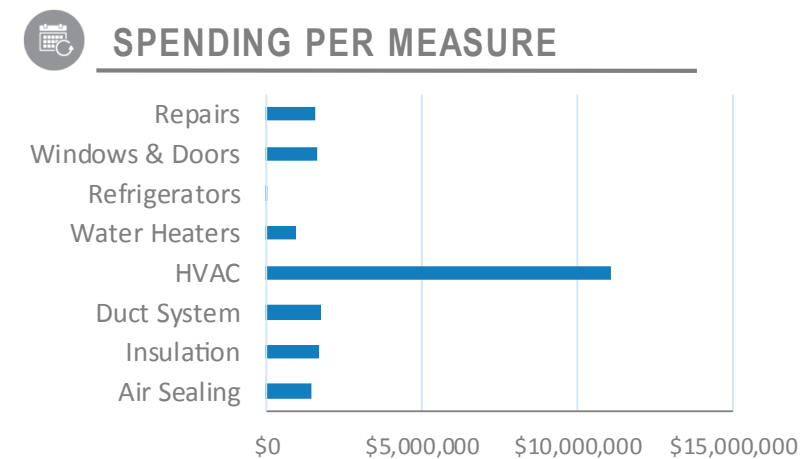
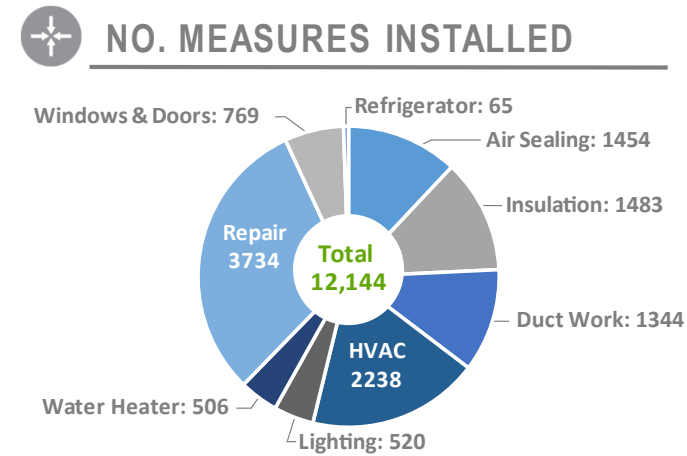
The upgrades

Home Uplift is modeled after the WAP. A prescreen helps hone in on potential issues. Next, a diagnostic audit takes place, which generates a work order. Trained, vetted contractors who are members of TVA's Quality Contractor Network perform the work, which is then inspected and verified by a third-party administrator affiliated with TVA. Finally, residents are educated about the upgrades so they can get the most out of them.

Home Uplift is implemented in two ways. In the "LPC Managed" model, staff from

local power companies interface with customers, conducting the energy audits and coordinating the upgrades with local contractors. In the "TVA Managed" model, TVA runs the program on behalf of the local power company.

Households receive on average \$10,000 worth of energy upgrades at no cost to themselves. A big chunk of the budget typically goes toward replacing the HVAC system. Air sealing, duct sealing or replacement, and insulating walls and attics are other frequent measures, but the scope of upgrades may include cleaning and tuning the HVAC system, replacing windows and doors, installing a heat pump water heater, replacing a refrigerator, and installing LED bulbs and low-flow showerheads. Home Uplift collects before-and-after data for every job and is working with the Department of Energy to generate a Home Energy Score™ for each home that receives upgrades.



"The importance of respect, diversity, inclusion and simply caring for one another cannot be overstated and is central to everything we do."

TVA's Diversity, Equity and Inclusion report

Home Uplift Outcomes FY 2021



768
homes upgraded

4,390
average annual
household kWh savings



\$8.8M
in LPC and
third-party contributions

\$5.6M
in TVA funding

\$8,332
average cost per home



37
participating
LPC partners

Often, the audit reveals issues that must be addressed before the upgrades can take place. For example, it doesn't make sense to insulate an attic if the roof needs repairing. For this reason, the program allocates 10% of the budget to repairs. TVA is working with partners to identify complementary programs that can help pay for major repairs such as roof replacement.

Scope of the program

TVA appropriates a portion of its budget for Home Uplift. Participating local power companies match these dollars through charitable contributions to a Tennessee-based Community Development Financial Institution called Pathway Lending.

After an initial pilot that began in 2018, Home Uplift formally launched in 2020, but because of the COVID-19 pandemic, auditors couldn't visit homes until the middle of the fiscal year. Home Uplift

upgraded 768 homes within six months in FY 2021; they are on track to upgrade 1300 homes in FY 2022. TVA would like to reach at least 1400 households a year, possibly more, but to do so they will need more "boots on the ground."

TVA has shifted much of its direct energy efficiency assistance to programs like Home Uplift in order to serve communities that historically have not been able to access energy improvements because of lack of capital. Home Uplift is consistent with federal policy, says Rapley, referencing President Biden's executive orders on racial equity and underserved communities. "It's a real equity issue for us," says Rapley. "We're reaching out very directly." ■



Knoxville residents Maria Muñoz & Alberto Galindez are saving \$70 per month on their energy bills; their home is also healthier and more comfortable.

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<https://www.energy.gov/eere/buildings/home-performance-energy-starr>

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