

# The Wise Family of Rock Hill

*Family of 6 gets energy “wiser”*



## Home Fast Facts

- Built in 1982
- 1,087 square foot ranch-style home
- Cement slab with an attic
- 3 bedrooms, 1 bath
- Six (6) occupants
- Average monthly electric bill: \$300-\$330

## Heating and Air Conditioning

- Comfort Systems Heating and Cooling of Rock Hill replaced the home’s original 1982 two-ton, 6 SEER (seasonal energy efficiency rating — think gas mileage for heat pumps!) air source heat pump with a Lennox two-ton XP14 heat pump with a CBX27 air handler which gives the system a certified ARI rating of 15 SEER.
- The old manual thermostat was replaced with a programmable, touch-screen thermostat.

## Ducts

- Leaky ductwork in the attic was torn out and replaced with a specially designed new air-balanced system.
- The new system includes metal duct trunk lines, mastic sealed and wrapped with R8 insulation, and all supply lines made of R8 flexible duct with movable louvered grills.

## How the House Was Helped

## Sealing and Insulation

- Apple Blossom Insulators conducted a comprehensive energy analysis of the home, and they caulked and sealed to stop air leaks around plumbing, baseboards and other areas.
- In the attic, Glenco Insulation addressed the home’s too-low R-13 level of blown cellulose attic insulation by installing an additional layer of blown fiberglass insulation to bring the level up to R-30, the current building code standard for new homes.
- Also, Comfort Systems added an Attic Tent, a product that seals the attic’s drop down stairwell and prevents cold or hot air from passing through the opening, and they installed a new dryer vent cap on the outside of the home.

## Planned Investment

- Capped value of weatherization measures.....\$10,000

## Actual Investment

- New heat pump system with ductwork, thermostat, attic tent, and more.....\$12,545
- Sealing and comprehensive energy analysis.....\$1,250
- Electrical.....\$927
- Attic insulation to R-30.....\$520

**Total estimated value of weatherization efforts in this home.....\$15, 252**

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## Costs

NOTE: The value of work on this home exceeded the \$10,000 per-home cap set for **Help My House!** energy makeovers. Why? Because the statewide and local sponsors and installers who donated their time and materials on the project insisted on doing the job right. In their judgment, the additional effort and expense were necessary to weatherize this home to their high standards.



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# Home Energy Efficiency Makeover

## The Wise family, Rock Hill, SC

On her Help My House! contest entry form, homeowner Janet Wise wrote, "There is so much that our family wants to do to minimize our carbon footprint and help stop the threat of global warming...it all starts with your home life."

### BEFORE



The Wise's way-past-its-prime heat pump was more than 25 years old. Its age and inefficient construction meant the unit was costing more while heating and cooling the home less.

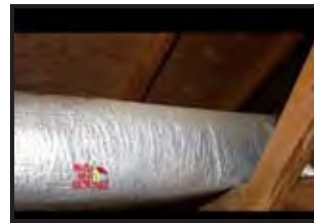
### AFTER



A new high-efficiency Lennox heat pump and programmable thermostat will dramatically improve comfort and energy savings in the Wise home.



Poorly wrapped and insulated ductwork was leaking conditioned air into the attic and allowing dust and other pollutants inside the home. This made the HVAC much less efficient—and wasted money.



A new well insulated duct system replaces the old setup. Now warm or cool air leaving the new HVAC unit flows cleanly and efficiently to vents inside the home.



Like many homes, insulation in the Wise's attic had settled over time, leaving only a thin layer of fiberglass and significantly reducing an important barrier between their inside living area and extreme outside temperatures.



New fiberglass insulation blown into the attic nearly doubles the R-value (a measure of insulation effectiveness — like fuel mileage a higher number is better) from 13 to 30, the current standard for new homes.



## Who Helped

Heating and Cooling System installed by:



[www.comfortsystemsllc.com](http://www.comfortsystemsllc.com); (803) 324-COOL

Heating and Cooling System provided by:



*Innovation never felt so good.™*  
[www.lennox.com](http://www.lennox.com)

Comprehensive Home Analysis and Air Sealing conducted by:



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