



Home Performance with ENERGY STAR

Dale Hoffmeyer
EPA Team Leader

hoffmeyer.dale@epa.gov; 202-343-9013

Patricia Plympton

Navigant Consulting in support of DOE
patricia.plympton@navigantconsulting.com; 202-481-7397

What do you want to achieve?

Chicago Climate Action Plan

- **80% reduction in greenhouse gas emissions from 1990 levels by 2050**
 - Retrofit 50% of commercial and industrial building stock resulting in a 30% energy reduction
 - **Improve 50% of residential buildings to achieve a 30% reduction in energy use**
 - Expand appliance trade-in and light bulb replacement programs
 - Improve water use efficiency as part of retrofits
 - Align Chicago's Energy Conservation code with latest International standards
 - Require all building renovations to meet green standards
 - Increase rooftop gardens to total 6000 buildings citywide and plant and estimated 1 million trees

“Good fortune is
what happens when
opportunity meets
with **planning.**”

-Thomas Edison

The American Recovery and Reinvestment Act is the opportunity.



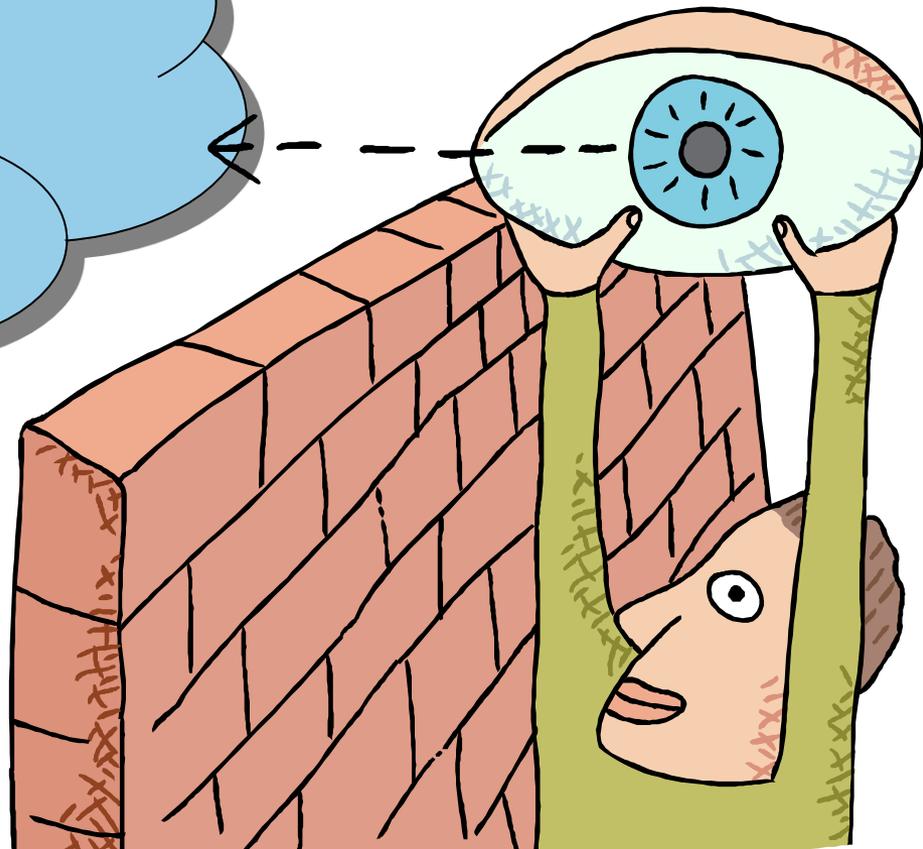
American Recovery
And Reinvestment Act

Now is the time
to implement
your plan?



What barriers stand between you and your goal?

