Home Energy Score
Joan Glickman, U.S. Department of Energy
Home Energy Score – An “MPG” for Homes

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

**What’s the Value?**

- 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
  - Exposes “**hidden**” value (e.g. insulation)
Implementation Highlights

- More than 34,000 homes scored since 2012
- 245 Active Assessors
- Score easily integrated into existing residential programs and other services
  - Simple data collection mechanism
  - Useful analytical tool for program administrators and utilities
- Homeowners understand the simple 1-10 scale
- Statewide adoption
  - AL, AR, CO, CT, MO, OR, VT with others exploring adoption (e.g. MA, NH, NY, RI)
- Local governments using the Score in disclosure policies (City of Berkeley)
- Score on a growing number of MLSs
This 3-D Tool developed with significant input from outside experts & practitioners.
- Uses computer-based simulations to recreate a range of job-site scenarios.

DOE conducted in-classroom/in-the-field validation study
- Confirmed effectiveness of simulation tool in determining a candidate’s competency to deliver the Home Energy Score.

DOE now recognizes certifications from many different building-related organizations.

As a result…Many more building professionals are now be able to offer the Score.
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

Software companies/organizations that completed API integration:


Others evaluating or about to complete API integration:

- Snugg Pro, CLEAResult

Images courtesy Richard Szydlowski, Minnesota Center for Energy and Environment
New FHA Policy Incentivizes Use of the Score

Tying the Score to Financing

✓ New FHA Mortgagee Letter (September 2015) allows lenders to provide a 2% stretch on debt-to-income ratios for borrowers purchasing or refinancing a home

✓ Home must score 6 or higher

OR

✓ Borrower must demonstrate that they are taking action to improve home’s score to 6 or higher
• DOE will work with interested states to do a semi-custom label

• If a state wants a fully custom label, they can work with a software provider to create that and populate it with Home Energy Score data (and other data if it’s part of their program)

  ✓ The software provider or state partner would be required to use an API to send the final version of each label to DOE/PNNL for storage in our data repository

  ✓ DOE needs to review final label design to ensure consistency with DOE requirements for use of its logo and data
Comparing New & Existing Homes

- Create a “translator” between Home Energy Score, HERS, other scores to generate consistent metrics (e.g., estimated energy costs, MBTU)

- Transition to EnergyPlus
Home Energy Information Accelerator

Joan Glickman, U.S. Department of Energy
Laura Stukel, Elevate Energy
Two Goals:

- Grow the number of verified records with home energy information
- Use home energy information in new and exciting ways

Auto-pop
Tax works, why not “green”?
Local Partners Focused on Innovations

Commonalities
Home Energy Score Standards:
- RESO
- HPXML
- SEED
Breakthroughs by working with Non-Traditional National Partners

Sample Partners

- Appraisal Institute
- CoreLogic
- Council of MLS
- Homes.com
- NAR Center for REALTOR Technology
- Real Estate Standards Organization
- Realtors Property Resource LLC
Real Estate Industry is Primed for Home Energy Info

= Council of MLS members offering Home Energy Info fields
Real Estate advancing study of NEB – but it’s called “Joy”

Twenty remodeling and replacement projects were used.

As part of the survey, homeowners were asked to rate their satisfaction from seeing their children’s REALTOR® opinions of how much of their projects were recovered.

<table>
<thead>
<tr>
<th>Interior Project</th>
<th>Recovered Percentage</th>
<th>Joy Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>New master suite/owner’s suite</td>
<td>53%</td>
<td>9.7</td>
</tr>
<tr>
<td>Kitchen upgrade</td>
<td></td>
<td>67%</td>
</tr>
<tr>
<td>Complete kitchen</td>
<td></td>
<td>67%</td>
</tr>
<tr>
<td>Bathroom renovation</td>
<td></td>
<td>58%</td>
</tr>
<tr>
<td>New wood floor</td>
<td></td>
<td>91%</td>
</tr>
<tr>
<td>Hardwood refinish</td>
<td>100%</td>
<td>9.6</td>
</tr>
<tr>
<td>HVAC system</td>
<td></td>
<td>71%</td>
</tr>
<tr>
<td>Insulation upgrade</td>
<td></td>
<td>95%</td>
</tr>
<tr>
<td>Attic conversion</td>
<td></td>
<td>69%</td>
</tr>
<tr>
<td>Basement conversion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Add bathroom</td>
<td></td>
<td>52%</td>
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</tbody>
</table>
Real Estate advancing study of NEB – but it’s called “Joy”

