



ENERGY STAR & Indoor Air Plus

Creating & Sustaining
the ENERGY STAR
Outreach Program

Homes have changed

- *They're better insulated*
- *They're tighter*
- *They're Air-Conditioned*
- *Attached garages are now standard*
- *Pets now live inside with us*
- *We're building on less desirable sites*
- *etc.*

But we still don't ventilate most homes ...

Why Indoor Air Quality (IAQ) Matters at Home

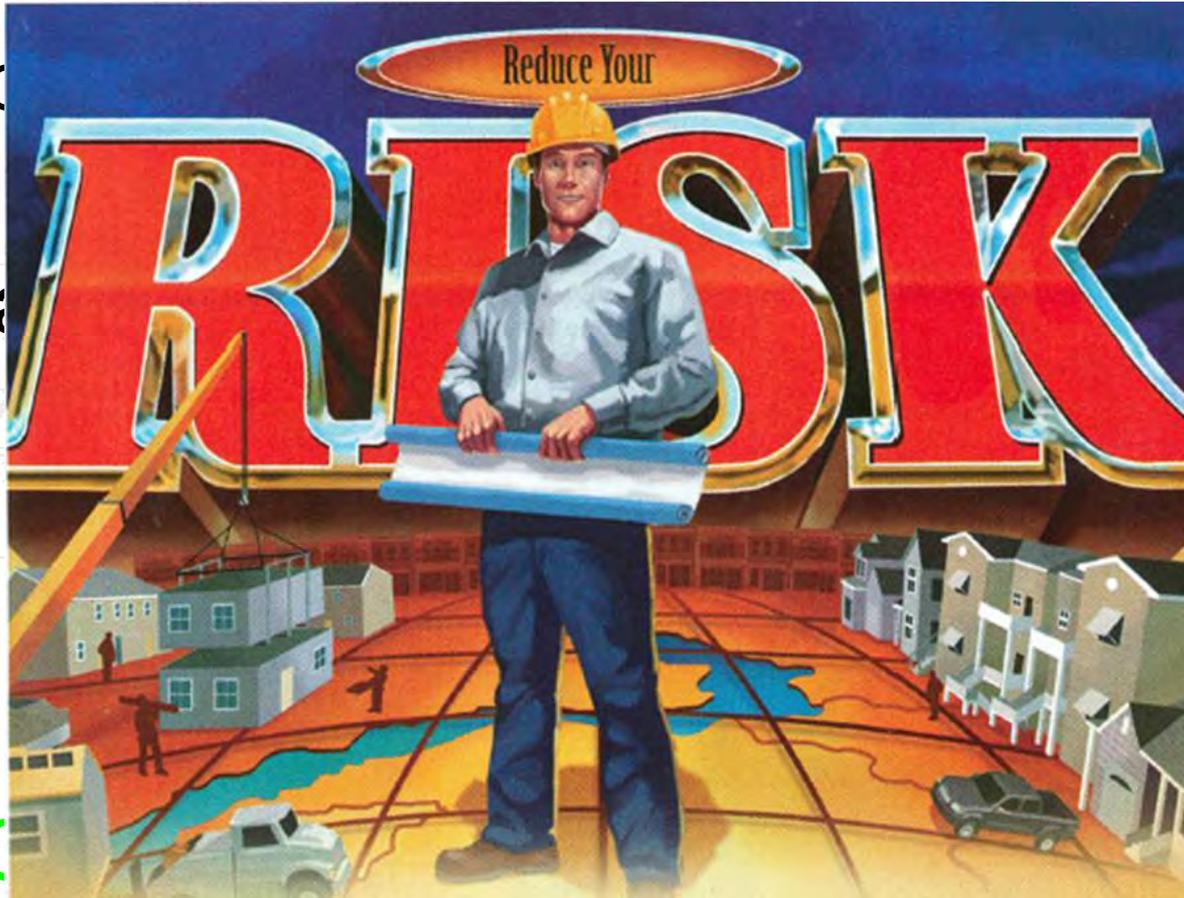
- *Asthma epidemic (20 million Americans have it) & almost 2 million ER visits per year, & 3,000 deaths/year.*
- *Radon causes >20,000 lung cancer deaths per year.*
- *Indoor dampness increases risk of respiratory problems by 30% to 50%.*
- *EPA estimates indoor air typically has 2-5 times more chemical pollutants than outdoor air.*

Now consider this:

- *People spend >90% of their time indoors, and >60% in their homes!*

Why Indoor Air Quality (IAQ) Should Matter to Builders

- Call for
defective
- Litigation
defective
- Lost
results
- Lost
not



tion

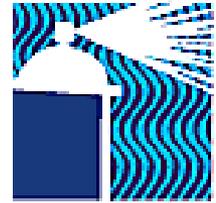
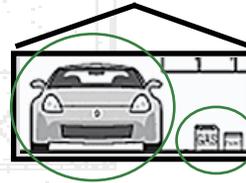
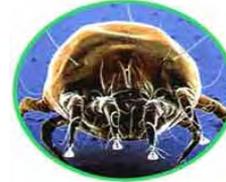
on

ation

i.e.,

What Can Builders Do about IAQ?

- Biological pollutants
 - Mold & Mildew
 - Dust Mites & Pests
- Combustion products
 - CO, NO₂, smoke
- Radon & Soil gases
- Formaldehyde
- Other chemicals
- Airborne Particles
 - Dust, pollen



These indoor pollutants have all been linked to health problems ranging from minor respiratory irritation to death, depending on exposure and sensitivity

Key Point: *Design & construction can reduce exposure risk for all these indoor air pollutants!*

How to get Better IAQ?

IAQ Risk Reduction Principles:

- 1. Source Control** – eliminate, substitute, or remove pollutant sources
- 2. Ventilation** – dilute unavoidable pollutants
- 3. Air Cleaning/Filtration** – capture targeted pollutants, only after source control & ventilation

Or look for the new label:



**Indoor
Air Plus**



EPA Indoor Air PLUS
Verification Checklist



Address or District: _____ Date: _____

City/State/Zip: _____

Section	Requirements (per IEP Construction Specifications for Schools)	Yes	Not Yet	Not Applicable		
Water Management	Water Management Site and Foundation					
	1.1 Site and foundation drainage sloped grade, protected drain tile, & foundation floor drains	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	1.2 Ceiling finish below concrete slab if in unoccupied (basements, etc. open)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	1.3 Foundation wall damp-proofing (floored or below grade walls)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	1.4 Radon-resistant construction included & certified (basements - see spec)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Water Management Wall Assemblies	1.5 Continuous drainage plane behind exterior cladding, properly flashed in foundation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		1.6 Fully flash window and door openings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		Water Management Roof Assemblies	1.7 Substrate over roofing shingles water resistant 7' from foundation (Roofed Dry climates)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			1.8 Fully flash roof wall transitions (day & night) flashing and all roof penetrations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	1.9 Membrane terminate at valleys & penetrations (Roofed Dry climates)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.10 Ice Sealing at eaves (Roofed climates 1-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Water Vapor Management	1.11 Moisture resistant exterior protective systems (i.e. Siding, exterior walling, & joint insulation)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	1.12 No vapor barriers on interior side of exterior walls with high condensation potential	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	1.13 Do not enclose wall or ceiling damaged materials in building assemblies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Fuels/Fumes	2.1 Reduce material features per ASTM E1405, IRC Appendix P, or equivalent (RFA Dose 1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	2.2 Provide ventilation 2 cubic feet per hour (CFM) per occupant (RFA Dose 1 & 2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	2.3 Seal foundation joints & penetrations, including all light sweep doors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
HVAC	3.1 Commissioned and tested	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	3.2 Commissioned and tested	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	3.3 Commissioned and tested	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	3.4 Commissioned and tested	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	3.5 Commissioned and tested	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	3.6 Commissioned and tested	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	3.7 Commissioned and tested	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Combustion Source Controls	4.1 Gas heat (fired) vented, all heat & water heaters properly vented or direct vented	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	4.2 Frequent sealing doors vented outdoors & meet minimum efficiency standards (see spec)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	4.3 Certified for use in each sleeping unit (e.g., common hallway)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	4.4 No smoking in common areas & include smoking restriction sign (see spec)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	4.5 Attached Garage Ventilation (Roofed or attached garage)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Mechanical Combustion Source Controls	4.6 No and correct vented/leakage between house & garage (house doors closed) with clear	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	4.7 Continuously sealed exhaust fan (minimum 20 cfm) in attached garages (see spec)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	4.8 Proper vent materials (approved, CMR, MFR, secondary) no after the furnace pipe	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Fire	5.1 Smoke panels & doors certified VDC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	5.2 Gases, airflows, & control qualified for CO2 Green Label Plus or Green Label	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	5.3 HVAC & additional environmental systems, storage tank, soil within tank, & regular airflow	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
5.4 Provide home before occupancy OR submit upon document	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
5.5 Provide home before occupancy OR submit upon document	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			

Rate/Provider: _____ Builder: _____

Company: _____ Company: _____

Signature: _____ Signature: _____

4/8/2008 FINAL DRAFT <http://www.epa.gov/iaq/indoorairplus>

Here's how...

Details at 11

(11AM on
Tuesday in
Key Rm 11)

Same Strategy - More Value

**ENERGY STAR
QUALIFIED HOME**



Pest Barriers

+ Moisture Control



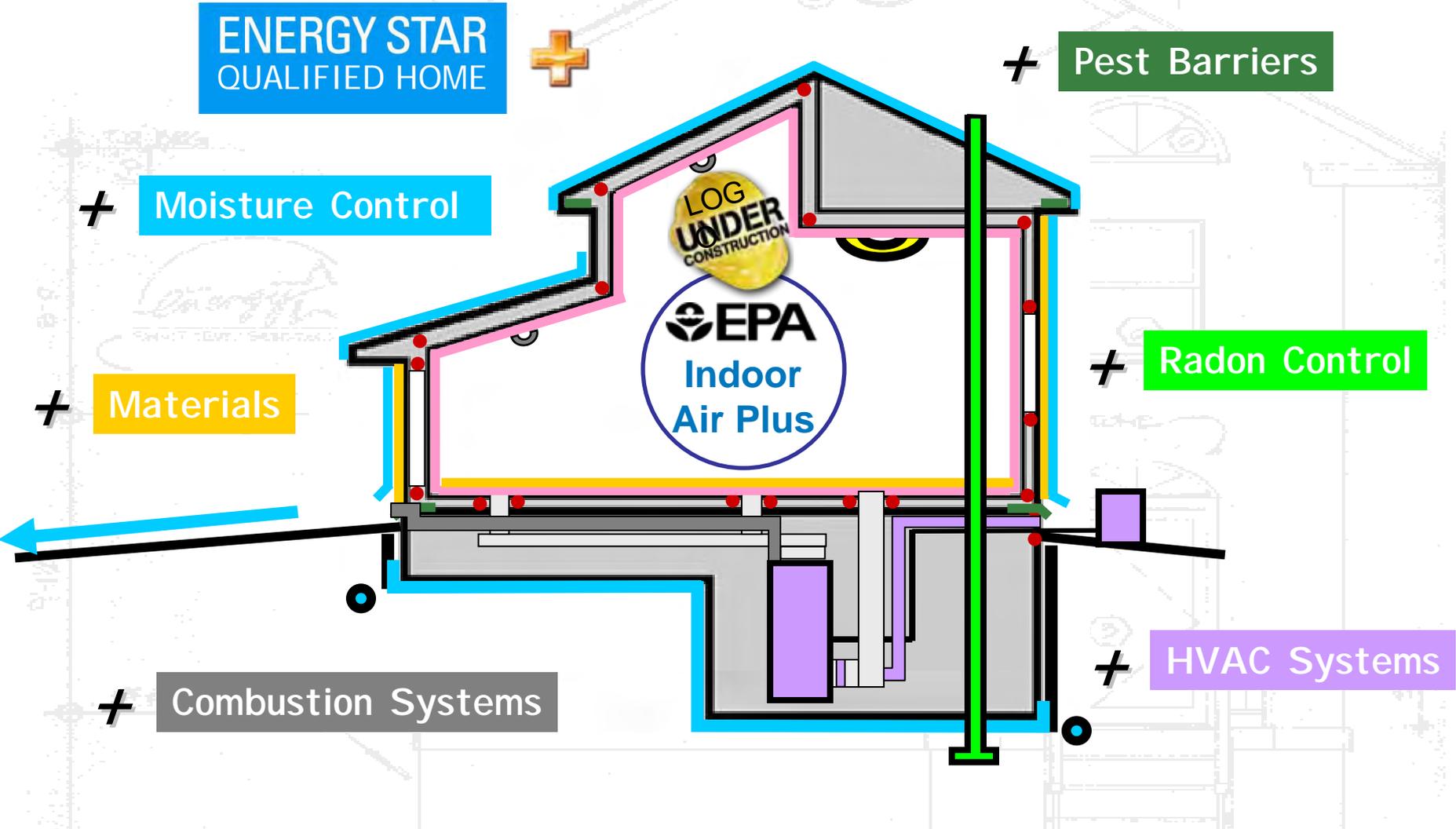
**EPA
Indoor
Air Plus**

+ Radon Control

+ Materials

+ HVAC Systems

+ Combustion Systems



ENERGY STAR & Indoor Air Plus



Like Twins

Indoor Air Quality (IAQ)

How to Get a New Home with EPA Indoor Air Plus

1. Find a qualified
ENERGY STAR
builder partner

www.energystar.gov/homes
use the Partner Locator



2. Ask to include
Indoor Air Plus
3. Breathe!

www.epa.gov/iaq/indoorairplus

Werling.eric@epa.gov

Just look for the EPA Labels ...

	AN ENERGY STAR® QUALIFIED HOME
Address: <input type="text"/>	
Built by: <input type="text"/>	
Verified by: <input type="text"/>	
Date: <input type="text"/>	
Optional information: <input type="text"/>	
<small>This home has been independently verified through an EPA-approved sampling protocol to meet ENERGY STAR's strict guidelines for energy efficiency. Each ENERGY STAR-qualified home can keep 4,500 lbs of greenhouse gases out of our air each year.</small>	
www.energystar.gov	



**LOG
UNDER
CONSTRUCTION**

EPA
**Indoor
Air Plus**



In new Home Showrooms ...

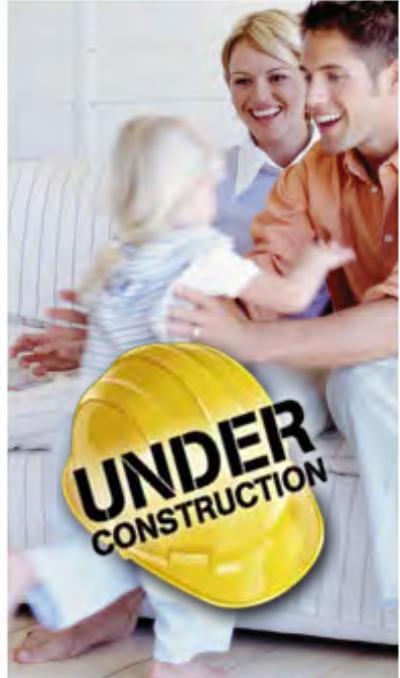
 LEARN MORE AT energystar.gov U.S. Environmental Protection Agency

New Homes



EPA 430-F-03-023 April 2004

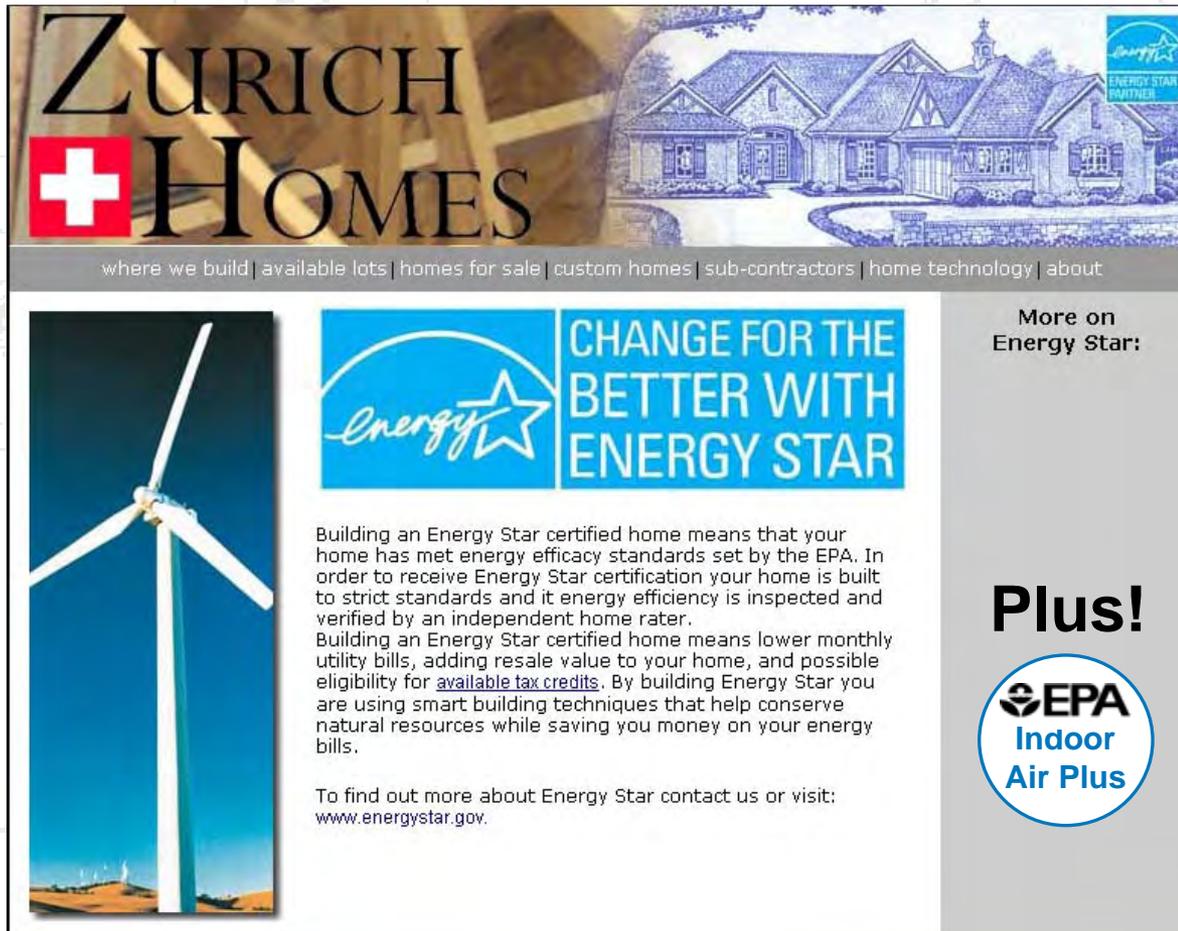
 **Indoor Air Plus** EPA Indoor Air Plus for New Homes DRAFT



All EPA Indoor Air Plus qualified homes meet strict guidelines for energy efficiency set by ENERGY STAR, the nationally-recognized symbol for energy efficiency.



In Participating Builder Ads...



ZURICH HOMES

where we build | available lots | homes for sale | custom homes | sub-contractors | home technology | about

Energy Star CHANGE FOR THE BETTER WITH ENERGY STAR

More on Energy Star:

Plus!

EPA Indoor Air Plus

Building an Energy Star certified home means that your home has met energy efficacy standards set by the EPA. In order to receive Energy Star certification your home is built to strict standards and its energy efficiency is inspected and verified by an independent home rater. Building an Energy Star certified home means lower monthly utility bills, adding resale value to your home, and possible eligibility for available tax credits. By building Energy Star you are using smart building techniques that help conserve natural resources while saving you money on your energy bills.

To find out more about Energy Star contact us or visit: www.energystar.gov.

And On-site Displays ...

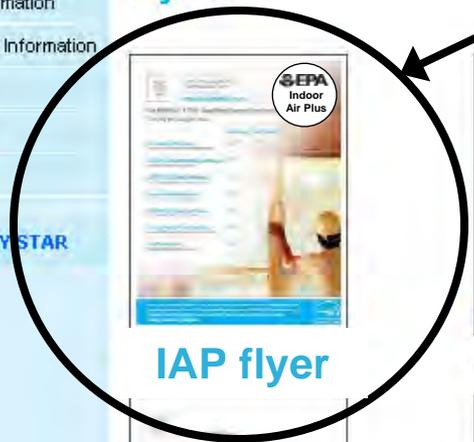


Tools to help builders

The screenshot shows the ENERGY STAR website interface. At the top, there's a blue header with the ENERGY STAR logo and the text "ENERGY STAR® My ENERGY STAR Account". Below this, a navigation bar includes "Contact ENERGY STAR | Help | Logout". The main content area is titled "Marketing Toolkit - New Homes" and contains the text: "This Toolkit can be used by ENERGY STAR builder partners to create the features and benefits of their ENERGY STAR qualified homes. type of template that you want to customize:". Below this text, there are three flyer thumbnails. The first flyer, titled "IAP flyer", is circled in black and has an arrow pointing to it from the text "IAP Marketing Toolkit Coming Soon!". The other two flyers are "Cost Benefits Flyer" and "Efficient Lighting Flyer". A "Next >>" button is visible on the right side of the page.



