Home Performance with ENERGY STAR Partner Meeting

Follow the action on Twitter #HPC17 #HPwES
Thank you for joining us!
Who do we have in the audience?

Utilities
Local/State Governments
WAP Contractors/
HPwES Contractors
Program Implementers
HPwES Sponsors
Raters/
Consultants
Regional Energy Efficiency Organizations
Non-Profit Organizations
Trainers
Software Developers
Healthcare/
Manufacturers/
Retailers
Partner Meeting Agenda

1:00 PM Welcome & National Program Update
1:35 PM EPA Indoor airPLUS Program
1:45 PM Home Performance with ENERGY STAR Sponsor Panel
2:55 PM Break
3:15 PM Using Home Energy Score to Promote Home Performance with ENERGY STAR, Weatherization, and More
3:50 PM How to Work in Both Weatherization and Home Performance
4:00 PM Contracting Industry Panel
5:00 PM Wrap Up
National Program Update

Ely Jacobsohn, Home Performance with ENERGY STAR Program Manager, U.S. Department of Energy

Topics for Discussion

Updates on the last year
What we are focusing on now
Why Ely’s encouraged....
National Home Performance with ENERGY STAR Update

15th Anniversary of HPwES!

Ely Jacobsohn, DOE, HPwES Program Manager
What is Home Performance with ENERGY STAR?

A public-private voluntary partnership program focused on turning building science-based recommendations into solutions for improved, energy-efficient homes.

✓ **Trust** – the work and the worker
✓ **Quality** – third-party quality assurance
✓ **Whole-House Approach** – methodical, thoughtful improvements

http://www.energystar.gov/homeperformance
The most common projects

1. Sealing Air Leaks and Adding Insulation*
   - These are critical first steps to improving the energy efficiency of your home.

2. Sealing Ductwork
   - Making sure ducts are straight, properly connected, sealed, and insulated where needed, will greatly improve your home's comfort and energy efficiency.

3. Upgrading Lighting, Appliances, and Water Heating Equipment**
   - Energy used in these areas can account for nearly half your utility bill, so there's a big opportunity to save by installing ENERGY STAR qualified products.

4. Installing Renewable Energy Systems
   - Once energy efficiency improvements have been made to your home, your participating contractor may recommend additional measures, like installing solar panels or a solar hot water system.

5. Improving Heating, Cooling, and Ventilation Systems
   - If your furnace or air conditioner is old or in need of repair, your contractor may recommend that you replace it with a unit that has earned the ENERGY STAR label.
   - Adding whole-house control systems can allow you to adjust and automate settings instantly for added savings and comfort.

*Photo credit: Austin Energy Home Performance with ENERGY STAR
**Photo credit: New Jersey Home Performance with ENERGY STAR
Importance of the ENERGY STAR Brand

88%

of households recognized the ENERGY STAR label when shown the label.

Source: Fairfield Research, July 2011
Welcome New Partners!

Columbia Gas of Ohio

Conservation Consultants, Inc.

Southern California Edison

Black Hills Energy

An EDISON INTERNATIONAL® Company

Improving life with energy
Sponsor Landscape

% of 2016 Projects Completed by Sponsor Type

- Low Volume (<200 Projects): 78%
- Mid-Volume (200-2,000 Projects): 21%
- High-Volume (>10,000 Projects): 1%

Number of Sponsors by 2016 Production Volume

- Low Volume (<200 Projects): 5
- Mid-Volume (200-2,000 Projects): 24

(Over 1,500 active participating contractors nationwide)
From the Annual Report: Spending*

Total Program Spending, by Budget Category

(Total = $243M; n = 37)

*Annual Report Data will be finalized in May
From the Annual Report: Savings*

Total Program Energy Savings by Fuel Type (MMBtu)

(Total = 1,460,542; n = 34)

- 727,331 Natural Gas
- 357,328 Oil
- 331,033 Electric
- 17,389 Propane
- 27,443 Other

