Home Energy Score

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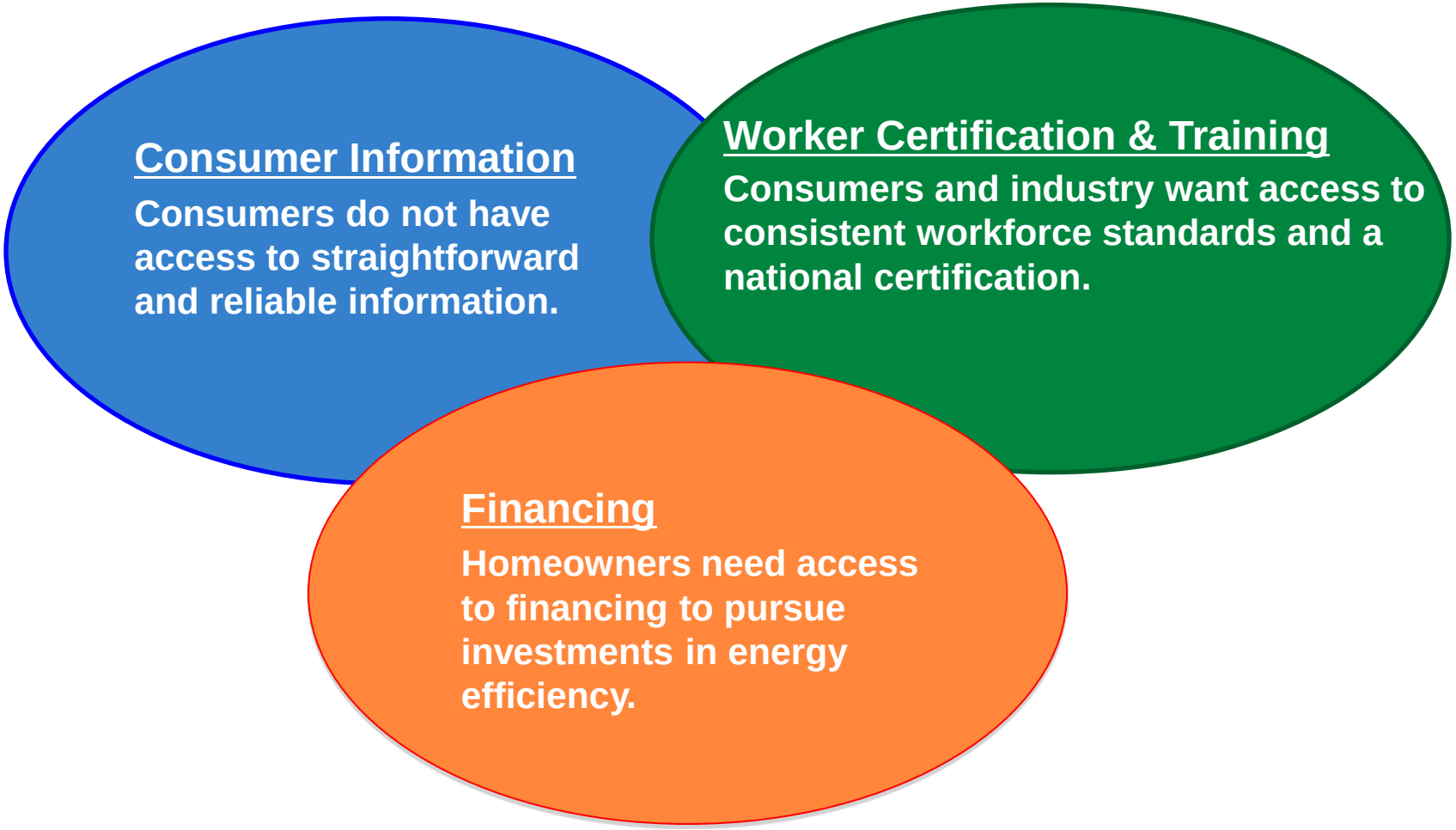
National Association of State Energy Officials

White House Recovery thru Retrofit Effort: Identified 3 Major Market Barriers



Objectives for the Home Energy Score

- Strengthen the home energy improvement market
- Provide an affordable and credible means for homeowners and homebuyers to understand --
  - their home's energy performance,
  - how their home compares to others in their area, and
  - how to improve its efficiency.