- ✓ Reduce carbon emissions
- ✓ Increase energy efficiency
- ✓ Create a sustainable green marketplace and jobs



Energy Efficiency



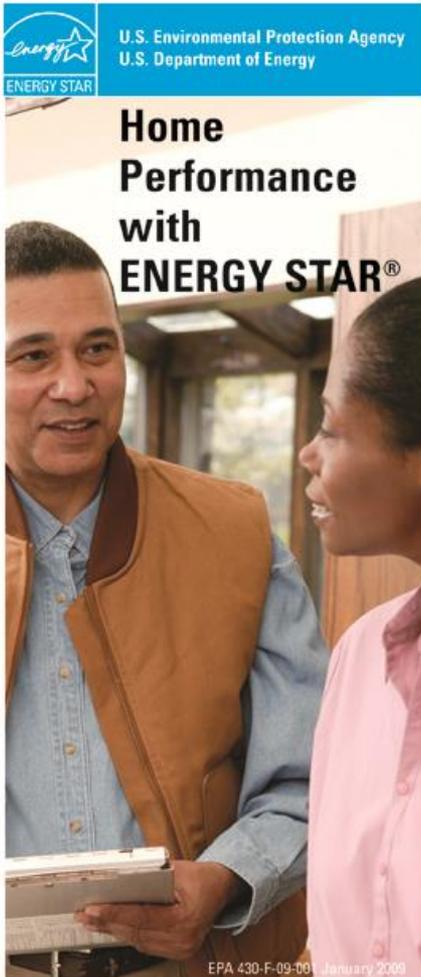
- Consumer Awareness
 - Don't realize they consume more than most
 - Don't understand the benefits
 - Don't know how to change
- Availability Perception
 - Difficult to find energy retrofit contractor I can trust
- Affordability Perception
 - Costs too much to retrofit my home

“The big secret in life is that there is no big secret.
Whatever your goal, you can get there if you're willing to work.”

Oprah Winfrey



Home Performance with ENERGY STAR



- Sponsored by a utility, state or local gov.
- A network of specially-trained contractors
 - ✓ Evaluate homes using state-of-the-art equipment
 - ✓ Recommend comprehensive energy improvements
 - ✓ Ready to complete the work or refer to someone who can
- Quality assurance program checks work of participating contractors to verify program standards are met
- Homeowner chooses and pays for improvements based on credible information

Why is my house sick?



