Home Energy Score Pilots: Homeowner Feedback

Joan Glickman
U.S. Department of Energy
DOE’s Home Energy Score: Pilot Program

- Qualified assessor collects about 40 data points during a brief home walk-through
- Score calculated using Home Energy Scoring Tool
  - Score is an asset rating, similar to an MPG for your house
Pilot Locations

Home Energy Score Testing Locations

- Energy Trust of Oregon, Portland area, OR
- Center for Neighborhood Technology, Chicago area, IL
- Hoosier Energy, Rural Indiana area
- EfficiencyPA, Allegheny County, PA
- Cape Light Compact, Cape Cod and Martha’s Vineyard, MA
- Local Energy Alliance Program, Greater Charlottesville area, VA
- Electric Cooperatives of South Carolina
- United Cooperative Services, Northern Texas
- Center for Energy and Environment, Greater Minneapolis area, MN
- Utah (mini-pilot)
Homeowner Feedback Component of Pilot: What We Wanted to Learn

• How do homeowners respond to the score and other materials provided?
  – Do they understand what’s provided?
  – Do they like it?
  – Are they satisfied with the process?

• Can homeowners use the information to make their homes more energy efficient?
  – What do homeowners find most useful?
  – What is least useful?

• How can we improve the score label, materials and delivery of the program based on homeowner feedback?
Home Energy Score Pilots: Homeowner Response Study

- 9 sites across the US, mix of rural, urban, suburban
  - Majority white, split evenly in terms of gender, mean income $50,000 - 100,000
- 1,000+ homes audited and rated
- Homeowners given a pre-score questionnaire when assessor visited their home
- Most homeowners received a post-score questionnaire thru email or by mail
- 15% response rate: homeowners who completed both questionnaires
Homeowner Response

How satisfied were you with...

How your home scored?

The information given with your list of recommended improvements?

Your overall experience with the Home Energy Score program?

1.00  2.00  3.00  4.00  5.00

Very Dissatisfied  Dissatisfied  Neutral  Satisfied  Very Satisfied
<table>
<thead>
<tr>
<th></th>
<th>I Strongly Agree or Agree...</th>
</tr>
</thead>
<tbody>
<tr>
<td>90%</td>
<td>The amount of time I had to be at home while my house was assessed was reasonable.</td>
</tr>
<tr>
<td>87%</td>
<td>The Home Energy Score 1 to 10 scale was easy to understand.</td>
</tr>
<tr>
<td>79%</td>
<td>The recommendations will help me prioritize what types of energy improvements to make to my home.</td>
</tr>
<tr>
<td>77%</td>
<td>I will tell people about the Home Energy Score program.</td>
</tr>
</tbody>
</table>
Homeowner Response (continued)

<table>
<thead>
<tr>
<th>I Strongly Agree or Agree...</th>
<th>Percentage</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>It is clear to me how much I can save on my utility bills and how I can achieve those savings.</td>
<td>73%</td>
<td></td>
</tr>
<tr>
<td>I understand how my home compares to top performing homes in my area.</td>
<td>73%</td>
<td></td>
</tr>
<tr>
<td>The Home Energy Score encouraged me to go ahead and make home energy improvements.</td>
<td>64%</td>
<td></td>
</tr>
<tr>
<td>After remodeling, I'd want to have my Home Energy Score updated.</td>
<td>45% (45% Disagree)</td>
<td></td>
</tr>
</tbody>
</table>
Reasons homeowners cite as why they are LIKELY to make improvements

- Can do it myself, don't need to hire
- Know others improving their home's
- A way to reduce my carbon emissions
- Upfront cost is affordable
- A way to protect the environment
- Easy to do
- Improve my Home Energy Score
- Increase comfort in my home
- Help me save on my utilities

Percent of Homeowners
Reasons homeowners cite as why they are UNLIKELY to make improvements

- Don't know how to get started
- Don't have time
- Won't save enough on utilities
- Too difficult to do
- Not a priority for me right now
- It's not affordable
- Have to hire someone to do it

Percent of Homeowners
What Homeowners Found MOST USEFUL

• Knowing what to fix
  – “Learning of things that need fixing in my home I did not find on my own.”