Analysis Done to Date

- Pre-White House Announcement
  - Focus groups
  - Social science research
  - Hypothetical runs to determine most important data to collect as part of assessments
- Pilots
  - Assessor feedback
  - Homeowner feedback
  - Data from pilots
  - Analysis with NREL on pilot data and other data from programs in several states (home characteristics data with utility bills)
    - Help prove validity of Home Energy Score
  - Bin/Weather analysis

Motivating Investment in Energy Improvements

- Homeowners appreciate straightforward, simple information… at least initially
  - Clear, simple, colorful graphics that make sense at a glance
- Homeowners want customized recommendations
- People are influenced by their peers and neighbors
  - Reference points matter
  - e.g., how does my energy use compare to that of my neighbors'?
- Consumers care about the bottom line
  - However, many are misinformed about which investments will pay off most quickly and save the most energy
  - Many don't realize that home energy improvements can also improve the comfort of their homes as well as health and safety
- Consumers like to see government seal on information provided
  - Co-branding with local provider also can be effective

Extracted from key Findings from Focus Groups and Social Science Review

Addressing the Information Barrier

What is the Home Energy Score?

- Standardized method for quickly assessing a home's major energy systems and the envelope
- Allows comparison between homes regardless of location in U.S.

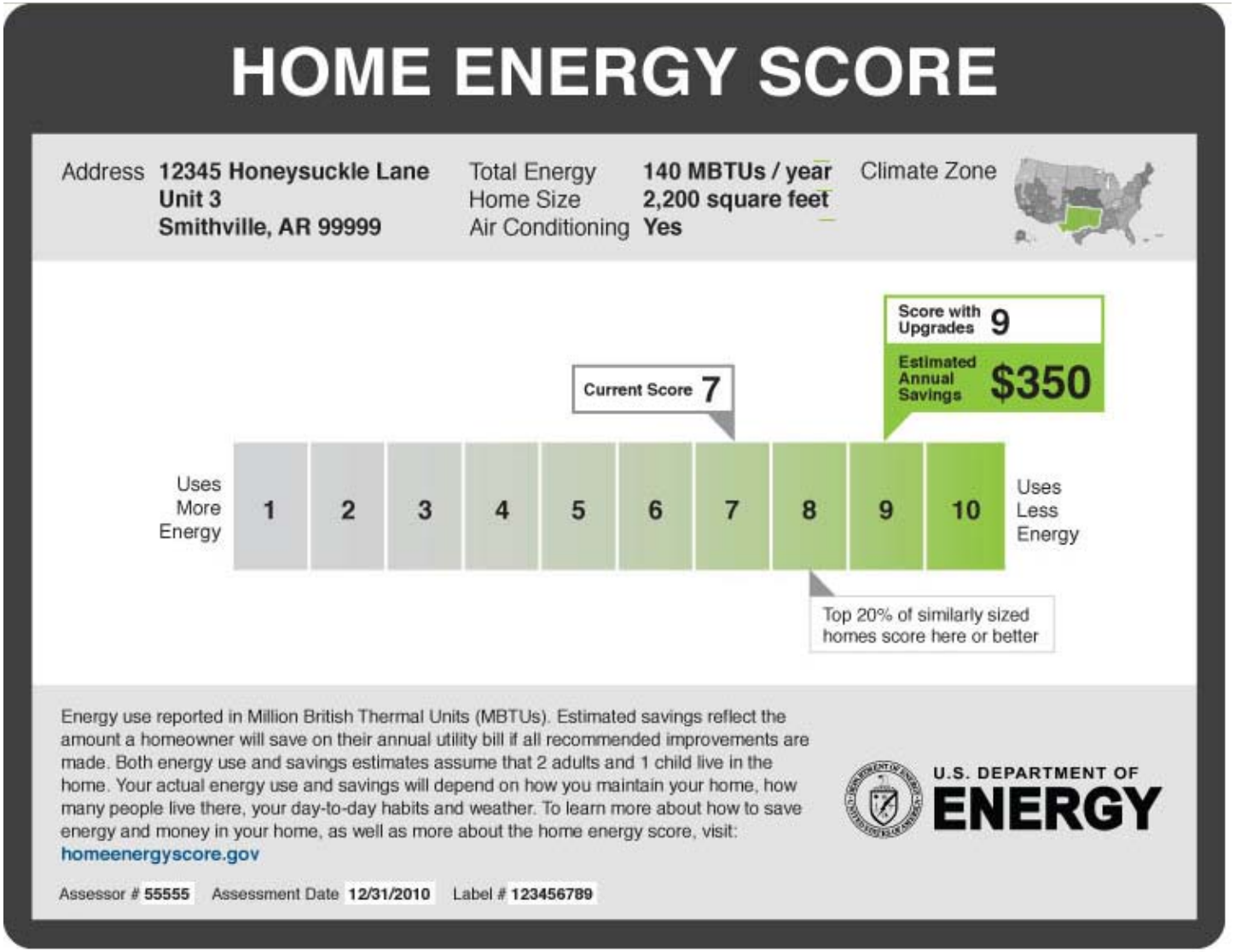
Who provides it?