IAP Marketing Toolkit Coming Soon!



How IAP fits into Green Building

Green Home Staircase

**Energy
Efficiency**



**Indoor Air
Quality**

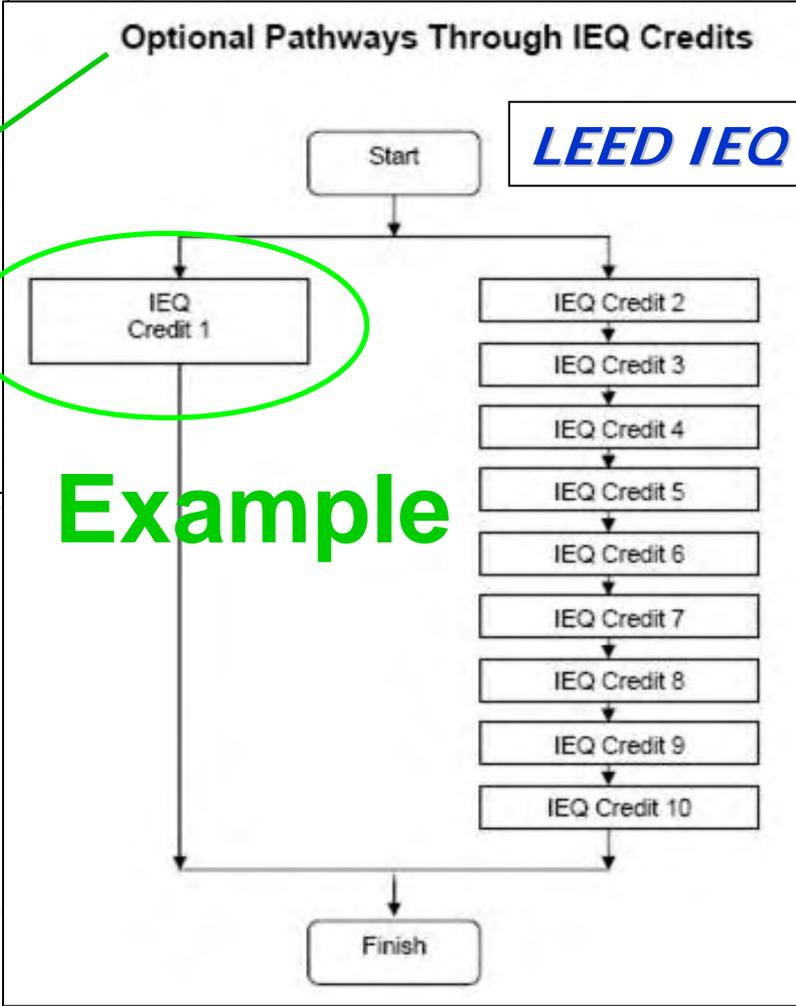


**Resource
Efficiency**



How IAP fits into Green Building

LEED for HOMES		Project Checklist	
Prerequisite	Requirement	Points Available	Points Earned
1.1	Water Conservation	1.0	1.0
1.2	Water Efficiency	1.0	1.0
1.3	Water Conservation	1.0	1.0
1.4	Water Conservation	1.0	1.0
1.5	Water Conservation	1.0	1.0
1.6	Water Conservation	1.0	1.0
1.7	Water Conservation	1.0	1.0
1.8	Water Conservation	1.0	1.0
1.9	Water Conservation	1.0	1.0
1.10	Water Conservation	1.0	1.0
1.11	Water Conservation	1.0	1.0
1.12	Water Conservation	1.0	1.0
1.13	Water Conservation	1.0	1.0
1.14	Water Conservation	1.0	1.0
1.15	Water Conservation	1.0	1.0
1.16	Water Conservation	1.0	1.0
1.17	Water Conservation	1.0	1.0
1.18	Water Conservation	1.0	1.0
1.19	Water Conservation	1.0	1.0
1.20	Water Conservation	1.0	1.0
1.21	Water Conservation	1.0	1.0
1.22	Water Conservation	1.0	1.0
1.23	Water Conservation	1.0	1.0
1.24	Water Conservation	1.0	1.0
1.25	Water Conservation	1.0	1.0
1.26	Water Conservation	1.0	1.0
1.27	Water Conservation	1.0	1.0
1.28	Water Conservation	1.0	1.0
1.29	Water Conservation	1.0	1.0
1.30	Water Conservation	1.0	1.0
1.31	Water Conservation	1.0	1.0
1.32	Water Conservation	1.0	1.0
1.33	Water Conservation	1.0	1.0
1.34	Water Conservation	1.0	1.0
1.35	Water Conservation	1.0	1.0
1.36	Water Conservation	1.0	1.0
1.37	Water Conservation	1.0	1.0
1.38	Water Conservation	1.0	1.0
1.39	Water Conservation	1.0	1.0
1.40	Water Conservation	1.0	1.0
1.41	Water Conservation	1.0	1.0
1.42	Water Conservation	1.0	1.0
1.43	Water Conservation	1.0	1.0
1.44	Water Conservation	1.0	1.0
1.45	Water Conservation	1.0	1.0
1.46	Water Conservation	1.0	1.0
1.47	Water Conservation	1.0	1.0
1.48	Water Conservation	1.0	1.0
1.49	Water Conservation	1.0	1.0
1.50	Water Conservation	1.0	1.0
1.51	Water Conservation	1.0	1.0
1.52	Water Conservation	1.0	1.0
1.53	Water Conservation	1.0	1.0
1.54	Water Conservation	1.0	1.0
1.55	Water Conservation	1.0	1.0
1.56	Water Conservation	1.0	1.0
1.57	Water Conservation	1.0	1.0
1.58	Water Conservation	1.0	1.0
1.59	Water Conservation	1.0	1.0
1.60	Water Conservation	1.0	1.0
1.61	Water Conservation	1.0	1.0
1.62	Water Conservation	1.0	1.0
1.63	Water Conservation	1.0	1.0
1.64	Water Conservation	1.0	1.0
1.65	Water Conservation	1.0	1.0
1.66	Water Conservation	1.0	1.0
1.67	Water Conservation	1.0	1.0
1.68	Water Conservation	1.0	1.0
1.69	Water Conservation	1.0	1.0
1.70	Water Conservation	1.0	1.0
1.71	Water Conservation	1.0	1.0
1.72	Water Conservation	1.0	1.0
1.73	Water Conservation	1.0	1.0
1.74	Water Conservation	1.0	1.0
1.75	Water Conservation	1.0	1.0
1.76	Water Conservation	1.0	1.0
1.77	Water Conservation	1.0	1.0
1.78	Water Conservation	1.0	1.0
1.79	Water Conservation	1.0	1.0
1.80	Water Conservation	1.0	1.0
1.81	Water Conservation	1.0	1.0
1.82	Water Conservation	1.0	1.0
1.83	Water Conservation	1.0	1.0
1.84	Water Conservation	1.0	1.0
1.85	Water Conservation	1.0	1.0
1.86	Water Conservation	1.0	1.0
1.87	Water Conservation	1.0	1.0
1.88	Water Conservation	1.0	1.0
1.89	Water Conservation	1.0	1.0
1.90	Water Conservation	1.0	1.0
1.91	Water Conservation	1.0	1.0
1.92	Water Conservation	1.0	1.0
1.93	Water Conservation	1.0	1.0
1.94	Water Conservation	1.0	1.0
1.95	Water Conservation	1.0	1.0
1.96	Water Conservation	1.0	1.0
1.97	Water Conservation	1.0	1.0
1.98	Water Conservation	1.0	1.0
1.99	Water Conservation	1.0	1.0
2.00	Water Conservation	1.0	1.0