*Annual Report Data will be finalized in May
Areas of Growth*

• Increased commitment to marketing (16% of the average program’s administrative budget, up from 12%*)
• 12 sponsors saw growth in 2016, with regional strength in the Mid-Atlantic, South and West
• More programs offering financing (19 in 2016, up from 16 the prior year)
• Notable activity in multifamily and income-targeted projects

*Annual Report Data will be finalized in May
Over 600,000 Projects Completed!
Challenges and Roadblocks

- Sustainable Program Funding
- Cost Effectiveness
- Weather
- Energy Prices
- Contractor Retention
- Finding Qualified Employees
- Lack of Consumer Awareness
- Market Saturation
Why Ely’s encouraged....
Strategies & Goals Overview

**Our Strategies**
- Increase Partnerships
- Expand Outreach and Marketing
- Improve Operational Excellence

**Our Objectives**
- Develop the Value Proposition
- Increase Awareness of the Value Proposition
- Enhance Stability and Certainty in the Market
<table>
<thead>
<tr>
<th>Increase Partnerships</th>
<th>Develop Value Proposition</th>
<th>Increase Awareness of Value Proposition</th>
<th>Enhance Stability &amp; Certainty</th>
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<tbody>
<tr>
<td>Recruit new program partners to increase the availability of HPwES to more homeowners</td>
<td>X</td>
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<tr>
<td>Demonstrate an Aggregator delivery model to prove a non-publicly funded delivery model for HPwES</td>
<td>X</td>
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<tr>
<td>Partner with HPC to deliver training for programs and contractors on business admin, marketing, and sales</td>
<td>X</td>
<td>X</td>
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<td>Explore the use of an ENERGY STAR label for existing homes</td>
<td>X</td>
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<tr>
<td>Facilitate and encourage outreach to State HFA’s and other affordable sector partners</td>
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Focusing on Scalability of Existing Sponsors

Want to hear more?
Join us at Boot Scootin’ Home Performance with ENERGY STAR
Tuesday 1:30-3:00
Increasing Access

Recruits ★
Pilots ★
Program Expansion ★
<table>
<thead>
<tr>
<th>Marketing &amp; Outreach</th>
<th>Develop Value Proposition</th>
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<tr>
<td>Distribute tools, resources, and marketing materials for program Sponsors and Contractors to communicate the value of HPwES</td>
<td>X</td>
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<tr>
<td>Enhance HPwES Website</td>
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<tr>
<td>Increase Clarity on the Awards Process</td>
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**Marketing & Outreach**

- Distribute tools, resources, and marketing materials for program Sponsors and Contractors to communicate the value of HPwES
- Enhance HPwES Website
- Increase Clarity on the Awards Process
Marketing & Outreach Enhancements

- **Website enhancements**
  - New sponsor search tool
  - New graphics
  - Simpler messaging
  - *HPwES website averages 12,000 page views per month*

- **Consumer marketing**
  - Promotional flyers/factsheets
  - Testimonials
  - Glossary of home performance terms
  - Videos/tips
  - Updated program brochure
  - Social Media
New Look Website!

www.energystar.gov/hpwes
**Operational Excellence**

<table>
<thead>
<tr>
<th>Support local Pay for Performance and M&amp;V 2.0 activities related to HPwES</th>
<th>Develop Value Proposition</th>
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Support HPC and the National Efficiency Screening Project to develop a new National Standard Practice Manual for Energy Efficiency

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<th>Support the development, expansion, and awareness of the HPXML data dictionary and transfer standard</th>
<th>Develop Value Proposition</th>
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Identify data needed to track progress and develop a strategic plan to explore integration with Home Energy Score as a data reporting tool

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Identify and leverage benefits to occupant health from home performance improvement activities:

- **Health and Home Performance Initiative**
  - Literature review (National Center for Healthy Housing and Ellen Tohn)
    - Research supports indoor air quality & home performance services correlation
    - Identify research gaps to be addressed
    - Learn more at [www.energystar.gov/hhp](http://www.energystar.gov/hhp)
  - Roadmap to leverage home performance-health connection to grow industry
    - HPwES roadmap working group
    - Consumer marketing for stakeholders
    - Email [homehealth@csra.com](mailto:homehealth@csra.com) to engage

