



Tambellini Residence

Maryland Home Performance with ENERGY STAR®



Customer:

Dan and Jen Tambellini

Location:

Pikesville, MD

Work completed:

July 2009

Improvements:

- Whole house air sealing focusing on: recessed light fixtures, attic floor penetrations, and interior wall top plates
- Main, addition, and 2nd floor attic insulation increased to R-50 with blown-in cellulose and closed-cell foam
- Knee wall insulation increased to R-22 with closed-cell foam and fiberglass batts
- Exterior caulking and weather-stripping

Benefits:

30% reduction in kWh usage
40% reduction in heating oil consumption
Improved air quality and comfort

Project cost:

\$8,855.00

Annual savings:

\$1,595.00

Meet Dan and Jen Tambellini

Dan and Jen Tambellini live in a 17 year old home in Pikesville, MD. The 3,200 sq. ft. house has an oil boiler and central air conditioning. Like many homes in the area, it has several attic spaces that have not been air sealed or insulated properly.

Why Dan and Jen Decided to Make Changes

Dan and Jen were looking for ways to lower their energy use and environmental impact by making the home more energy efficient. In addition, they found certain areas of the house, especially the addition and kitchen, to be very uncomfortable. They wanted to know how to improve the conditioning in these areas.

Getting Started

Dan and Jen called TerraLogos Energy Group, participating contractors with the Maryland Home Performance with ENERGY STAR program, and scheduled an energy audit.

TerraLogos performed a visual inspection and diagnostic tests on the home's mechanical equipment and building shell to determine the causes of their home's comfort, health, and energy issues.

Findings

- TerraLogos found that the home had very high levels of air infiltration. A Blower Door Test revealed that, on a normal day, all the air in the home was being replaced once every 50 minutes. The major areas of air leakage were located at openings and penetrations in the top floor ceiling.
- TerraLogos also discovered that the insulation levels in the attic areas and knee walls were insufficient and needed to be improved.

The Improvements

- Whole house air sealing focusing on recessed light fixtures, attic floor penetrations, and interior wall top plates. These projects reduced overall air leakage by 35%.
- Increased the insulation in the main, addition, and 2nd floor attic to R-50 using a combination of closed-cell foam and blown-in cellulose.
- Increased the insulation of the knee walls to R-22 using a combination of closed-cell foam and fiberglass batts.

Results

Dan and Jen have achieved a 30% reduction in annual electricity use and a 40% reduction in heating oil consumption. In addition to the reduction in energy use, Dan and Jen have noticed increased comfort levels and improved air quality throughout the house. The total project cost the homeowners \$8,855 and it is projected to save \$1,650 per year at current energy prices.

Homeowner Quote

"I consider the money spent to hire TerraLogos to be the best investment I have made in the energy efficiency of my home. TerraLogos' expertise has proven invaluable to the efficiency of my home and has provided an immediate payback in financial savings and comfort."