Example

PLUS

Over 20 durability features not required in LEED

Questions?

www.epa.gov/iaq/indoorairplus

Werling.eric@epa.gov

ENERGY STAR in Affordable Housing



Brian Ng

Affordable Housing and
Finance Coordinator

ng.brian@epa.gov

www.energystar.gov/homes

What are the benefits of energy efficiency?



Energy efficiency provides:

- Lower energy use and lower utility bills
- Improved home comfort
- Improved building durability
- Increased property value
- Reduced air pollution / improved environment and human health

Why is Energy Efficiency Important for Low Income Families?



- Rising energy prices
- Low-income households spend more on energy (can exceed 30% of income)
- Grant funding and subsidies are shrinking
 - Actual energy bills exceed LIHEAP funding by \$21 bil.
- Utility costs in public and assisted housing are more than a quarter of operating costs

What Does ENERGY STAR Offer?



- Protects the environment through superior, cost effective energy efficiency measures
- No tradeoffs in performance or quality
- A government backed symbol providing valuable, unbiased information – source of authority
- It is binary (it's either efficient or not)
- Power of the individual to make a difference

ENERGY STAR for Affordable Housing



ENERGY STAR Qualified Homes:

- Homes that are independently verified to meet stringent energy efficiency guidelines established by the U.S. EPA
- Includes single-family, low-rise multifamily (3 stories or less), manufactured and modular homes

ENERGY STAR Qualified Products:

- Over 50 product categories produced by over 2,000 manufacturers. Includes light fixtures, CFLs, refrigerators, dishwashers, clothes washers, window ACs, windows and doors

Home Performance with ENERGY STAR:

- A whole-house energy efficiency assessment and improvement process

What is an ENERGY STAR Qualified Home?



COMPONENTS OF A TYPICAL ENERGY STAR® QUALIFIED HOME



1. Effective insulation
2. High performance windows (Low-E)
3. Tight construction (complete air barrier) and ducts
4. Efficient heating and cooling equipment
5. Lighting and appliances
6. Third-party verified

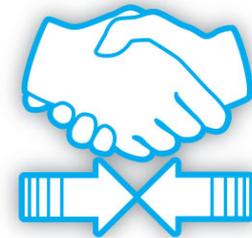
For Existing Homes



energystar.gov/QuantityQuotes



ENERGY STAR
Quantity Quotes



A Web site created by the U.S. DOE to
connect large-quantity buyers with
suppliers of ENERGY STAR products

QuantityQuotes.net



How QuantityQuotes.net Works



Purchaser submits a purchase request to suppliers through the Web site



Interested suppliers respond to the purchaser through the Web site



Purchaser follows up with suppliers and chooses one to negotiate a contract with

Product Availability:

- Refrigerators
- Fluorescent light fixtures
- Compact fluorescent lamps (CFLs)
- Room air conditioners
- Dishwashers
- Clothes washers
- Dehumidifiers
- Replacement windows & doors [planned]

Benefits:

- **Save time.** Stop searching for suppliers of ENERGY STAR qualified products. Let them come to you.
- **Save money.** Suppliers compete against one another for your business.
- **Get the right product.** Customized forms guide you through formulating your purchase request.
- **Keep your contact information private.** Communicate anonymously with suppliers and choose when and to whom to reveal your identity.