Want to hear more? Join us at What Do We Really Know About the Health Benefits of Energy Upgrades? Monday 10:30am - 12pm
High Performance Building Envelope Assemblies

Team and Partners | Topic Area
--- | ---
Home Innovation Research Labs, Inc. w/ ACC, NAHB, FPL, VSI, Dow, SIPA, APA, IBHS, DuPont | High Performance Moisture Managed Envelopes (2015)

- **Moisture Performance of High-R Wall Systems**: Study moisture performance in high-R walls (>R-20) in 20 occupied high performance homes across different climate zones.
- **Extended Plate and Beam Wall System**: Study the constructability and structural/moisture performance of high-R walls with rigid foam insulation behind the WSP, in the pocket resulting from wall plates one dimension wider than studs.
- **Attic Retrofits Using Nail-Base Insulated Panels**: Study the constructability, energy and moisture performance of an innovative retrofit approach using nail-base insulated panels installed above the existing roof deck.

**Success Metrics**: Measured and modeled performance of high-R walls and design guidance for all climates. Efficient, durable wall assembly to meet and exceed new IECC targets. HVAC energy savings of 10% or more for sealed attics and cathedral ceilings.
### Monitoring of Unvented Roofs with Diffusion Vents and Interior Vapor Control in a Cold Climate

- Interior vapor control membrane on attics with fibrous insulation.
- Enables affordable insulation solution for attics, bringing the HVAC equipment into the conditioned space.
- New Construction Field Test
- Existing Manufactured Housing Field Test/Demonstration
- Up to 3 winters of data

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<th>Team and Partners</th>
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<tr>
<td><strong>Building Science Corporation</strong>&lt;br&gt; w/ DuPont, Owens Corning, Cosella-Dörken, K. Hovnanian Homes</td>
<td>High Performance Moisture Managed Envelopes (2016)</td>
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**Success Metrics:** Assessment & validation of unvented roof construction detail to enable moisture managed fibrous insulation solutions in cold climates, achieving code & above code performance (R-49) at up to 80% material cost reduction, and saving >10% in HVAC energy use.
Develop a highly scalable tool that automatically and remotely analyzes communicating thermostat (CT) and interval meter data to identify household-specific retrofit opportunities to reduce heating energy consumption, quantify expected retrofit energy savings, and validate post-retrofit energy performance.

**Success Metrics:** Develop & validate approach that correctly identifies households with the target retrofit opportunities with 1) at least 75% classification accuracy and 2) +/-25% accuracy in predicting retrofit energy savings, to significantly increase the uptake of the target retrofit measures while reducing program recruitment costs per retrofit project. Success metrics include doubling the rate of onsite energy audits in partner utility programs for the target households identified by the tool.
### Ventilation Integrated Comfort System (VICS)

#### Team and Partners

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<td>w/ Mitsubishi</td>
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- Development of integrated ERV and heat pump
- Variable speed fans for low energy and high controllability
- Test and demonstrate in unoccupied and occupied homes
- Lower cost and higher performance than typical practice of Central Fan Integrated Supply (CFIS) ventilation

**Success Metrics:** Develop, validate, & demonstrate VICS, to reduce up-front cost $1,000-$2,000 and save 400-800 kWh/year, compared to separately installed standard ducted ventilation & HAC systems. Enables balanced ventilation, better IAQ, & RH control in tight homes at lower cost.
### Performance-Based IAQ and Optimized Ventilation

**Team and Partners**

**Southface Energy Institute**  
w/ Underwriters Laboratory, Beazer Homes,  
Illinois Sustainable Technology Center,  
Venmar, Kerley Family Homes  

**Topic Area**

**Optimal Ventilation & IAQ Solutions (2016)**

- Develop assessment protocol incorporating low-cost IAQ sensors: PM2.5, CO₂, O₃, formaldehyde, and radon sensors
- Benchmark IAQ metrics in new and existing homes
- Smart ERV field tests in real-world homes to evaluate impact on IAQ and energy consumption
- Pilot LBNL-developed IAQ Score in test homes