• I learned something
  – “I like knowing how much energy I'm using and not wasting. The tips and recommendation will help me.”

• Connection to contractor/energy efficiency pro
  – “Help with finding contractor for attic sealing and insulation.”
  – “The home inspector was very knowledgeable and gave me dollar amounts that could be saved by following the given recommended improvements.”
What Homeowners Found LEAST USEFUL

• Recommendations are too generic or incorrect
  – “The final report seemed like boiler plate. Needs more precise recommendations and references to local contractors who have relationships with local power providers.”
  – “Since mine is a new home, most of the recommendations did not apply”
  – “The recommendation to replace my new, 90% efficient, energy star boiler, diminished the credibility of the report.”

• Too hard to improve score
  – “Seems like a lot of wash because such a minor jump in score. Plus, no one told us what to do to have a more significant improvement in our score.”

• Score alone not enough: Homeowners need more information and help to implement home improvements
Worth Noting….

- Homeowners are NOT homogeneous
  - Homeowners have contradictory reactions

- It’s not one piece but the whole program — score, information, in person connection, easy access to trusted contractors, and a mix of incentives
  - “I loved the fact that you had an express/rush service combining energy audit with a bid and approved contractors waiting. It made it very easy to make upgrade for attic insulation and the rebate incentives made it a no brainer.”
Key Observations from Pilot Partners

• Meaningful, accurate, specific recommendations are very helpful (and need to be improved)
• Energy professional’s advice is highly regarded and influential
• Many homeowners are excited by process, want to learn and see how home scores.
• Score alone is not enough – visuals, involvement in process, clear cost savings all help. Even better, use score as part of more comprehensive process.
• Given explanation, label and recommendations are mostly easy to understand. Exceptions being:
  – Source Energy
  – Based on a model & concept of asset
  – Who homeowners are being compared to
Feedback Led to Changes in Home Energy Score Materials & Program

Moved “Total Energy (MBTU)” to Separate Page
- Pilot partner and homeowner feedback
- Now shown on a separate page along with other fuel estimates (e.g., kwh, therms)

Show savings over 10 year period
- Finding from A/B internet testing

Leave room here to allow co-branding with partners
- Expressed interest of potential pilots
- Feedback from focus groups

HOME ENERGY SCORE

HOME INFORMATION
Address: 12345 Honeysuckle Lane
Smithville AR 72468
Home size: 2,200 square feet
Year built: 2002
Air conditioned: Yes

Score with improvements
9
Estimated 10 year savings
$3,500

Top 20% of similarly sized homes score here or better

Uses more energy
1 2 3 4 5 6 7 8 9 10
Uses less energy

SCORE INFORMATION
Assessment date: 05/27/2011
Scored in: 2011
Score #: 123456789
Scored by #: 123456789
Variables to Consider When Presenting Information

Timing matters!
- During an audit
- When remodeling
- As part of home maintenance
- At point of sale
- When home is being appraised
- In first year of home ownership

Who is the audience?
- Appraisers
- Realtors
- Homeowners
- Utilities
- Home Inspectors
Next Steps

• National Launch
• Future Evaluations
• For more information, including if you are interested in becoming a partner, contact:

homeenergyscore@ee.doe.gov
Feedback Led to Changes in Home Energy Score Program

- **Label simplified**
  - MBTUs moved to secondary info page, KwH added to same page

- **Utility savings changed to 10 year estimate**

- **Recommendations**
  - More specific to local context
Feedback Led to Changes in Home Energy Score Program

- Label simplified
  - MBTUs moved to secondary info page, KwH added to same page
- Utility savings changed to 10 year estimate
- Recommendations
  - More specific to local context