- Local and state governments, utilities, non-profits, and other home performance industry organizations

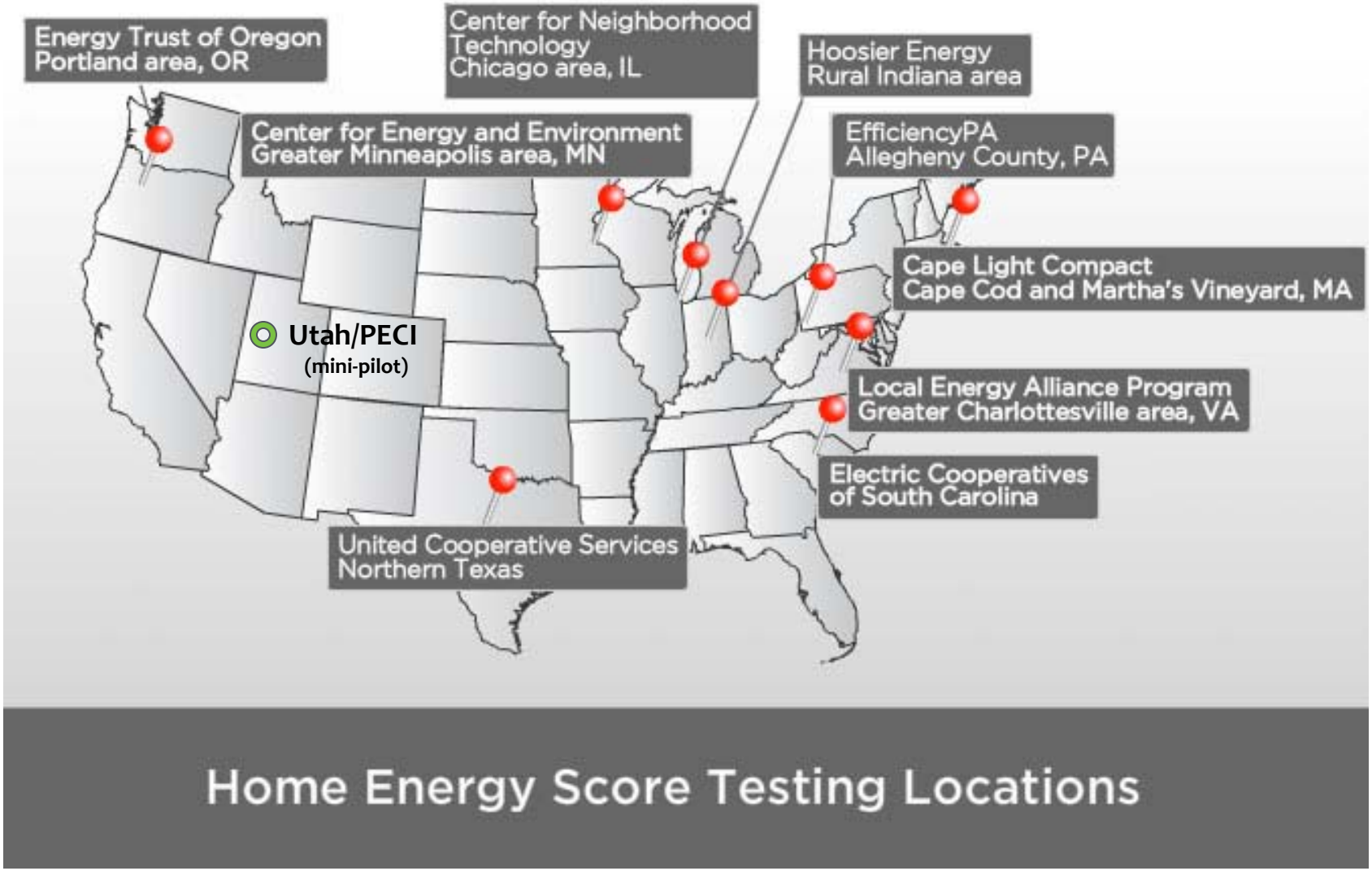
What does a homeowner get?