### Success Metrics: Develop & validate a performance-based protocol for assessing indoor air quality (IAQ) in homes and inexpensive smart ERV solution that can achieve average annual HVAC energy cost savings of approximately $100 compared to central fan integrated supply systems, and ~50% reduction of ventilation related latent loads compared to supply or exhaust strategies. Goal is to overcome builder reluctance to air-tightness & ventilation strategies, to enable energy savings from tight construction in hot/humid climates, while reducing IAQ risks and improving comfort.
Development of the Industry’s First Smart Range Hood

- Kitchens are the primary source of the most harmful pollutants generated in the home.
- Kitchen range hoods are seldom used and can be ineffective.
- Develop a Smart Range Hood that senses pollutants, with automatic operation.
- Improve residential IAQ, extend lives, and save billions of dollars in health-related costs annually.

Success Metrics: “Smart” range hood developed & validated that is very quiet (≤ 1 sone), up to 5 times more efficient than ENERGY STAR, and near 100% capture efficiency, at a target price point competitive with the intermediate market. Enables tighter homes, ZERH specs, & better IAQ by addressing major indoor pollutant source.

Team and Partners

<table>
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<th>Newport Partners</th>
<th>Topic Area</th>
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<tr>
<td>w/ Broan-NuTone</td>
<td>Optimal Ventilation &amp; IAQ Solutions (2016)</td>
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**Home Improvement Catalyst (HI Cat)**

**HI Cat Focus:** Identifying and prioritizing activities where DOE can have the greatest impact in accelerating adoption of energy efficient technologies and practices at key home improvement transactions.

**Contact:** Steve Dunn, DOE Project Manager  
**e-mail:** steve.dunn@ee.doe.gov

**Scoot on over to join us this week...**

- Tues -- 7:15 am Roundtable: Making HVAC Quality Installation Achievable
- Tues -- 10:30 am Session: Solving the Challenges of Retrofits
- Wed -- 10:30 am Session: The Impact Driven Value Proposition Challenge
Indoor airPLUS program

Aaron S. Johnson, QAD
Indoor airPLUS / Healthy Home Performance
Indoor Environments Division
U.S. Environmental Protection Agency
Home Performance with ENERGY STAR Sponsor Panel
Value Proposition: TEE it off for the Sponsor Panel!

Development of the “Value Proposition” for Stakeholders

• Cost Effectiveness
• Pay for Performance
• Engagement with other industries

Increasing Awareness of the “Value Proposition”

• Marketing materials and User Group
• Home Energy Score

Dealing with Market Uncertainty

• Contractor Training
• Selling in uncertain markets
• Structuring businesses to be resilient
John White
Senior Manager
ICF International
BGE, Pepco, Delmarva Power, SMECO

March 19, 2017

DOE Sponsor Meeting

John F. White
ICF – WE MAKE BIG THINGS POSSIBLE

Energy

Environment

Transportation

6,500+ EMPLOYEES

1 BILLION+ IN REVENUES

Health

NATIONWIDE DSM IMPLEMENTATION

150 Energy Efficiency Programs

50 Clients Across North America

15 Large Portfolios

WITH INTEGRATED, IN-HOUSE

Customer Service + IT Backbone + Award-winning Marketing
Performance Based Incentives

Incentive Structure

- Incentives up to $7,500 (capped at 75% of cost)

Calculated Lifetime MMBtu Savings

- Calculated through Beacon HEA
  - Annual savings for eligible measures multiplied by measure life then converted to MMBtu
- Floating range of incentives
  - Electricity Savings ($12-$20) per lifetime electric MMBtu (293.071 kWh per MMBtu)
  - Natural Gas Savings ($1-$3) per lifetime natural gas MMBtu (10 therms per MMBtu)
    - Nat. Gas incentives offered across all utilities on shell measures
    - Nat. Gas incentives on furnaces only offered through BGE
- Starting incentive levels
  - $18 per electric MMBtu & $3 per natural gas MMBtu
- Prescriptive rebates:
  - Duct sealing – guaranteed minimum rebate
  - HVAC replacements – coupled with shell improvements
- HVAC early retirement
  - Performance-based (with qualifications)
Performance Based Incentives

