

An Energy-Efficient Mobile Home Through Appalachian Power Company's Take Charge Program

THE CHALLENGE

When Mr. James Nichols reached out for support in March 2023, his main source for hot water was a pot of water placed on a hot wood stove. His hot water tank, an original of his nearly 30-year-old mobile home, was leaking and not operable. With zero insulation underneath the home, and heating through wood stove, electric furnace, and space heaters in the winter, Mr. Nichols was looking for some support.

THE SOLUTION

After approval for **Appalachian Power Company's** Take Charge program, **Community Housing Partners (CHP) Energy Solutions** conducted a home inspection at Mr. Nichols' home in Floyd County, Virginia. A suite of **energy efficiency, health, and safety measures improvements** were identified.

A month later, the CHP Energy Solutions crew, the Take Charge program implementer, began making improvements throughout Mr. Nichols home. This included comprehensive **air and duct sealing**, a **belly patch kit** and **insulation** for underneath the mobile home, a **new hot water heater**, base-load measures like **LED bulbs** and **faucet aerators**, and a brand new, 2 ton 16-seer **high efficiency heat pump**.



The **Virginia Energy Efficiency Council**, a member-based 501c3, launched the Energizing Efficiency Campaign in 2023 to further the mission of advancing EE across the state by showcasing incredible work being done in our communities and inspiring others to act. Learn more at [VAEEC.org/Energizing-Efficiency-Campaign](https://www.vaeec.org/Energizing-Efficiency-Campaign).



2023 ENERGIZING EFFICIENCY CASE STUDY

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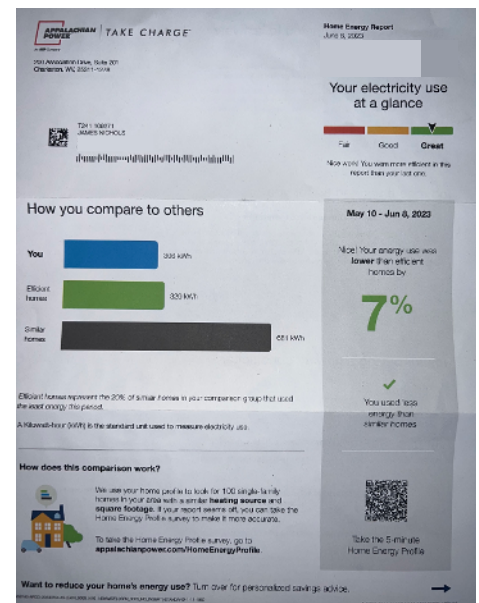
For Mr. Nichols, who lives by himself, these improvements have made a huge improvement to his quality of life. Not only was his home made more energy-efficient, but **safety was greatly improved** as well. An improperly vented wood stove was removed, and the heat pump will provide air conditioning throughout the home in the summer, something Mr. Nichols has never had in his home before.

“Before the work on my home, I heated with an electric furnace and a wood stove. During the winter, my furnace ran all the time and my wood stove helped with the heating cost, but it was dangerous. The APCo Program has made world of difference.” - Property Owner James Nichols

THE RESULTS

Mr. Nichols is expected to save around 10,123 kWh annually, or about \$1,400 per year, as a result of this program.

This utility program utilizes an algorithm-driven energy model that includes measures installed, average electrical costs, heating and cooling days, etc. to calculate savings. This is then third-party verified by an Evaluation, Measurement, & Verification (EM&V) provider.



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