



Tools to Move a Market 

Energy Performance Score (EPS)

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Questions covered

The Energy Performance Score: label for new & existing homes


- Why label homes?
- How to inform stakeholders to easily understand the impact of green building and home improvements on energy consumption and global warming?
- How can this tool be used to enhance existing or planned audit programs?
- Can voluntary & mandatory home labeling progress influence homeowners & builders to make energy efficiency improvements?
- Oregon & Washington labeling pilot outcomes and recommendations

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Whole-house energy reduction

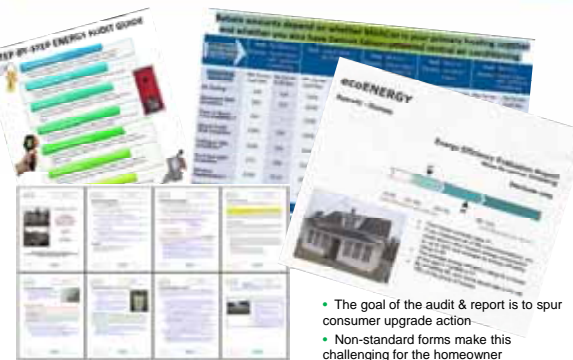
Influenced by:

- Asset rating
- Operational rating
- In-home dashboard
- Utility bill



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Residential audits: consumer challenge



- The goal of the audit & report is to spur consumer upgrade action
- Non-standard forms make this challenging for the homeowner

“MPG” for new & existing homes

Energy Performance Score (EPS)



Asset rating: The needed “MPG” for homes

- Absolute energy consumption per annum
- Carbon emissions per annum

HUD calls for 'MPG' for homes

Los Angeles Times | Real Estate
 HUD Secretary Shaun Donovan wants mortgage incentives for energy-efficient homes

"The Obama administration's top housing official -- Shaun Donovan, secretary of Housing and Urban Development -- thinks consumers deserve more information on the energy efficiency of the houses they buy, both resale and newly built. And he thinks mortgages should come with lower rates or better terms to encourage purchases and retrofits that save energy.

"When you buy a car," he said, "you know very clearly what the energy efficiency of that is because there's a number on the window. It says: Here's the gas mileage. We don't know that for housing."

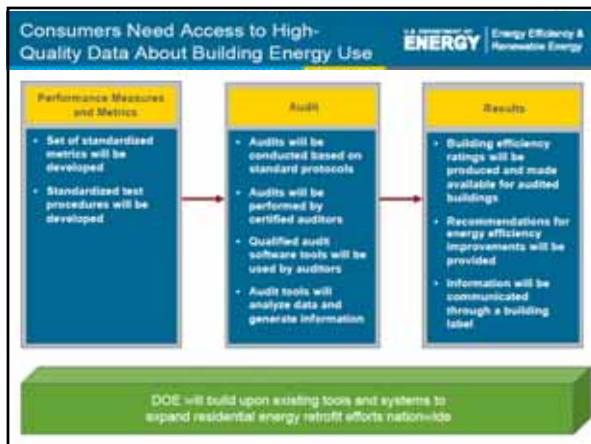
NATION'S HOUSING, April 12, 2009


DOE-EPA MOU

MOU on Improving the Energy Efficiency of Products and Buildings Between
 The U.S. Environmental Protection Agency
 and
 The U.S. Department of Energy

National Building Rating Program
NBRP will be enhanced in the following ways:


- 1) A comprehensive whole building scale-based rating tool will be developed and promoted that reflects both the physical characteristics of a building (asset rating) and a way to compare the actual energy use of existing buildings with similar buildings.
- 2) A labeling scheme will be developed to easily convey the energy use information from the whole building scale-based rating tool.




Oregon Senate Bill 79 

On July 22, 2009, Governor Kulongoski signed SB 79, creating a Task Force on Energy Performance Scores and updating state building codes to increase energy efficiency standards.


- Energy efficiency [SB79]:
 - Establishes energy performance scores for new & existing homes or commercial buildings
 - Sets goal of zero-emission new buildings by 2030
 - Implements reach codes




Oregon SB79 – Energy Performance Score 


Task Force

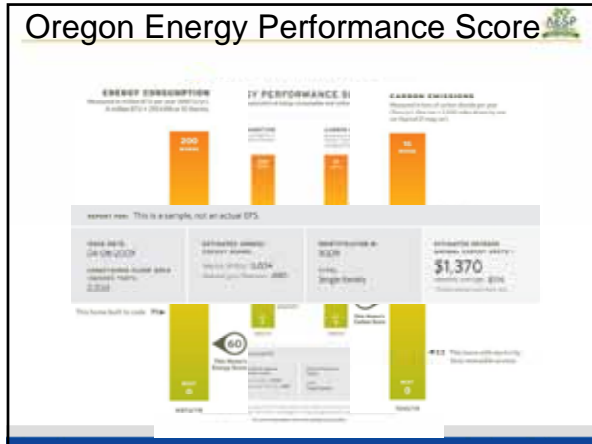
- Develop recommendations for a voluntary and mandatory energy performance scoring system for new existing commercial and residential buildings.
- The Task Force to recommend a voluntary energy performance scoring system in time for ODOE to adopt the recommendations by rule no later than July 1, 2010.
- The task force shall submit a report, and may include recommendations for legislation, to an interim committee of the Legislative Assembly related to energy no later than October 1, 2010.