- Asset Score
- Home Facts: List of data collected by a Qualified Assessor
- Recommendations for improvements

Home Energy Score: Pilot Version Tested in 2011



Home Energy Score Pilots

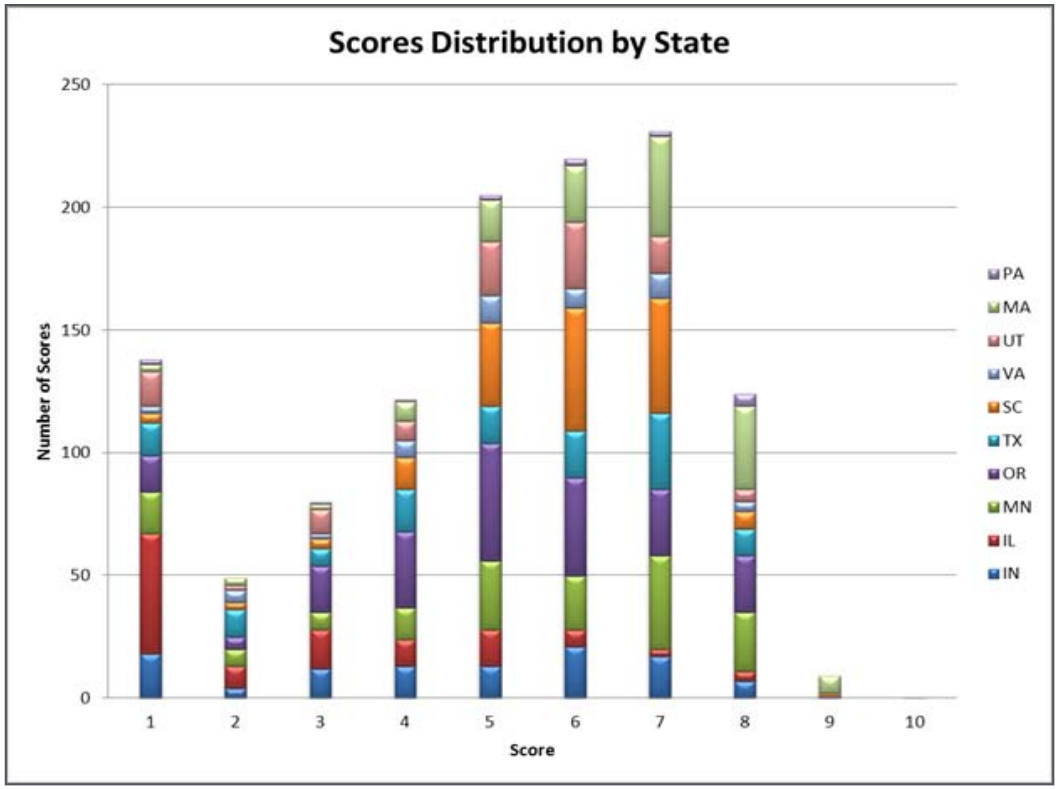


Home Energy Score Pilots

- Nine pilots completed in 2011
- 1,000+ homes assessed in total (January – June 2011)
- 31 qualified assessors participated
- In most cases, the scores reflected relatively "normal" distributions

Improvements to Scoring Tool

- Need to reconsider bin values in some climates
- Making adjustments
- Version 1.0 expected late 2011



Homeowners understood and liked the scoring method…

More than 90% of those who responded thought –

- The amount of time they had to be in the house was reasonable.
- The 1 to 10 scale was easy to understand.

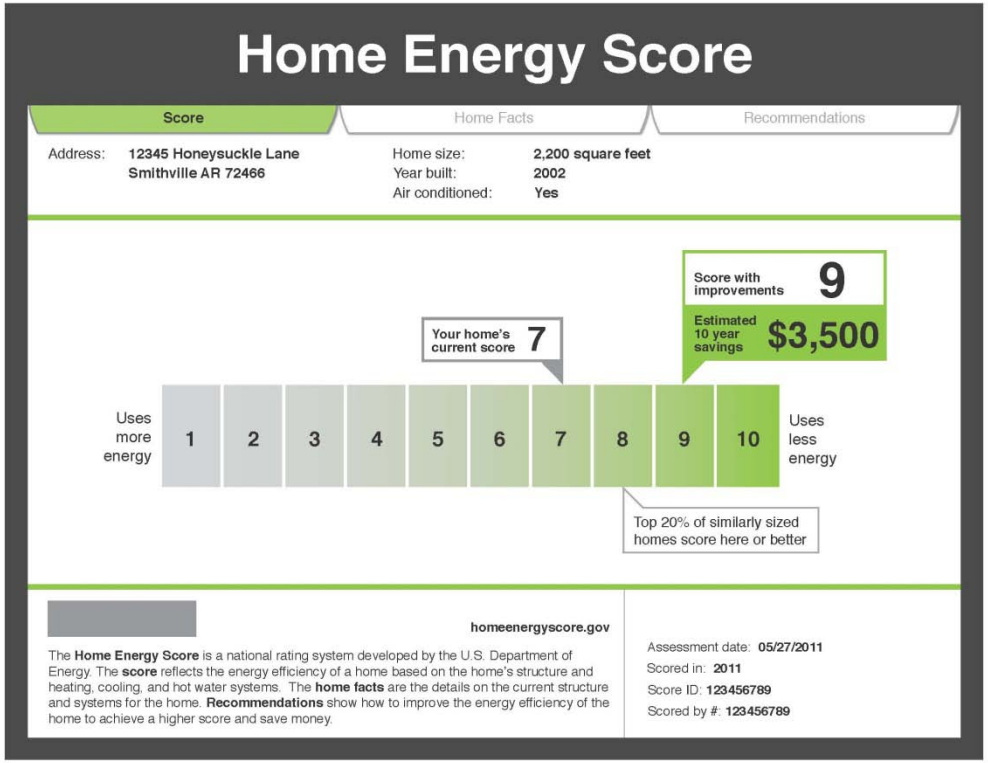
More than 80% of those who responded said –

- The recommendations would help them prioritize energy improvements to make to my home.
- They now understand how their home compares to top performing homes in my area.

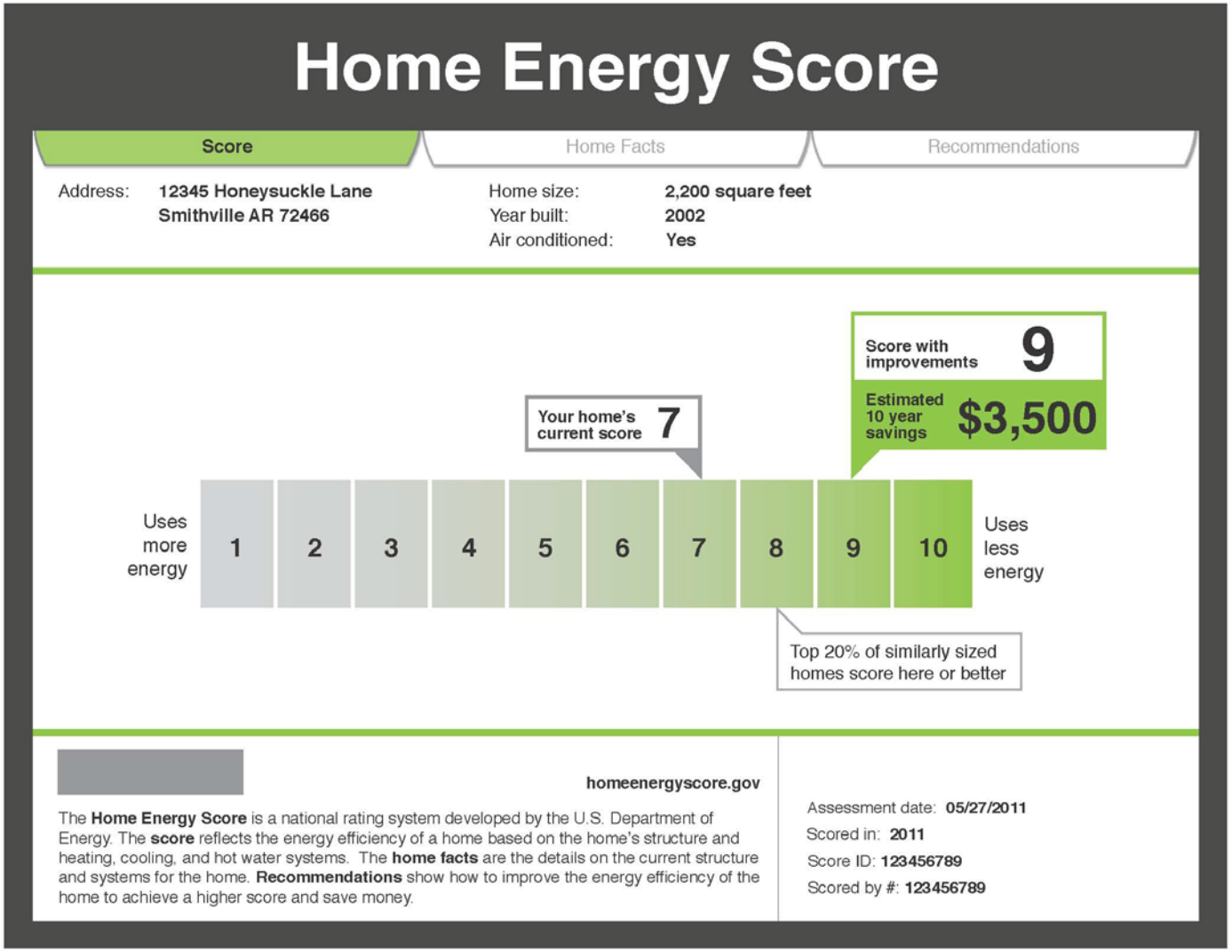
*** This is based on preliminary results.**