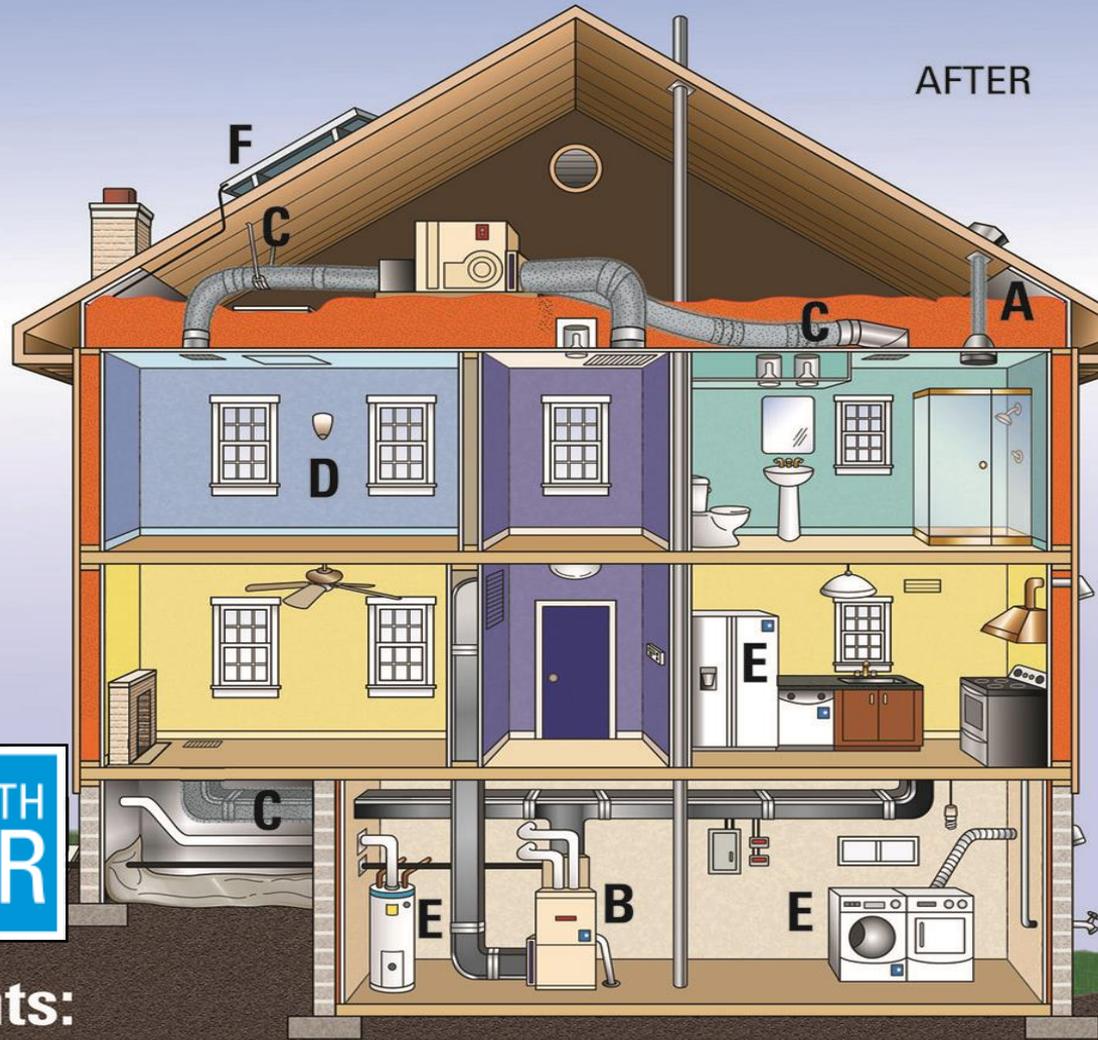
Discuss Results and Present Proposal



BEFORE



AFTER



Typical Home Improvements:

- A** Sealing Air Leaks and Adding Insulation
- B** Improving Heating and Cooling Systems
- C** Sealing Ductwork

- D** Replacing Windows
- E** Upgrading Lighting, Appliances, and Water Heating Equipment
- F** Installing Renewable Energy Systems

Contractor Tests Out Verifies Results & Combustion Safety



- Diagnostic testing (after work)
 - i.e. Air infiltration, HVAC air flow, duct leakage, combustion safety testing
- Feedback to
 - the contractor
 - the homeowner
 - the program administrator
- Verified improvements and persistent energy savings





Quality Assurance

- **Essential to achieve program success**
 - Energy savings
 - Credibility/reputation
- **Requirements**
 - Contractor participation agreement
 - 100% job reporting (can be electronic)
 - 100% job report review
 - 5% onsite inspection (1 in every 20 jobs)
 - Tier 1 – 3 – 5 of first jobs will be inspected or mentored
 - Tier 2 – 20% of next 20 jobs inspected
 - Tier 3 – 5% of all jobs inspected
 - Customer satisfaction survey

Benefits of Partnering with ENERGY STAR



- For Program Sponsors
 - Program Development Guidance
 - Sponsor Guide
 - Financing Guide
 - Online Marketing Toolkit
 - Consumer Brochure
 - Promotional Banner Stands
 - Promotional Video
 - Web site Templates
 - Energy Benchmarking Tool for web site
- For Participating Contractors
 - Contractor Business Development Guide
 - Profiting from Home Performance
 - Contractor Recruitment Workshops
 - Home Performance Sales Workshop
 - Consumer Brochure
 - Bill Analysis Tool
 - Online Marketing Toolkit

HOME PERFORMANCE WITH ENERGY STAR

Home Performance with ENERGY STAR® Gets Results

A whole-house approach to energy efficiency:

- Utility bill savings of 20% or more
- Fewer drafts and more comfortable rooms
- Work performed by specially trained contractors

Third-party quality assurance to make sure work gets done right

- Reduced greenhouse gas emissions protect the environment

Typical home improvements:

- Sealing air leaks
- Adding insulation
- Upgrading heating and cooling systems
- Replacing lighting and appliances
- Installing high-performance windows

www.energystar.gov



Program Examples

NYSERDA

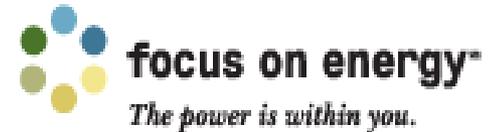


- New York State Energy Research and Development Authority (NYSERDA) developed the first Home Performance with ENERGY STAR Program.
- The program is based on a contractor model and its mission is to transform New York's trade contractor infrastructure by facilitating training and certification.
- Homes improved in 2008: 4,105 and 154 participating contractors
- Contractors:
 - Training: Optional Building Analyst or Specialist training, BPI certification test, Partial subsidy available
 - Certification: BPI certification and accreditation required
 - Incentives: Diagnostic equipment purchasing assistance, General contractor referral incentive, partial subsidy of marketing efforts, comprehensiveness incentive.
- Consumer Financing/Incentives:
 - ENERGY STAR Financing: unsecured loan up to \$20,000 (terms of 3, 5, 7 or 10 years);, available to owner-occupied 1- or 2-family homes.
 - New York Energy Smart Loan Fund: Unsecured loan for up to \$20,000 (\$30K for ConEdison customers). The homeowner's interest rate is bought down by 4% (up to 6.5% for ConEdison) for up to 10 years for eligible improvements.
 - 10% of the cost of eligible energy efficiency improvements up to a maximum incentive of \$3,000, directly from the program if no loan is received.

Wisconsin – Focus on Energy



- Focus on Energy's program model is characterized by using consultants to perform energy audits and voluntary trade allies to install improvements.
- Homes Improved in 2008: 1,012
- Participating Consultants:
 - Training: Participating consultants must pass RESNET exam after attending a 5-day (BPI equivalent) building science class as well as 5-day training on participating in the program.
 - Certification: RESNET.
 - Incentives: \$100 - \$150 to participating consultants for test in/test out reports and \$75 referral fee to trade allies for using a participating consultant for a home improvement job.
- Consumer Financing / Incentives:
 - Various cash rebates offered by Focus on Energy on eligible measures.
 - Low-interest financing options offered by program sponsor through Energy Finance Solutions on eligible improvement measures.
- Marketing: Current best practices include targeted radio ads, promotions in conjunction with events in the state, summer promotions to keep homeowner interested year round, and coupons linked with action of installing improvement measures.



Oregon - Energy Trust of Oregon



- Energy Trust is a public-purpose organization with an extensive contractor network.
- Homes Improved in 2008: 1,040
- Contractor:
 - Recruitment: Utilize existing trade ally contractor network from “single-measure” programs, about 300 contractors in the pool.
 - Training: Building Analyst, Duct Sealing, Lighting Strategies, and others throughout the year for trade ally contractors.
 - Certification: BPI Building Analyst.
 - Incentives: Cooperative marketing; 75% rebate on training; up to 20% discounts on equipment.
- Consumer Financing/incentives: Cash incentives for equipment; Green Street lending offers 2 loan options; Oregon tax credits
- Marketing: Offer no cost home energy reviews; Conducting 4 home energy make over contests
- Quality Assurance: 10 QA mentors conduct 100% QA on a contractor’s first 3-5 jobs, then is eventually reduced to about a 10 % sample the level.



