



Comfort • Savings • Efficiency

Lockett Home in Ashburn, Virginia

The Locketts and their two pre-school aged children have lived for 10 years in this 1700 square foot home built in 1994. They worried that the home was too hot in summer and too cold in winter, especially in the children's room upstairs. They knew their energy bills were too high to be this uncomfortable in a newer home.



The Lockett Home in Ashburn, VA

House Facts

- 2-story with crawlspace
- Built in 1994
- 1700 square feet
- Occupied by 2 adults and 2 children
- \$273 a month on average, combined energy utility bills (total annually almost \$2,025 in electricity and almost \$1,255 in gas)

Their Home Energy Makeover

Comprehensive Energy Analysis

Robert Brown of WellHome conducted a comprehensive home energy analysis using diagnostic equipment. The analysis looked at how the different components of the home energy system worked together compared to national "whole house" energy efficiency and safety standards. Robert found that air leakage through the home's outside walls, attic and crawlspace was two and a half times greater than should be expected. Robert determined what improvements would have the greatest impact for energy savings, health and safety, and comfort. Comprehensive national standards are set by the Building Performance Institute.

Heating and Air Conditioning System

F.H. Furr replaced the 16-year-old 80% efficient gas furnace and 10 SEER air conditioner with a 90% efficient furnace and a Lennox SunSource Comfort System which combines solar energy and electricity to reduce peak demand on home electric usage. They also installed a hospital-grade air filtration system to help improve indoor air quality, and they added a zoning system so that the Locketts could separately control the temperature of the upstairs and downstairs with a single heating and cooling system. At the auditor's suggestion, the homeowners trimmed the bushes around outside a/c unit so it would work properly.

Sealing and Insulation

In the attic, Wellhome air-sealed all recessed lights, fans and vents that are accessible from the attic. They moved insulation around reveal a cracks where conditioned air could exit the home easily. Then they added almost 1000 square feet of R-19 insulation to the attic for an overall insulation value of R-39. Also, they added an insulated attic hatch to prevent heat from entering or escaping the closet area.

On the home's outside and lower floors, WellHome air-sealed all exterior pipes with foam to prevent bugs and pest as well as unwanted air from entering the home. In the crawlspace, WellHome insulated the side walls, sealed the crawlspace and installed a ground cover to keep out moisture and mold. They also air-sealed all visible ducts to make them air tight.

Water Heater

The existing water heater was just 4 years old so no change was made.





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INVESTMENT

- \$16,000 Furnace and Air Conditioning System Replacement
- \$ 4,000 Attic, Crawlspace and Exterior Insulation with Air and Duct Sealing
- \$ 350 Comprehensive Home Energy Analysis
- \$20,350 Total Retail Value of Home Energy Makeover Improvements

Makeover Team

Primary Home Auditor:



www.wellhome.com



www.edge-gogreen.com



www.homeenergydetective.com



www.windowsonwashington.net



www.myenergymedics.com



www.wellhome.com

Comprehensive Home Energy Analysis provided by:

Insulation and sealing provided by:



www.wellhome.com

Heating and Cooling System provided by:



www.lennox.com

Heating and Cooling System installed by:



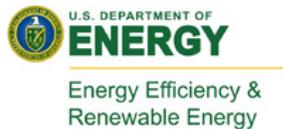
www.fhfurr.com

Participating Utility:



www.washingtongas.com

Contest Hosts:



www.energy.gov



www.epa.gov



www.loudoun.gov

Contractor Accreditation and Quality Assurance provided by:



www.bpi.org

Contest Administration provided by:



www.egia.org

Television Coverage provided by:



www.wjla.com



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