Feedback Led to Program Improvements

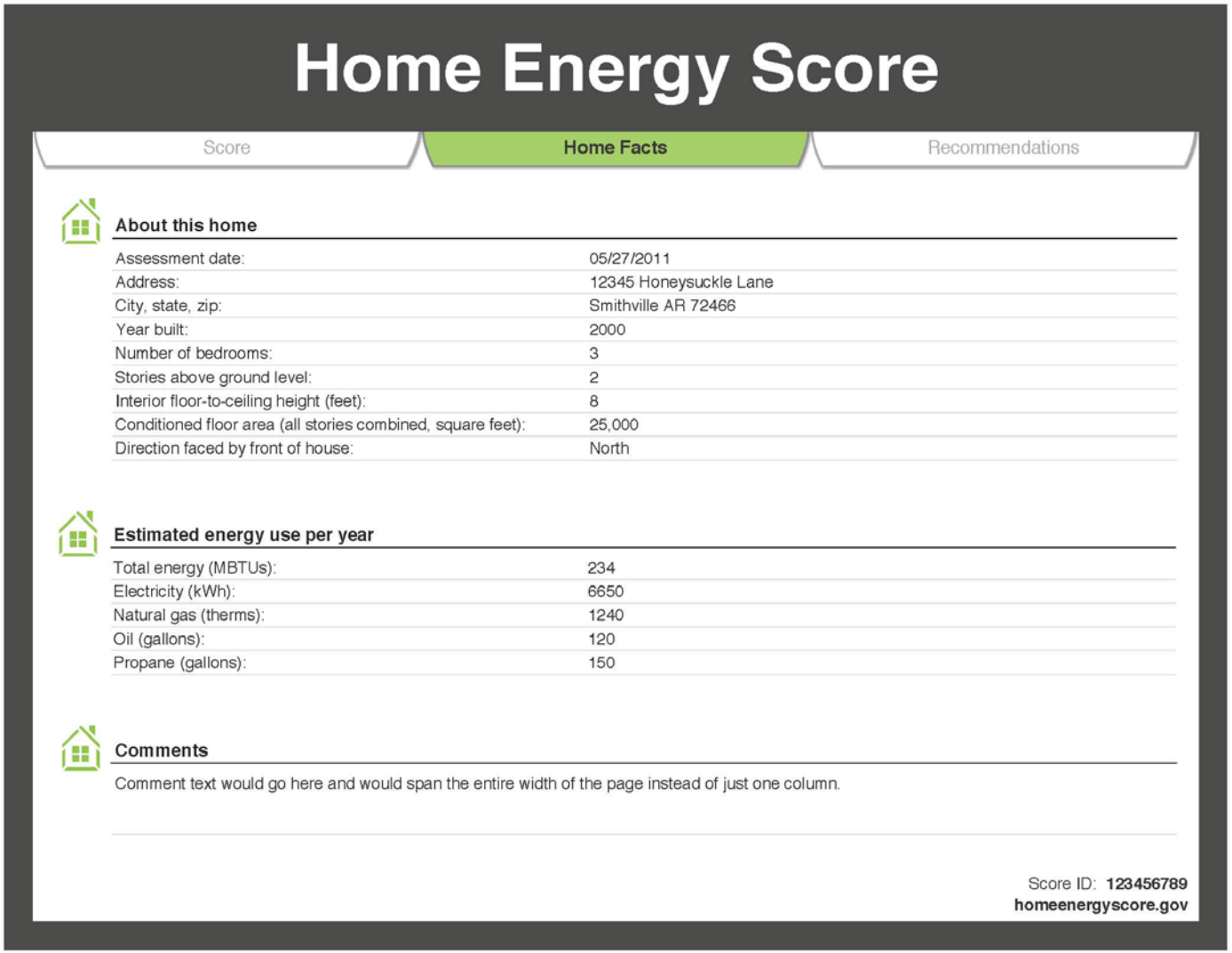
- Simplified label/score
- Improved scoring tool
- Revised assessor training and testing