Maryland - Maryland Energy Administration



- Maryland's program is sponsored by the Maryland Energy Administration and can be defined by a strong contractor network with a robust Quality Assurance program.
- Contractor:
 - Recruitment:
 - First 3-6 months, relied on trade and building associations and presentations at local environmental groups
 - Mature program includes contractor waiting list for training and “buzz” via contractor networks.
 - Training: Offer BPI Building Analyst training, 3 days classroom training , 3 half days field training
 - Certification: BPI Building Analyst.
 - Incentives: Full rebate of cost of certification (\$600) after completing 5 jobs.
- Consumer Financing/Incentives: None currently through the program.
- Marketing: Google ad search campaign, booths at local home and garden shows staffed by participating contractors, reach out to local media to get stories on the air
- Quality Assurance: Every job is reviewed, Customer survey with each job, Tiered field visits for new companies, 3 strikes “you are out” policy.



Austin – Austin Energy



- Austin Energy's program is largely contractor driven.
- Homes Improved in 2008: 2,223
- Contractor:
 - Recruitment: Initially marketed through trade associations, Policy by the state on energy audit disclosure has further propelled contractor interest.
 - Training: National Comfort Institute (NCI) including 3 days of classroom training. New contractor orientation.
 - Certification: NCI , State legislation on energy audit disclosure will require RESNET or BPI.
 - Incentives: Up to 40% in equipment costs.
- Consumer Financing/Incentives
 - 20% of cost of improvements up to \$1,575 on bundled measurements.
 - Additional rebates offered by utilities.
 - Multiple low-interest loan options for various eligible improvements with interest rates starting at 0% APR.
- Marketing: Primarily yearly newspaper ads and bill inserts year round that are timed with the seasons.
- Quality Assurance: Another contractor in the program or Austin Energy staff.



Pennsylvania – PA Home Energy



- PA Home Energy’s program model is distinguished by a robust contractor training.
- Contractors:
 - Recruitment: Initially through home shows and builder associations ,existing energy raters and auditors in the state, HP 101 workshops funded by the state.
 - Training: RESNET training and exam , BPI classroom and field training including coverage of software modeling. Participants are pre-screened for success factors.
 - Certification: RESNET and BPI (RESNET is required before BPI certification)
 - Mentoring: Accompany another contractor on a few jobs until exhibiting proficiency in a checklist of skills.
 - Incentives: Each week of training earns \$200 rebate, First 5 audits submitted earns \$500 back, and \$100 is given for the submission completed jobs
- Consumer Financing/Incentives: Cash incentives up to \$1,000 depending on energy savings through particular utility and rebates and tiered low- interest financing options are available statewide through Keystone HELP program.
- Marketing: Various promotions throughout the year including purchase of google search terms and TV and radios ads.
- Quality Assurance: 10% of homes provided by internal program staff



Current State / City Activity



- Many states/cities/counties will create a Home Performance with ENERGY STAR program, often leaning on utilities in the long term.
 - **Kentucky:** State will support HPwES infrastructure using ARRA funds and utilities will supply additional funding in the long term.
 - **Utah:** Preliminary stages of planning, want to leverage ARRA funds and get cities, counties, and utilities involved across the state.
 - **Charlottesville, VA:** Starting a HPwES program in 2010 using ARRA funds and additional grant money, Working with NREL and Dominion VA Power on Smart Grid Technology
 - **Jefferson Parrish, LA:** Plan to start a HPwES program using ARRA funds to establish a solid program and partially hand off to utilities in the long term.
- A large number of state energy offices will use Recovery Act funds to provide support for residential energy efficiency retrofits through homeowner incentives, contractor training or policy recommendations.
 - **Virginia:** Rebates to homeowners on audits and qualified improvements, training classes, policy recommendations
 - **Florida:** Low interest loan financing options, rebates to homeowners on qualified improvements, free audits using existing utility auditor network.



For More Information

www.energystar.gov/hwpessponsors

Contact: HomePerformance@EnergyStar.gov

OR

Dale Hoffmeyer at EPA (202-343-9013)

hoffmeyer.dale@epa.gov

OR

Patricia Plympton at Navigant Consulting

in support of DOE (202-481-7397)

patricia.plympton@navigantconsulting.com