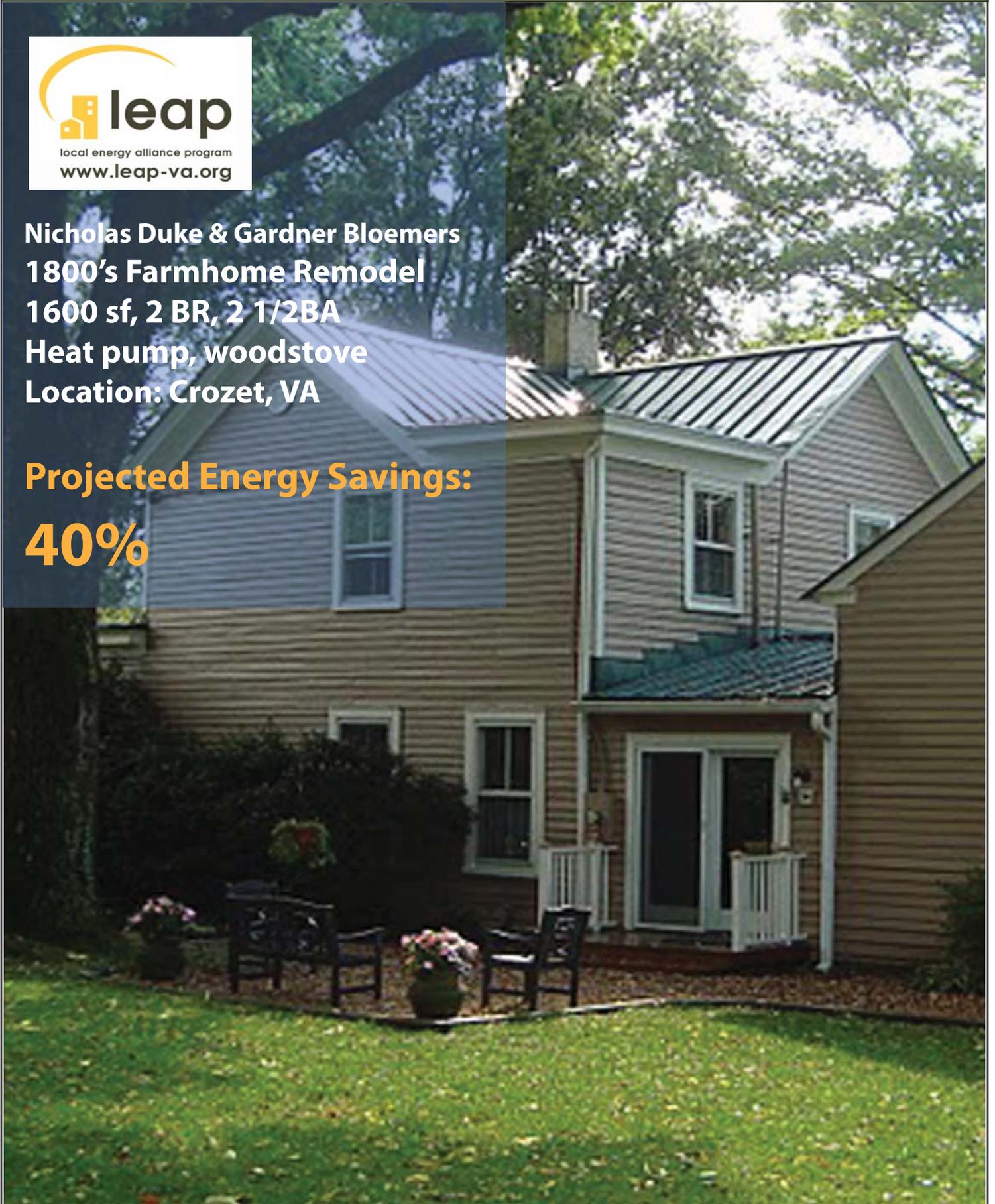


## LEAP SUCCESS STORY



**Nicholas Duke & Gardner Bloemers**  
**1800's Farmhome Remodel**  
**1600 sf, 2 BR, 2 1/2BA**  
**Heat pump, woodstove**  
**Location: Crozet, VA**

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



## LEAP SUCCESS STORY

When planning updates for their home, Nicholas Duke and Gardner Bloemers took a proactive approach, considering the long-term durability, safety and energy efficiency of their house. Their late 1800's home had been renovated over the years, but the focus of their remodeling project was updating their master bath and kitchen spaces, reconfiguring the dining area, and making the office space more functional and better insulated.

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

- The air leakage was 315% higher than the average
- The HVAC was a 20+ year-old forced air heat pump for the front section of the house, a wood stove in the rear section, and a ductless unit served the office space upstairs

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

- Air sealed walls, roof, and crawlspace to reduce air leakage by 55%
- Insulated the crawl space and brought duct work into conditioned area
- Insulated attic from R10 to R38 and brought duct work into conditioned area
- Installed an on-demand hot water heater
- Gutted and insulated the rear section of the home with spray foam insulation
- Replaced the HVAC with a high performance forced air system
- Replaced all windows with ENERGY STAR high performance windows

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

- Reduction in space heating and cooling bills by 40%
- Improved durability and indoor air quality



*"We wanted to stay in our house for the long run, but we were paying for its age in drafty rooms and high energy bills. With LEAP our house went from Swiss cheese to American cheese, and we can already feel the difference. We can tell our home is far more comfortable now, and the cost savings will be the bonus we were looking for." – Nicholas Duke*

***Architect: The Gaines Group, PLC - Charles Hendricks, AIA, CSI, CDT, LEED AP***

***Contractor: Peter Johnson Builders - Peter Johnson***

***Insulator: Elite Insulation - Ken Wells***

***Building Analyst: Key Green Energy Solutions - Laura Fiori***

***Building Analyst: Building Knowledge - Benjamin Meredith***

***HVAC: Clyde E. Smith, Inc.***