Home Energy Score



Home Facts



Home Energy Score

Score | **Home Facts** | Recommendations

About this home

Assessment date:	05/27/2011
Address:	12345 Honeysuckle Lane
City, state, zip:	Smithville AR 72466
Year built:	2000
Number of bedrooms:	3
Stories above ground level:	2
Interior floor-to-ceiling height (feet):	8
Conditioned floor area (all stories combined, square feet):	25,000
Direction faced by front of house:	North

Estimated energy use per year

Total energy (MBTUs):	234
Electricity (kWh):	6650
Natural gas (therms):	1240
Oil (gallons):	120
Propane (gallons):	150

Comments

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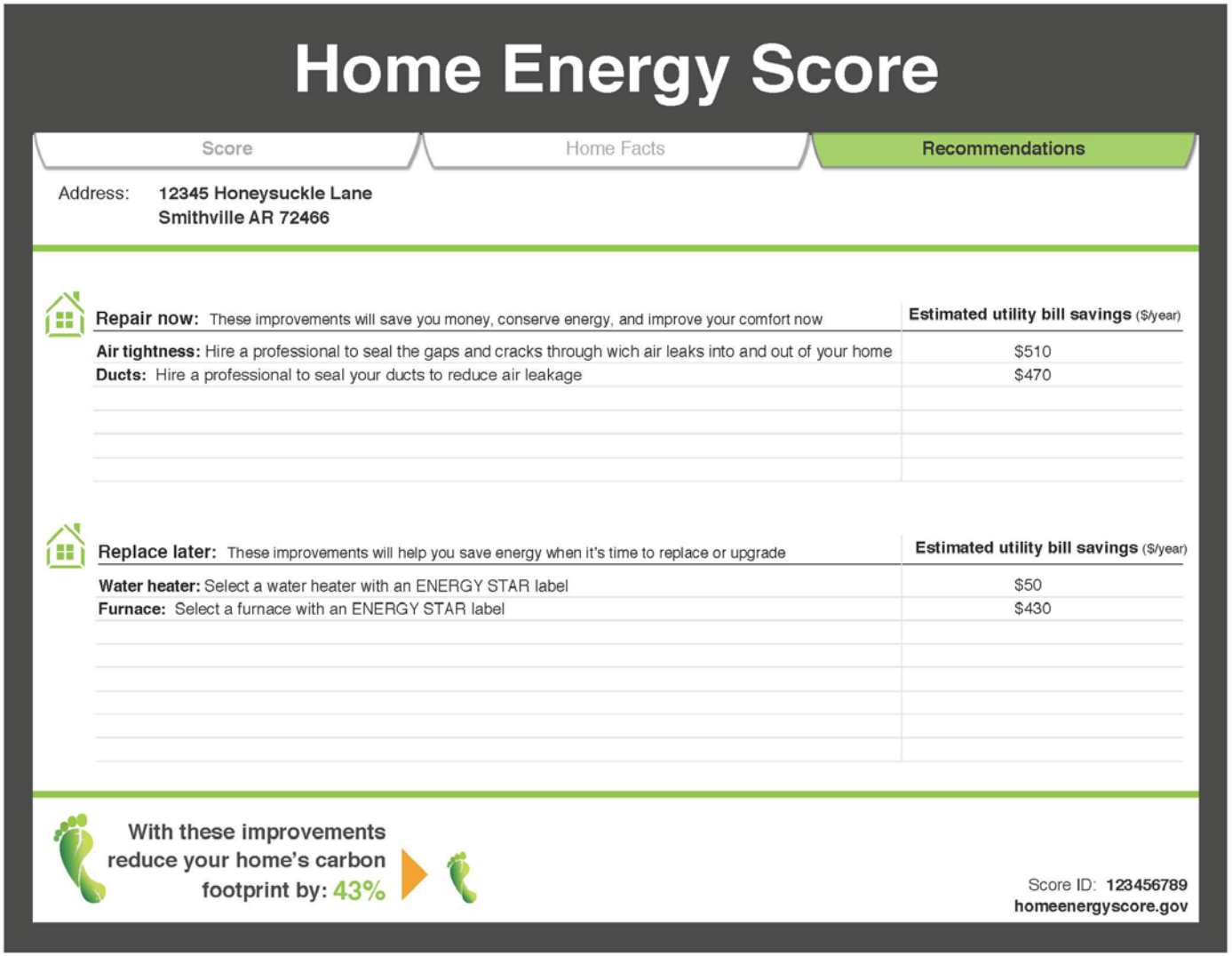
Score ID: **123456789**
homeenergyscore.gov