SB 5854, Washington 

- Energy Efficiency [Washington HB1747, SB5854 Section 7]: tasked CTED to recommend a *“methodology to determine an energy performance score for residential buildings and an implementation strategy to use such information to improve the energy efficiency of the state’s existing housing supply”*
- Earth Advantage Institute charged with delivering EPSs on 5,000 existing homes in Seattle started Jan 2010 based on the 2008 ETO EPS pilot
- Planned expansion of Seattle pilot with US DOE/LBNL for post retrofit audit and behavior research






- ### Desirable outcomes of label
- Apply to new & existing homes
 - Spur consumer action
 - Increase demand for contractor & builder services for high performance homes
 - Work with any 3rd-party certified green/EE program + existing audit programs
 - Clear green washing claims
 - Stimulate preferred mortgage & insurance products
 - Empower Realtors with sales proposition
 - Link to MLS
- 

HPwE* + EPS

EPS
+



- EPS common metric to communicate energy usage/upgrades with homeowners & contractors
- Quantifies goals for programs and homeowner
- M&V accountability ensures wise investments
- Tracking & verification of audited homes, savings, and CO₂ mitigated
- Standardized reporting formats

ETO 2008 EPS Pilot Findings



- Not a single respondent said "not very useful"
- 100% of all homeowners felt EPS would have use when buying
- Realtors: 65% of their homebuyers would be "very interested"
- 89% of Realtors said that the EPS would be a competitive marketing advantage
- 79% of Realtors would like to see it on the RMLS
- 64% of homeowners want a customized list of EE steps with \$
- 90% of builders said the EPS a competitive marketing advantage
- 41% of builders thought the EPS should be mandatory.

Does a home label motivate?



The Earth Advantage EPS Pilot Program was very useful to us in targeting things that we could do to reduce the energy use for our home in Oregon. We had already installed a high efficiency heat pump system, and we were planning on installing new energy-efficient windows, but the pilot program showed us that we could also save energy by increasing the amount of insulation in our attic, installing insulation in our crawl space (we had none), and doing air and duct sealing.

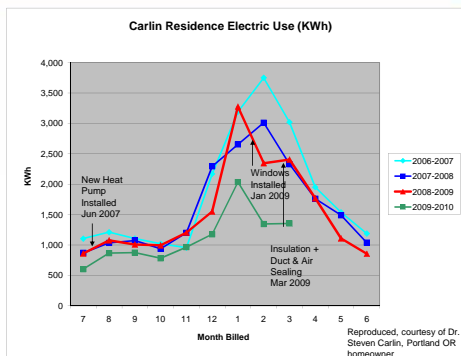
We did all those improvements and I have been tracking our energy use every month. We have saved 33% overall in the last year, and that greatly reduces our energy bill and carbon footprint. We are planning on adding a 5.3 Kwatt solar system to our roof this spring to reduce our electric consumption even more, and we are already on our local utility's "Clean Wind" program.

posted by Steven Carlin

Reproduced, courtesy of Dr. Steven Carlin, Portland OR homeowner

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Consumption: results following EPS '08 audit




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New homes builder response

October 1, 2008 11:39 AM

Miranda Homes Announces Free Energy Performance Evaluation

Home Builder will team with Earth Advantage to give home buyers tools for comparison.



Miranda Homes has teamed with Earth Advantage to put together a unique offer for home buyers. For a limited time, prospective home buyers can receive a free Energy Performance Evaluation of their current home for comparison against other homes they are considering.

Similar to the MPG sticker in the window of a new car, an Energy Performance Evaluation gives home shoppers a way to compare homes they are considering against each other. Earth Advantage evaluates energy efficiency and carbon output of a home by taking into consideration insulation, windows, fixtures, design and several other factors. The evaluation takes a few hours and normally costs \$50.


For a limited time, prospective home buyers can receive a free Energy Performance Evaluation of their current home for comparison against other homes they are considering.

The offer from Miranda Homes is available to Oregon residents who are buying a new home. To schedule a tour of one of Miranda's homes and to take advantage of this offer please call Miranda Homes at 503-668-4888 and ask about the free Energy Performance Evaluation.

PHOTO BY WWW.EARTHADVANTAGE.COM AT 11:39 AM © COPYRIGHTS Source: Energy Trust of Oregon


EPS program reporting & tracking

- # Audits by period/area/auditor
- Profile statistics of homes audited
- Data points collected
- Recommendations submitted
- EPS energy and carbon scores
- Attrition rates of consumers
- # Contractor estimates submitted
- Engagement ratio by consumers
- Top retrofit features implemented
- Average cost per upgrade
- Appeal of financial incentives
- Homeowner feedback on contractors
- Energy saved and emissions mitigated via post-upgrade audit
- Cost effectiveness on pilot subsidy
- Cycle times from audit to upgrade



Thank you!

Download EPS Findings & Recommendations report at:
<http://www.earthadvantage.org/eps.php>



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