Home Energy Score

Score: 7
Estimated annual savings: $411

Your home’s current score: 3

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

U.S. Department of Energy’s Home Energy Score

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Today’s Discussion of Home Energy Score

- Why bother?
- What is it?
- How does it work?
- What’s coming soon?
From a recent study by Shelton Group, Shelton’s Group Energy Pulse 2013...

81% of respondents said that higher energy efficiency would cause them to choose one new home over another.

Yet, we know that people don’t capitalize on energy efficiency opportunities in their own homes. Why not?

“I think that cosmetic improvements will make my home more attractive at resale than efficiency improvements will” (37%)

Opportunity: “I care about the efficiency of the home I buy”

Problem: “I can’t recoup my EE investments”

Potential Solution: Home Energy Score
The Score helps translate investment in energy efficiency into a tangible value.

- Homeowners and homebuyers understand it.
- Easy to capture at point of sale.
- Exposes “hidden” value: makes insulation and air sealing visible.
Taking Advantage of Social Norming

The Score capitalizes on social norming principles to help drive demand for energy efficiency.

- People like to fit in, do as others do
- “Check it out…You’re as good or better than your neighbors”
- “You did a good thing and you can be recognized for it now”
An “MPG” for Homes

Home Energy Score: A key product of the “Recovery through Retrofit” initiative

U.S. Department of Energy created nationally standardized “miles-per-gallon” home score

✓ Offers homeowners affordable, reliable, easy way to understand homes’ energy performance

✓ Available at no-cost to program providers

✓ Intended to motivate homeowners to invest in residential energy efficiency

✓ Simple and action-oriented

✓ Ability to document investment in energy efficiency using the post-improvement score

Home Energy Score website: www.homeenergyscore.gov
Numbers...Here, There, Everywhere

Making Them Meaningful

AFUE  SEER  HSPF

Insulation  R Value

Window

U-Factor  SHGC

HVAC Systems

Making Them Meaningful
Part 1: The Score

Home Energy Score

Score: 3
Your home’s current score

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

Score with improvements: 7
Estimated annual savings: $411

Address: 12345 Honeysuckle Lane
Smithville AR 72466

Home size: 1,800 square feet
Year built: 1970
Air conditioned: Yes

The Home Energy Score is a national rating system developed by the U.S. Department of Energy. The Score reflects the energy efficiency of a home based on the home’s structure and heating, cooling, and hot water systems. The Home Facts provide details about the current structure and systems. Recommendations show how to improve the energy efficiency of the home to achieve a higher score and save money.

Assessment type: Official Score
Assessment date: Feb 03, 2014
Score ID: 42944
Qualified assessor #: 101019
Home Energy Score Version: v2014.4506

homeenergyscore.gov
Part 2: Home Facts

“Home Facts” provides the inputs the assessor used and the Home Energy Scoring Tool’s estimated energy use for the home, given standard conditions.
Part 3: Recommendations

- Recommendations categorized as “Repair now” and “Replace later”

- Some Partners and Qualified Assessors elect to provide their own efficiency recommendations

- In such cases, this sheet remains blank and refers the homeowner to the assessor’s supplemental report.
Relative Accuracy of Different Modeling Tools: Comparing Source Energy Estimates to Energy Bills

Modeled source energy use vs. Measured source energy use

- REM/Rate 14.4
- SIMPLE 0.9.12
- Home Energy Score

n = 537
Comparing Natural Gas Estimates to Energy Bills
Comparing Electricity Estimates to Energy Bills
Implementation Method

Who scores a home?
- Qualified Assessors working under local Partners who are state/local governments, utilities, non-profits, and other home performance industry organizations

What does a homeowner get?
- Asset score including score with improvements and estimated annual savings
- Home Facts
- Cost-effective energy improvement recommendations
Implementation Highlights

✓ 15,000+ homes scored since 2012
✓ 250+ Assessors
✓ Homeowners understand the 1-10 scale
✓ Statewide adoption planned in CT, CO, VT, MO with others following suit (e.g., AL, AR)
  ✓ Linking to multiple listing services
  ✓ Tying incentives, levels of recognition to Score
✓ Cities requiring it as part of disclosure policies
✓ Simple data collection mechanism
✓ Useful analytical tool for program administrators/utilities
✓ Score can be easily integrated into existing residential programs
Existing Partner network
As of November 2014

Utilities  State and local governments  Non-governmental organizations  Home inspectors

- Eugene Water and Electric Board
- Coldwater Board of Public Utilities
- Focus on Energy
- Building Performance Institute
- Efficiency Vermont
- Connecticut Energy Efficiency Fund
- ECHO/Energy New England
- PSEG Long Island
- New Jersey Natural Gas
- US Inspect
- Local Energy Alliance Program
- Community Housing Partners
- Four Corners Office for Resource Efficiency
- Illinois Home Performance
- Spirit Foundation
- Southface Energy Institute
- CharlestonWISE
- Center for Sustainable Energy
- EnergyFit Nevada
- InterNACHI
- Colorado Energy Office
- Michigan Energy Options
- Illinois Home Performance
- Nexus Energy Center
- EnergyFit Nevada
- StopWaste.org
- Home Energy Score Partner
Flexible Implementation Options

✔ Home Energy Score is a flexible offering that can be integrated into a variety of different programs and efforts.

✔ Some examples in use…
Example #1: Focus on Energy (WI)

Utilities can capitalize on an auditor’s house visit

Quickly highlights opportunities for deeper energy efficiency improvements

Cost effective data collection mechanism

Partners using this approach include Focus on Energy, implemented by Conservation Services Group

Preliminary results shows high customer satisfaction upon Home Energy Score delivery

Provide the Score as part of **direct install/prescriptive measures** programs.
Example #2: Columbia Water & Light

Provide the Score as part of a whole home efficiency program.

✓ Offered as part of the Home Performance with Energy Star program
✓ Home Energy Score completed before and after energy efficiency improvements are made
✓ Improved “Final” Score serves as a form of recognition for homeowner’s actions
✓ Used to motivate investment
✓ Used to estimate energy savings
Example #3: New Jersey Natural Gas

Provide the Score as part of equipment rebate program.

- NJNG provides the Score to customers as part of the mandatory equipment rebate no-cost audit.
- Home Energy Score is used to encourage homeowners to undertake additional upgrades.
- Helps the utility collect and track data with little or no additional cost.
- NJNG carrying out a Home Energy Score Evaluation Study to assess impacts.
Example #4: Colorado Energy Office

Offer the Score at **point of sale.**

Colorado is linking the Score to incentives at point of sale or refinancing ($750 per score jump, up to $3,000)

- Puts energy efficiency improvements on homebuyer’s radar
- Consumers’ willingness to invest in energy efficiency is higher at point of sale
  - Many home improvements are made during first year of home ownership
  - Additional cost can be rolled into the loan with little impact on the mortgage payment

- Adding the score to existing energy efficiency programs to reach scale and accelerate market adoption

Highlight Energy Efficient House
Other State Highlights

- **Connecticut**
  - Integrating Home Energy Score into statewide Home Energy Solutions (HPwES) program
  - Using it to track progress toward their 80% weatherization goal for 2030
  - Plan to score more than 10,000 homes annually

- **Vermont**
  - Adopting the Score as a key component of the state’s voluntary labeling program
  - Using multiple metrics from Home Energy Scoring Tool to generate a customized label for their state
  - Roll out planned for early 2015
Third-party software companies can license the Home Energy Score API to build applications that exchange data with the tool:
- Use API and avoid double data entry
- HPXML Ready by beginning of 2015

Software companies and organizations that completed API integration:
- EnergySavvy, Energy Soft, Optimizer, United Illuminating, Cake Systems

Images courtesy Richard Szydlowski, Minnesota Center for Energy and Environment
DOE Assists with Marketing Materials for Partners & Qualified Assessors

How does your home compare?

Find out with
U.S. Department of Energy
Home Energy Score

Click to learn more

HOME ENERGY SCORE

Know how your home compares

The Home Energy Score is similar to a vehicle’s miles-per-gallon rating. The score, developed and administered by the U.S. Department of Energy, allows you to compare the energy performance of your home to other homes nationwide.

The process starts with a Qualified Assessor collecting energy information about your home during a brief home walk-through. In addition to scoring your home, the Qualified Assessor will provide you with a list of recommended energy improvements and their estimated cost savings.

Home Energy Score

U.S. Department of Energy
Energy Efficiency & Renewable Energy
eere.energy.gov

Web Banners

Graphics

Qualified Assessor

U.S. Department of Energy
Home Energy Score

 qualify for

HOME ASSURANCE

Energy Efficiency 
Residential Improvement Systems

Contact Home Assurance
Qualified Assessor

Qualified Assessor will conduct an in-home energy audit and provide a list of cost-effective energy efficiency improvements.

Click to learn more
Home Energy Score Integration with FHA and other HUD programs

✔ Tying the Score to Financing Opportunities

• Provide a two percent stretch on the qualifying debt-to-income ratio provided to borrowers purchasing or refinancing an “efficient” home or improving an inefficient one

• Allow recommendations identified by Home Energy Score as “Eligible Energy Measures” for FHA products

• Longer Term: Integrate Home Energy Score as primary EE metric for HUD’s existing homes programs
3-D Simulation Training and Testing: Coming January 2015

✓ 3-D Tool uses computer-based simulations to recreate a range of jobsite scenarios.

✓ Through a comprehensive validation study, DOE confirmed that the simulation tool can effectively determine a candidate’s competency to deliver the Home Energy Score.

✓ DOE will now recognize certifications for many different building-related organizations (e.g., BPI, RESNET, home inspector and contractor associations).

✓ Many more building professionals will now be able to offer the Score.
Opportunities in Michigan

“…we can empower the private sector and Michigan homeowners. When people are looking at buying a home, they receive an inspection report, telling them about the plumbing, the roof, and many things about the house that aren't visible to the naked eye. What they don't know is whether the house is energy efficient.”

-- Governor Snyder, November 2012

Some options on how to begin…

• Integrate Score into utility programs
  - Use of API allows utilities to provide the score at little to no incremental cost

• Promote use of Score among home inspectors and contractors
  - Need a viable option for quality assurance and mentoring

• Educate realtors and appraisal community

• Consider tying incentives to score
  - Analyze existing data from homes that have gone through home performance to see the effect of improvements on their scores
Home Energy Score

Motivate Homeowners
Data Collection Mechanism
Transparent Calculation Methodology
Integration with existing programs
Free
Easy and quick

HomeEnergyScore@ee.doe.gov
www.HomeEnergyScore.gov