- For more, come to our session:

  **Comprehensive Home Performance with ENERGY STAR®:**
  Motivating your Customers & Contractors
  **Wednesday, March 22, 2017 at 8:30AM**
  Music Row 2 (level two)
Leveraging a Strong Trade Ally Network

- **60 Trade Allies participate in the HPwES programs in Maryland**
  - Sign Contractor Participation Agreement
    - Maintain state licensing
    - Hold insurance
    - BPI certified
  - Trade Allies assigned an Account Manager
    - Provide guidance on program requirements
    - Provide support for rebate application submissions
    - Provide training and onboarding
    - Conduct quarterly meetings to review program results and changes
  - Trade Ally engagement and support
    - Regular stakeholder meetings
    - Participating contractor logo
    - Program marketing drives customers to the find a contractor page
    - Focus groups
Thank you

John F. White
John.White@icf.com
443-718-4864
Elizabeth Murphy
Senior Program Administrator
United Illuminating Company
Building Value through HPwES in Connecticut

Elizabeth Murphy
March 19, 2017
Energize Connecticut

- Statewide initiative which helps consumers reduce their energy bills, save money, and reduce their carbon footprint
- A partnership of the Energy Efficiency Fund, the Connecticut Green Bank, Department of Energy and Environmental Protection ("DEEP") and local electric and gas utilities
- Funded by a charge on customer electric and natural gas bills
Home Energy Solutions (HES)

- HPwES program offering direct-install energy efficiency products and services for single family (1-4 units) homes
- Comprehensive energy assessment for low co-pay
- BPI certified HES lead technician addresses all energy-saving opportunities and qualifies home for add-on measure rebates
- Financing options provided to make add-on measures affordable
Low Income and Multifamily Programs

- HES – Income Eligible is Connecticut’s low income HPwES program
  - Offers same services as HES, but at no cost to qualifying residents
  - Partners with WAP to maximize reach of WAP funding

- Multifamily initiative offers comprehensive energy improvement services and customized incentives to 5+ unit properties
  - Incorporating HPwES brand in 2017
Building Value through HPwES

▪ Value Proposition
  – Customer education
  – Integration of DOE Home Energy Score

▪ Increasing Awareness
  – Low income and multifamily customers
  – Real estate community
  – Solar industry

▪ Market Uncertainty
  – Enhanced marketing efforts
  – Robust technician training
Value Proposition

- Customer education
  - Detailed customer report offering recommendations based on home’s energy usage

- Integration of DOE Home Energy Score
  - Connecticut became first statewide implementer in April 2015
  - Over 18,000 scores generated to date!
  - Leverage score to encourage sellers to make energy improvements prior to selling
  - Showcase ability to compare homes when buying
Increasing Awareness

- **HES – Income Eligible**
  - Incorporated HPwES brand in 2016
  - Goal of offering Home Energy Score in 2018, working towards solutions for challenges:
    - Development of mobile data collection tool
    - Ensuring HES-IE lead techs are qualified Assessors
    - Renter-occupied properties → ensuring communication with decision-maker (i.e., landlord)
    - Limited customer resources to invest in recommended upgrades

- **Multifamily – incorporating HPwES brand in 2017**
Increasing Awareness

▪ Engagement with real estate community
  – Educate realtors to understand value of energy efficiency
  – Collaborate with realtors to generate leads and leverage Home Energy Score

▪ Engagement with solar industry
  – 2017 Coffee and… matchmaking events designed to integrate home performance and solar
  – Home Energy Score as an option for homeowners to meet energy audit requirement for solar incentives and financing
Market Uncertainty

- Enhanced marketing efforts
  - Multiple touch points
  - Custom Resource Center – customizable marketing collateral

- Robust technician training
  - Detailed field manual containing talking points to facilitate customer interaction
  - Sales and technical training
For more info on Connecticut’s program visit:

EnergizeCT.com/HES

EnergizeCT.com/DOEHomeEnergyScore
Scott Bloedorn
Project Manager - Residential Programs
Focus on Energy

focus on energy
Partnering with Wisconsin utilities
Focus on Energy - Home performance with ENERGY STAR®

Scott Bloedorn
Home Performance Project Manager
About Focus on Energy

- Focus on Energy is Wisconsin utilities’ statewide energy efficiency and renewable resource program.
- We represent 108 utilities.
- We recently celebrated our 15 year anniversary.
- Over 2,500 contractors have participated in our residential programs since 2012.
### Home Performance Program

**Choose Your Path**

<table>
<thead>
<tr>
<th>Whole Home Improvements</th>
<th>Heating &amp; Cooling Improvements</th>
<th>Renewable Energy</th>
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<tbody>
<tr>
<td><strong>Program details</strong></td>
<td>Energy assessment</td>
<td>Solar electric systems</td>
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<tr>
<td></td>
<td>Customized report</td>
<td>Geothermal systems</td>
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<td></td>
<td>Air sealing and Insulation</td>
<td>Renewable energy loans</td>
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<tr>
<td><strong>Customer Investment</strong></td>
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<td><strong>Customer Incentives</strong></td>
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<tr>
<td><strong>Description</strong></td>
<td>The perfect starting point for ultimate home comfort and highest savings.</td>
<td>Not quite ready for the full home treatment? You can still save on heating and cooling improvements.</td>
</tr>
</tbody>
</table>

Larger incentives for Whole Home and Heating and Cooling Improvements are available for income-qualified homeowners.
HOME PERFORMANCE PROGRAM

HOME COMFORT ADVISOR PROGRAM

EXCLUSIVE OPPORTUNITY TO BOOST YOUR BUSINESS

Home Performance with ENERGY STAR®, administered nationally by the U.S. Department of Energy in conjunction with the U.S. Environmental Protection Agency, offers a comprehensive, whole-home approach to helping homeowners improve the comfort and energy efficiency of their homes. Contractors offering Home Performance with ENERGY STAR services are equipped with specialized training and tools to help determine how their customers’ homes are wasting energy and causing comfort issues.

More than 22,000 Wisconsin homeowners are already enjoying more comfortable, energy-efficient homes thanks to Focus on Energy’s Home Performance Program, but thousands more could still benefit.

To help address this, Focus on Energy is excited to offer the Home Comfort Advisor Program to a select group of HVAC Trade Allies.
Home Energy Score

The U.S. Department of Energy’s Home Energy Score assesses the energy efficiency of a home based on its structure and heating, cooling, and hot water systems. For more information visit HomeEnergyScore.gov.

Score Today: 3
Score with Improvements: $573
Energy Efficient Mortgage Pilot

OPEN THE DOOR FOR YOUR CLIENTS WITH AN FHA ENERGY EFFICIENT MORTGAGE

Ready to share some exciting news with your clients?
Your clients want a home they can afford to buy, maintain, and live in.

CLIENT BENEFITS:
- Low interest rates
- Up to $1,000 back at closing
Customer Segmentation Study

- The Golden Year Patriots
- Middle Class Melting Pot
- The Prosperous
- Young Homeowners
A/B testing showed a 64% increase in click through rates when banner adds contained the HPwES logo.
Contact Info

Scott Bloedorn
scott.bloedorn@focusonenergy.com
Sherry McCormack
Energy Efficiency & Consumer Programs Coordinator
Southwestern Electric Power Company (SWEPCO)
Home Performance with ENERGY STAR®
Partner Meeting

Incorporating Multifamily Properties while creating a Joint Utility Partnership
Multifamily in HPwES

- Multifamily accounted for 35% of total kWh savings
- Additional 989 units for contractors with less associated overhead
- Training tool
  - On-site mentoring
  - Ability to “practice” by completing 3-5 units/day
- Helps customer segment having little control over utility bills
Arkansas Partnership
SWEPCO & Black Hills Energy