<table>
<thead>
<tr>
<th>Midrange Project</th>
<th>2016 National Averages</th>
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</thead>
<tbody>
<tr>
<td>Attic Insulation (fiberglass)</td>
<td>JOB COST: $1,268</td>
</tr>
<tr>
<td></td>
<td>RE SALE VALUE: $1,482</td>
</tr>
<tr>
<td></td>
<td>COST RE COUPED: 116.9%</td>
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<tr>
<td>Manufactured Stone Veneer</td>
<td>JOB COST: $7,519</td>
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<tr>
<td></td>
<td>RE SALE VALUE: $6,988</td>
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<tr>
<td></td>
<td>COST RE COUPED: 92.9%</td>
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<tr>
<td>Garage Door Replacement</td>
<td>JOB COST: $1,652</td>
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<tr>
<td></td>
<td>RE SALE VALUE: $1,512</td>
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<tr>
<td></td>
<td>COST RE COUPED: 91.5%</td>
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<tr>
<td>Entry Door Replacement (steel)</td>
<td>JOB COST: $1,335</td>
</tr>
<tr>
<td></td>
<td>RE SALE VALUE: $1,217</td>
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<tr>
<td></td>
<td>COST RE COUPED: 91.1%</td>
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<tr>
<td>Minor Kitchen Remodel</td>
<td>JOB COST: $20,122</td>
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<tr>
<td></td>
<td>RE SALE VALUE: $16,716</td>
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<tr>
<td></td>
<td>COST RE COUPED: 83.1%</td>
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<tr>
<td>Entry Door Replacement (fiberglass)</td>
<td>JOB COST: $3,126</td>
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<tr>
<td></td>
<td>RE SALE VALUE: $2,574</td>
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<td></td>
<td>COST RE COUPED: 82.3%</td>
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<tr>
<td>Siding Replacement (engineered)</td>
<td>JOB COST: $13,832</td>
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<tr>
<td></td>
<td>RE SALE VALUE: $10,866</td>
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<td></td>
<td>COST RE COUPED: 78.6%</td>
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<tr>
<td>Deck Addition (wood)</td>
<td>JOB COST: $10,471</td>
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<td></td>
<td>RE SALE VALUE: $7,850</td>
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<td></td>
<td>COST RE COUPED: 75.0%</td>
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<tr>
<td>Siding Replacement (vinyl)</td>
<td>JOB COST: $12,341</td>
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<tr>
<td></td>
<td>RE SALE VALUE: $9,032</td>
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<tr>
<td></td>
<td>COST RE COUPED: 73.2%</td>
</tr>
</tbody>
</table>
Innovations in Delivering Home Energy Info

Source: MRED LLC
Results: Data Rewards Sellers, Helps Buyers

Better Market Performance
Sample: Chicago Attached Single Family

Higher percentage of the asking price:

Extra $4,576 for the average seller who disclosed energy costs

Source: 2015, Elevate Energy

Less time on the market:

About one less mortgage cycle for the average seller
Moving Forward Together

Breakthroughs

- MLS industry to standardize Green MLS fields by 2018
- RESO/BEDES mapping
- HPXML to RESO export code
- Council of MLS Green Best Practices Council
- 300,000 Homes.com listings (~10%) now populated with home energy info
Moving Forward Together

Tangible Opportunities for States

- Strategies that “grow the pipeline”
  - Pilots
  - Quality Assurance
- Rethinking the MLS as a utility third party service
  - What are the supporting policies?
  - What is the value proposition for the data holder?

Top of MLS wish list: