

## LEAP SUCCESS STORY



**Thach Family**  
**1840/1975 Two-story bungalow**  
**1806 sf, 3BRs, 3BA**  
**Propane Furnace**  
**Location: Ivy, VA**

**Projected Energy Savings:**  
**40%**



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Most winters, the Thach family faced freezing pipes, extremely cold drafts and high energy bills. It was clear that their 1840s home (with 1975 addition) needed some help. Indeed, the home energy assessment found that the air leakage in the house was 630% higher than recommended. After their home energy improvements, they are looking forward to eliminating the problems that long plagued them.

### ***Basic Issues Uncovered in the Home Performance Assessment:***

- Low level of attic insulation, degraded wall insulation
- Poor connection between original house and new addition causing air leakage
- High air leakage through exterior walls
- Incomplete vapor barrier in the crawlspace
- Air handler and ductwork located in unconditioned attic; leaky ductwork

### ***Energy Improvement Measures Implemented:***

- Sprayed open cell foam to underside of roof deck to insulate and air seal plus remedy leaky house connections
- Added low expanding foam to exterior walls for insulation and air sealing
- Vapor barrier added to cover exposed soil in crawlspace
- Open cell spray foam in attic brings air handler and ductwork into conditioned space
- Ductwork sealed

### ***Expected Benefits:***

- Air leakage reduced by 50%
- 40% energy savings
- No more uncomfortable drafts

***Building Analyst: Key Green Energy Solutions***  
***Contractors: Lithic Construction, Weatherseal Insulation,***  
***Duct-Rite Mechanical***