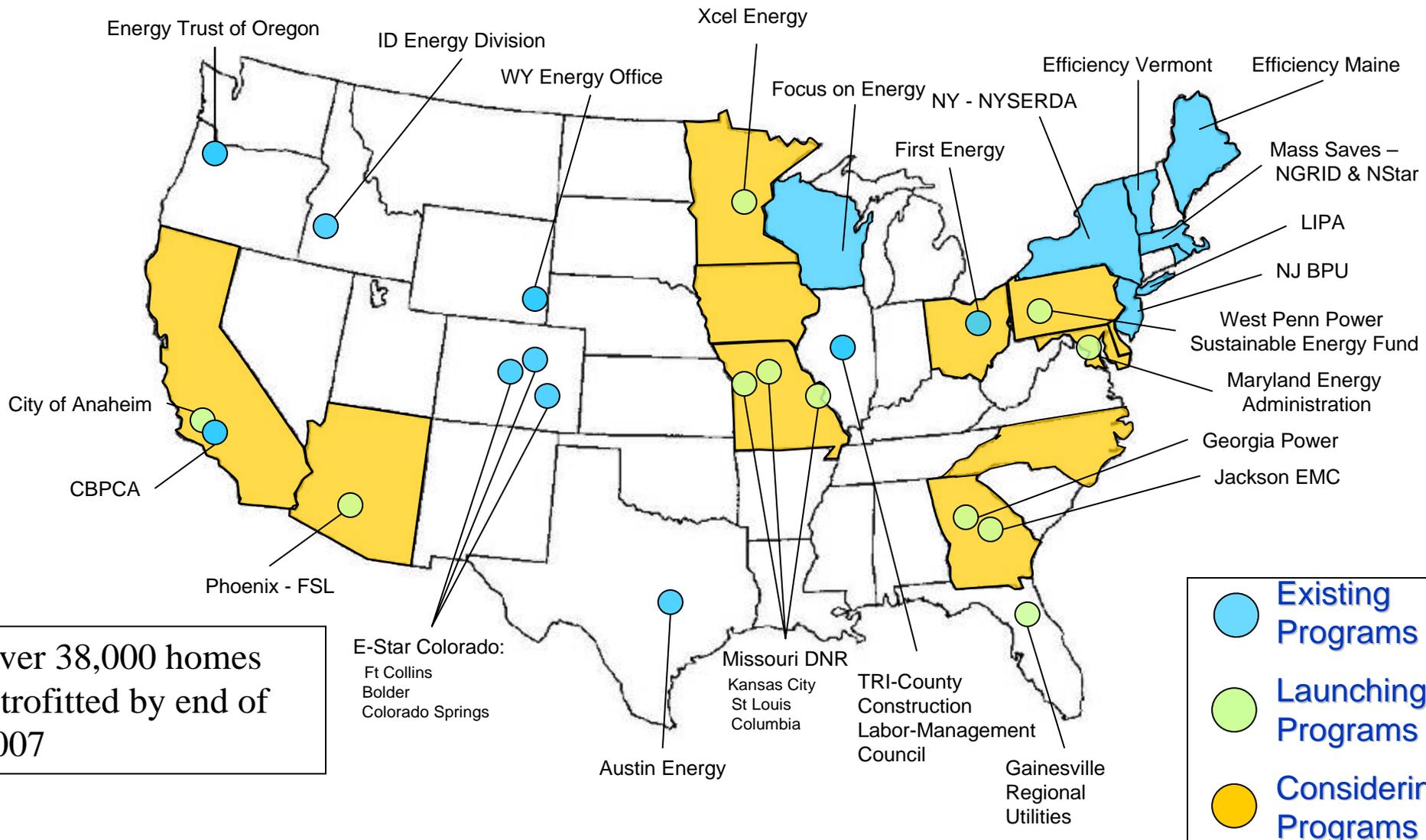
For Existing Homes



- **Home Performance with ENERGY STAR**
 - **'Whole-House' improvements**
EPA works with state and utility partners
 - **Combines Audit, Evaluation, Improvements**
Emphasis on delivering improvements
 - **Quality Assurance**
Diagnostics and “best practice” installation
Accredited performance contractors

Home Performance with ENERGY STAR

April 2008



Over 38,000 homes retrofitted by end of 2007

How Can Stakeholders Promote ENERGY STAR in Affordable Housing?



- **Builders, Developers, Rehab Specialists** – Include ENERGY STAR early in planning and design phases. Specify use of ENERGY STAR qualified products and equipment and ENERGY STAR construction guidelines.
- **HUD, HFAs, Federal Home Loan Banks** - Award points and/or incentives or require ENERGY STAR measures as part of criteria for allocating public funding
- **Utilities and Energy Offices** - Provide financial and technical assistance to help implement ENERGY STAR measures. Work with HFAs to promote ENERGY STAR measures over standard efficiency equipment and construction. Sponsor Home Performance programs in their service areas.
- **Lenders** – Offer energy efficient mortgages or other loans and incentives that promote ENERGY STAR qualified homes and making improvements to existing homes. Work with utilities and energy offices to administer special loan programs.

ENERGY STAR Deployment Strategy



- Work with HUD to strengthen ENERGY STAR presence in NOFA for HOPE VI and in HOME and CDBG guidance, help HUD provide ENERGY STAR info. in Consolidated Action Plan training for grantees
- Work with state housing finance agencies to require or award points for ENERGY STAR homes when scoring LIHTC applications
- Develop and distribute case studies, success stories and disseminate to local housing authorities through HUD channels and Web (www.energystar.gov/homes)
- Continue promoting ENERGY STAR products (quantityquotes.net)
- Provide recognition - ENERGY STAR awards for energy efficient affordable housing (www.energystar.gov/awards)

ENERGY STAR's Partnership with Habitat for Humanity



- ENERGY STAR's residential construction standards are part of HFH's U.S. construction standards.
- There are 75 HFH affiliates who are ENERGY STAR partners. HFH affiliates have built over 3,500 ENERGY STAR qualified homes across the U.S.
- Houston HFH and Nashville HFH affiliates have earned ENERGY STAR awards for excellence in energy efficient affordable housing
- Houston HFH built 288 ENERGY STAR homes in 2006. Provide zero interest loans to low income families
- Nashville HFH reported \$60k annual savings and a 42% reduction in energy use for their ENERGY STAR qualified homes. Ave. utility bill for 1,100 sq. ft. home is \$87/month

Utah Dept. of Housing and Community Development



- Utah DHCD administers the Olene Walker Housing Loan Fund which includes HUD HOME allocations
- In 2007, the fund made ENERGY STAR a requirement. This influenced Utah's state tax credit program to prioritize ENERGY STAR in scoring criteria
- Loan applicants can get loan rate reductions for ENERGY STAR projects
- DHCD allows developers to use utility estimates from home energy raters as utility allowances for residents. This creates better project cash flow and an incentive for developers to adopt ENERGY STAR for new construction and renovation projects.

Victoria Ridge Senior Apartments

(48 ENERGY STAR units)

Ogden, Utah

\$135 in annual savings per unit



Rural Self-Help Housing

(7 ENERGY STAR units)
Saratoga Springs, Utah
\$432 in annual savings per home



Helpful Web Sites



ENERGY STAR for New Construction

www.energystar.gov/homes

ENERGY STAR Home Improvement

www.energystar.gov/homeimprovement

ENERGY STAR Bulk Purchasing Tool

www.quantityquotes.net

RESNET – HERS Raters

www.natresnet.org

Building Performance Institute

www.bpi.org

State, Local, Utility, and Federal Incentives

www.dsireusa.org

ENERGY STAR's Main Message



Energy efficiency is not a luxury, it is critical to providing truly green, healthy, affordable housing and more sustainable communities.

Marketing ENERGY STAR HOMES

Zak Shadid

Operations Manager, ENERGY STAR for Homes

shadid.zachary@epa.gov

www.energystar.gov/homes



WHAT IS ENERGY STAR?



The national, US government-backed
symbol for
energy efficiency

ENERGY STAR Mark



HISTORY OF ENERGY STAR



- *1992 - EPA introduces ENERGY STAR as a voluntary labeling program for energy-efficient products to reduce greenhouse gas emissions*
- *First labeled products - Computers /Monitors*
- *Through 1995 - Label expands to addt'l office products, lighting, HVAC, and New Homes*
- *1996 - EPA partners with US DOE for new product categories (appliances & windows)*
- *The ENERGY STAR label can now be found on over 50 different types of products.*

ENERGY STAR AS A TRUSTED “BRAND”



ENERGY STAR's "Brand Promise"

When consumers see the ENERGY STAR, they can be assured they are getting efficiency, performance, and cost savings.

All while helping to protect the environment by reducing greenhouse gas emissions.