• Common application process
• Unified contractor base
• Unified implementation team
  – Joint Contractor Trainings & Kick-off Meetings
  – QA approach and teamed for field mentoring
• Average incentive costs split 50/50
• Joint Quarterly Report to DOE!!
Sherry McCormack
AEP SWEPCO

slmccormack@aep.com
479.973.2404
Take a Break

STRETCH
Using Home Energy Score to promote HPwES, Weatherization, and more

Ely Jacobsohn
Program Manager
Home Performance with ENERGY STAR U.S. Department of Energy

Joan Glickman
Program Manager
Home Energy Score
U.S. Department of Energy
Integrating Home Energy Score and Home Performance with ENERGY STAR

- Home Energy Score can be used with HPwES
- Can help meet some of the HPwES Minimum Requirements
- Homeowner Report with a list of recommended improvements
- Wholehouse Evaluation
- Perfect for Single measure incremental upgrade oriented program models
- No Cost to Use HEScore
- HEScore is easy to use - evaluations can typically be completed in less than an hour
- Just need to add Health and Safety and Diagnostics when Needed
Using Home Energy Score to Promote HPwES, Weatherization, and More

Joan Glickman
March 19, 2017
Why Is Residential Labeling Important?

Labels make the invisible, visible.

**Home Sellers** want to get credit for their investments in energy efficient equipment and other features.

**Home Buyers** want to know what they’re buying and be able to predict monthly expenses (e.g., utility costs).

Labels can help capture the value of EE at time of sale.
DOE’s Home Energy Score: What Is It?

- A “miles-per-gallon” rating for single family homes
  - Standardized U.S. Department of Energy (DOE) rating
  - Provides estimated energy use for the home, given standard conditions.

- Reliable and easy to understand
  - Tells consumer how much energy the home is expected to use
  - Gives visibility to home’s “hidden” value
  - Provides an “actionable” list of cost-effective recommendations to improve a home’s energy performance and comfort

- Generated using a DOE energy modeling tool
  - Data must be collected in a qualified assessor during an in-home assessment
  - Free online training and test
What Data and Information Comprise a Home Energy Score?

• Home Energy Score is **based on a home’s assets that affect energy use**

• Assets reflect those parts of the property that typically convey at time of sale

• **The Scoring Tool applies standard assumptions about occupant behavior and local weather to allow “apples to apples” comparison between homes**
The (Customizable) Home Energy Score Report  Part 1: The Score

- Takes an hour or less to complete
- Free, on-line tool can be used directly or linked to other software tools via API
- Can be generated by contractors, home inspectors, utilities, others
- No reporting requirements
- All automated
Part 2: Home Facts

This section of the Report provides all of the data inputs collected by the Assessor as well as the estimates generated by the Home Energy Scoring Tool.
Part 3: Recommendations

**Recommended Improvements**

**REPAIR NOW.** These improvements will save you money, conserve energy, and improve your comfort.

- **Air Tightness:** Have a professional seal all the gaps and cracks that leak air to save **$110 / year**
- **Ducts 1:** Add insulation around ducts in unconditioned spaces to at least R-6 to save **$43 / year**
- **Attic 2:** Increase attic floor insulation to at least R-19 to save **$57 / year**
- **Ducts 2:** Add insulation around ducts in unconditioned spaces to at least R-6 to save **$23 / year**
- **Ducts 2:** Have a professional seal all the gaps and cracks that leak air to save **$74 / year**

**REPLACE LATER.** These improvements will help you save energy when it’s time to replace or upgrade.

- **Windows:** Choose ones with an ENERGY STAR label to save **$61 / year**
- **Water Heater:** Choose an ENERGY STAR appliance to save **$159 / year**
- **Electric Heat Pump:** Choose an ENERGY STAR appliance to save **$32 / year**

**Comments**

Current local incentives may make this house a good candidate for a new water heater.