Recommendations (optional)



Home Energy Score

Score | Home Facts | **Recommendations**

Address: **12345 Honeysuckle Lane**
Smithville AR 72466

Repair now: These improvements will save you money, conserve energy, and improve your comfort now	**Estimated utility bill savings** ($/year)
Air tightness: Hire a professional to seal the gaps and cracks through wich air leaks into and out of your home	$510
Ducts: Hire a professional to seal your ducts to reduce air leakage	$470

Replace later: These improvements will help you save energy when it's time to replace or upgrade	**Estimated utility bill savings** ($/year)
Water heater: Select a water heater with an ENERGY STAR label	$50
Furnace: Select a furnace with an ENERGY STAR label	$430

With these improvements reduce your home's carbon footprint by: 43%

Score ID: **123456789**
homeenergyscore.gov

Interested in Becoming a Partner?

Primary Requirements

- Score minimum of 200 homes annually
- Meet quality assurance requirements
  - Rescore 5 percent of homes
- Assessors must meet DOE requirements
  - BPI certified building analyst or HERS Rater
    - Considering alternative certifications (e.g., pilot testing Home Energy Survey Professionals)
  - Training available on-line
  - Must pass DOE on-line exam (3 parts)

Partners Signed to Date

- Long Island Power Authority, NY
- Ohio Partners for Affordable Energy
- Utah Office of Energy Development
- Clinton Foundation, Little Rock, AK
- Energy Coordinating Agency, PA
- Stop Waste Organization, CA
  (several jurisdictions in California)
- Babylon, NY
- Cape Light Compact, MA
- Columbia Water and Light, MO
- Local Energy Alliance Program , VA
  (several jurisdictions in Virginia)
- Midwest Energy Efficiency Alliance, IL
  (with Center for Neighborhood Technology)

More about the Home Energy Scoring Tool

- Only Qualified Assessors can access the tool
- The tool is for use in single family homes
  - Townhomes are eligible but require special inputs
  - Cannot be used for multi-family housing
- The tool is only available through the internet
- Application Programming Interface (API) will be available in March 2012
  - Will allow seamless link to other software tools

So, what can we do to encourage investments in energy efficiency?

- Make it easy
- Make it reliable (workforce standards)
- Encourage energy improvements as part of home maintenance
  - Home maintenance needs to be as easy as car maintenance
- Seize the moment
  - Integrate improvements with home renovations or appliance purchases
  - Encourage investment in improvements at time of sale or within first year of home ownership
- Emphasize other benefits: comfort, improved value
- Advertise your investment/spread the word
  - Similar to home renovations, improvements can "spread" if visible to neighbors
  - Highlight energy efficiency at time of sale

For more information

If you have additional questions or comments,

please contact **Joan Glickman** at

homeenergyscore@ee.doe.gov

Visit: homeenergyscore.gov for

recorded webinars and Q&A sessions as well as

additional information on the program.

Criteria for Home Energy Score Qualified Assessors

All Qualified Assessors must complete the following prior to gaining access to the scoring tool and providing Home Energy Scores:

1. Provide proof of a valid certification from one or more of the following:
   - Building Performance Institute's (BPI) Building Analyst certification
   - Residential Energy Services Network (RESNET) certified Rater
2. Pass the online Home Energy Score Building Science Test as well as the online Home Energy Score Training Test (including "scoring" of 3 sample homes on-line)

Individual assessors are currently not eligible for partnership with Home Energy Score. To participate, individual assessors must work thru Partner organizations.

Convincing Homeowners to Invest in Energy Efficiency Isn't Always Easy

- Tens of millions of homes could benefit from cost effective energy improvements but…
  - Home energy is a minor cost for middle and upper income households (3-5% of household income)
    - On average, about $2200 in utility costs per year
  - Energy improvements lack cache and are largely invisible (exception: windows)
  - Home improvements are generally perceived as a hassle