ENERGY STAR AS A TRUSTED “BRAND”

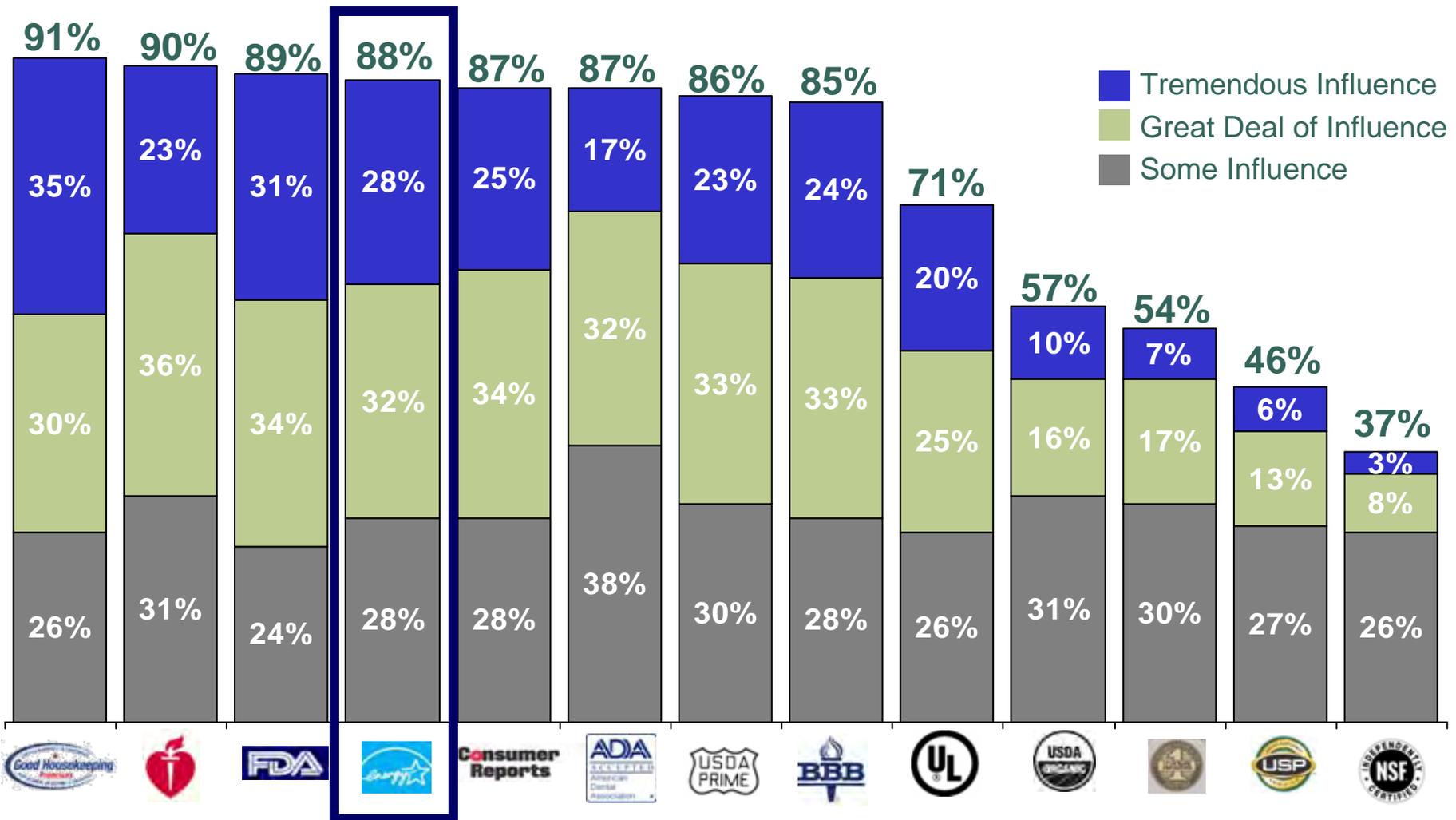


70%+ *awareness in 2007*

80%+ *households would recommend*

35% *knowingly purchased*

ENERGY STAR AS A TRUSTED "BRAND"



WHAT IS ENERGY STAR FOR HOMES?



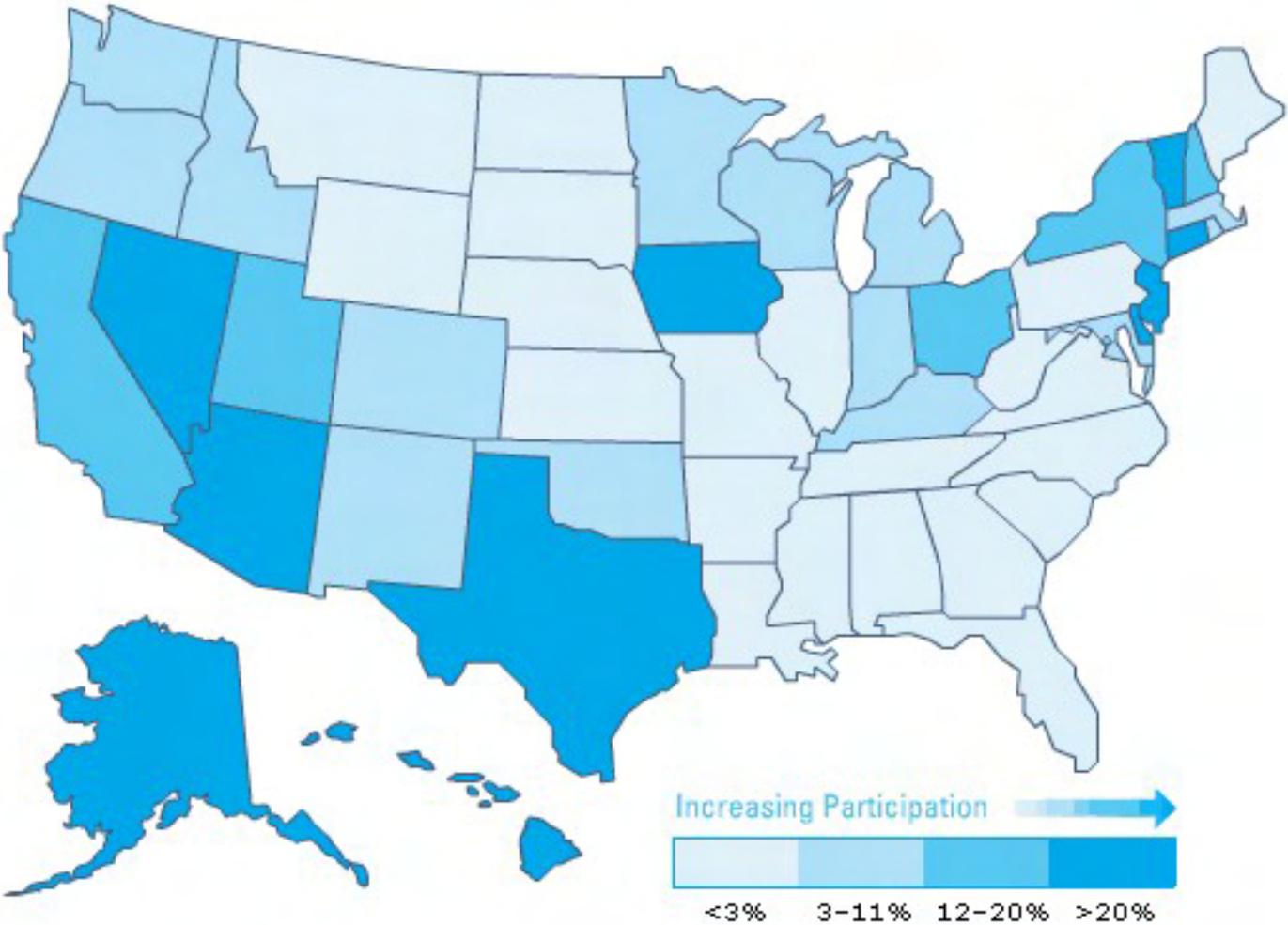
- ***Voluntary***
Compelling Value Proposition
- ***Defines Energy Efficient***
Rigorous Specifications
Third-Party Verified
- ***Builder Recognition***
Government-Backed Label
Awards