- Recommendations categorized as “Repair now” and “Replace later”; based on cost-effectiveness using state average utility rates

- Some Partners and Assessors provide their own custom recommendations

- Tool can generate “Upgrade Score” based on custom recommendations
Implementation Highlights: Making It Easy, Making It Matter

✓ ~60,000 homes scored since 2012
✓ ~450 Assessors
✓ State and local adoption
  - AL, AR, CO, CT, MO, NH, OR, VT; others considering (e.g. MA, NY, RI, WI)
  - Berkeley, CA and Portland, OR require Score at time of sale or listing

✓ 8 software platforms link to DOE’s latest Tool via an application programming interface (API)
  - No need for double entry of data
  - Cake Systems, EnergySavvy, Enhabit, Home Inspector Pro, Inspection Depot, Optimizer, Snugg Pro, United Illuminating

✓ Free streamlined 3D simulation training and testing for Assessors; update released January 2017
✓ Linking realtors, home inspectors & efficiency programs through DOE’s Home Energy Information Accelerator
✓ Financing opportunities, incentives
Why Should You Consider Integrating the Score into Your Programs?

For many, the Score is an easy and logical add-on.

- Satisfies a number of HPwES/WX requirements
- Serves as a whole-home assessment and evaluation tool
  - It runs a full energy simulation of the home using a DOE approved engine
  - While diagnostics are not required to generate a Score, the Tool accepts CFM50 data if a blower door test is conducted
- Generates a standard report
  - Includes a number of different metrics and a list of cost-effective recommendations for efficiency improvements
  - It’s customizable, including the ability to rescore the home with program specific asset-related efficiency recommendations
- Provides free training and testing for Assessors
- Provides an easy interface for programs to track and download data
  - Partners can pull all inputs as well as Tool outputs for homes scored by their Assessors
- Appropriate for single measure or whole home upgrade programs
The Opportunity for Integration!

- **Lead Generation**: Broaden the HPwES market by leveraging interest at point of purchase.
- **Enhance Appeal of EE**: Use the Score to demonstrate to customers the potential to recover costs at point of sale.
- **Before and After**: The Score is usually offered at the audit phase and at the conclusion of the HPwES project.
- **Minimal Additional Effort**: With an API-compliant software, it typically adds only a few minutes to the audit.
- **Valuing EE**: Because of the Score’s simplicity and credibility, it enables valuing EE investment by homeowners and buyers.
- **Differentiation**: Leading HPwES contractors are incorporating the Score to further differentiate their offerings.
Our Partners

We owe it all to them!
We Want to Hear From YOU!

Questions?
Contact us at HomeEnergyScore@ee.doe.gov
Check us out on the web at www.HomeEnergyScore.gov

Even More Questions?
Join us at these sessions:

• “A Review of Exciting Efforts to Scale up Residential Energy Labels.” Monday 1:30 - 3 pm. Hear how States are implementing the Score.

• “Looking Beyond Traditional Incentives to Spark Consumer Demand.” Monday 3:30 - 5 pm. Hear why Contractors are using the Score.

• “Who’s Keeping Score? Using Home Performance with ENERGY STAR and Home Energy Score Together.” Tuesday 8:30 - 10 am.

Join us for an informal dinner* on Tuesday at 6:30 pm

Martin's Bar-B-Que Joint
410 4th Ave S

*Dutch Treat
How to work in both Weatherization and Home Performance?

David Rinebolt
Weatherization Assistance Program
U.S. Department of Energy
Home Performance with ENERGY STAR Contractor Panel
Panelist

Larry Zarker (Moderator)
Executive Director
Building Performance Institute

Jonathan Waterworth
Owner
AZ Energy Efficient Home

Robert Hamerly
Principal
GreenSavers

Tom Carter
Executive Director
Efficiency First
Topics for Discussion

Home Performance is more than just efficiency! Home Performance is also about jobs, small businesses, supporting the local economy through business taxes paid, economic development and improving existing housing stock.

Best Practices

What are contractors experiencing?

Business Models

Failures

What are you hearing?

Selling Home Performance

Industry Barriers

National Trends

Health, Safety and Comfort

Home Performance is more than just efficiency! Home Performance is also about jobs, small businesses, supporting the local economy through business taxes paid, economic development and improving existing housing stock.
Final Questions and Wrap Up