Laboratory for Sustainable Solutions
Presentation Outline

• Background and Overview
• Research Process
• Energy Star
• High Performance (HP2)
• Making the Decision
• Numbers
• Challenges and Opportunities
• Resources
• Advice
Background and Overview

- HFHI Construction and Environmental Resources (CAER)

- University of South Carolina, Laboratory of Sustainable Solutions

All houses built by Metro Denver HFH incorporate sustainable construction features and practices.
Research Process

1. Met with HFHI Construction and Environmental Resources representatives in Americus
2. Researched Energy Star, HP2, Energy Efficiency and Sustainable Buildings
3. Developed Questionnaire
4. Implemented Survey via Email
5. Follow-Up
6. Compilation
7. Final Report
Energy Star

Tight Construction
eliminates drafts, moisture, dust, pests, and pollen

Tight Ducts
improve indoor air quality and comfort with less noise

Improved Insulation
blankets the home in comfort and quiet

Energy-Efficient Heating and Cooling Equipment
reduces utility bills and noise while increasing durability

High Performance Windows
keep heat in during the winter, and out during the summer
High Performance (HP2)

HP2 is defined as “40-50% more energy-efficient than MEC 1993, resulting in homes that heat & cool for $250 or less per year.”

HP2 Home in Montana
Participating Habitat Affiliates

- HFH of North Central Iowa*
- Broward County HFH of Florida
- Greater Fox Cities Area HFH of Wisconsin*
  - HFH of Metro Denver of Colorado*
  - Chattanooga Area HFH of Tennessee*
- HFH of New Castle County of Delaware*
  - HFH Valley of the Sun of Arizona*
  - San Antonio HFH of Texas*
  - HFH of Southwest Montana*
    - Rock County HFH (WI)
  - Lower Wisconsin River HFH
  - Greater Bellevue HFH (NE)
Making The Decision

Tax Incentives
Material Costs
Affordable Bills for Homeowners
Interest in Environment/Sustainability
Person/Group Advocate
Habitat Homes Built in 2000

137 Total

- High Performance
- Energy Star
- Traditional
Habitat Homes Built in 2001

- High Performance
- Energy Star

85 To Date
Challenges

- Material Costs
- Utility Costs
- Issues With Subcontractors
- Home Rating Test
- Change in Building Practices
- Understanding Requirements
- Cost/Effort Required
- Maintenance
- Staff Within Affiliate
Media Attention/Public Relations

• Energy Star Logo
• Awards
• Signage
Resources

NAHN
HFHI Green Team
Utilities
Schools
Architects
Energy Consultants
Needed Support

- Class/Education
- Funding
- Technical Support
Advice

• Build HP2 Homes
• Make the Investment
• Join Habitat Green Team
• Refuse Substandard Building Techniques
• Get Outside Training
• Use Cases of Caulk
• Follow NAHN Specs EXACTLY
• Do it for the Habitat Families
Laboratory for Sustainable Solutions

Conclusion