ENERGY STAR IN NEW CONSTRUCTION

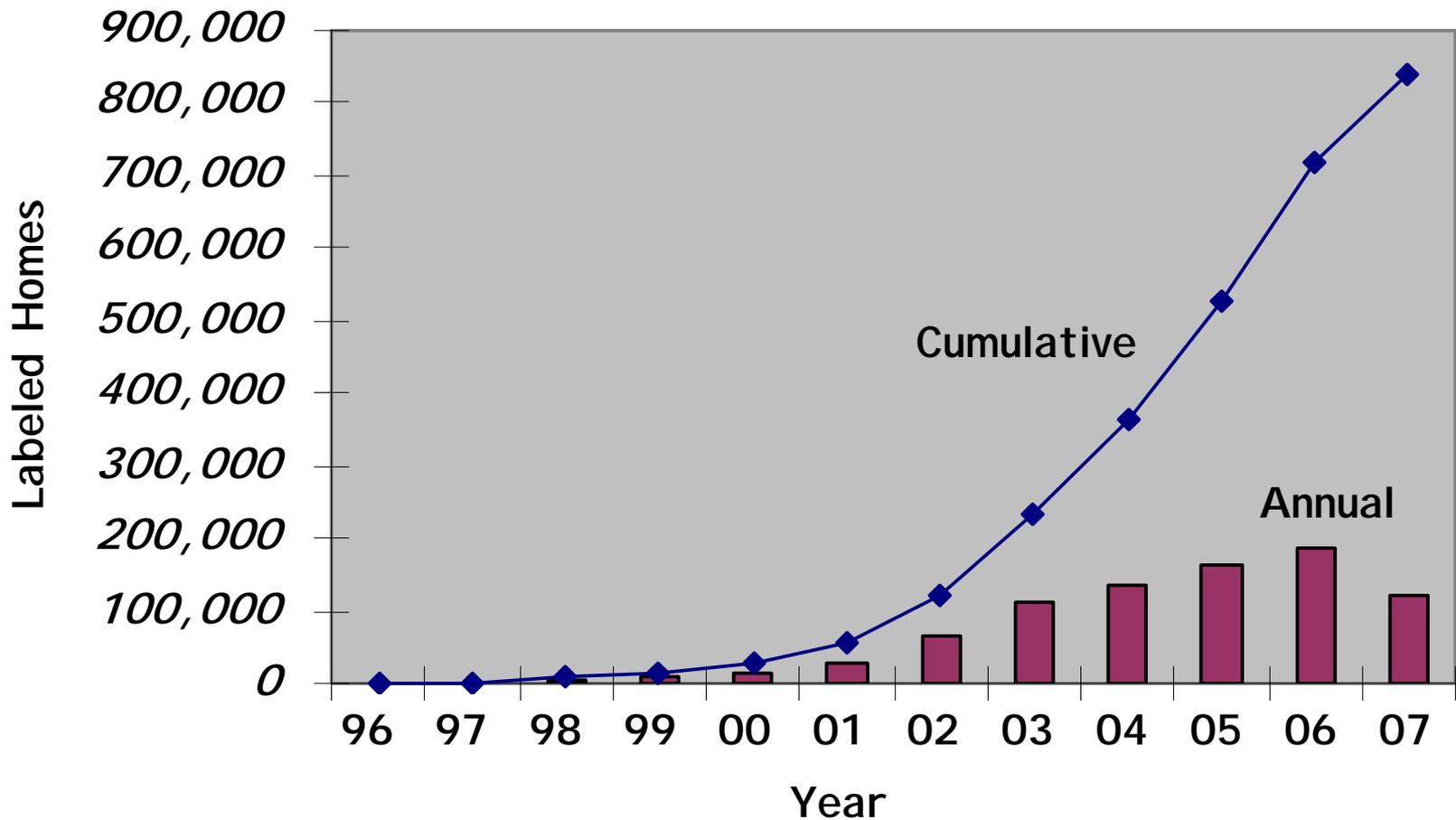


- **>840,000** *Homes Qualified to-date*
- **>5,000** *Builder Partners*
 - **60%** *100 Largest Builders*
 - **95%** *of Largest 25*
- **~12%** *National Market Penetration*
 - **9 states and 30 metro areas with >20% market penetration**

ENERGY STAR Qualified Homes: Program Results



RESULTS: EXPONENTIAL GROWTH



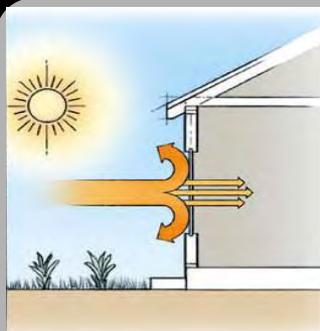
HOW TO APPLY BUILDING SCIENCE: ENERGY STAR QUALIFIED HOMES



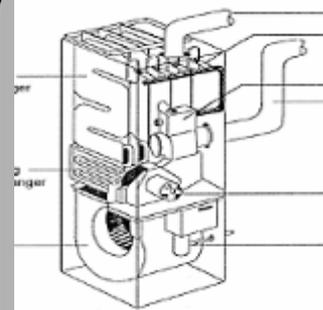
***Tight
Ducts***



***Air
Sealing***



***Advanced
Windows***



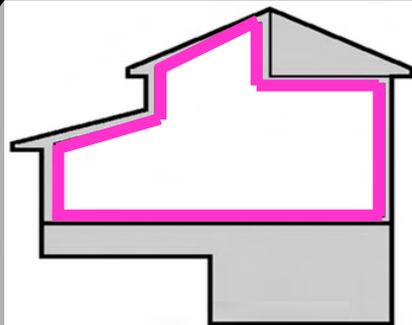
***Efficient
Equipment***



***Field
Verified***



***Insulation
Installation***



***Complete
Air Barrier***



***Right
Sizing***



What are the benefits of an ENERGY STAR Qualified Home?



- Minimizes energy needed to control the interior environment while maximizing comfort
- **15-20%** more energy efficient than a standard *new* home
- Passes third party inspection by a certified home energy rater
- Can remove 4,500 lbs. of greenhouse gases per year
- Can save homeowners \$200-400 per year

MARKETING:



ENERGY STAR

Marketing

Resources

ENERGY STAR MARKETING RESOURCES LOGO



Promotional Mark



Certification Mark

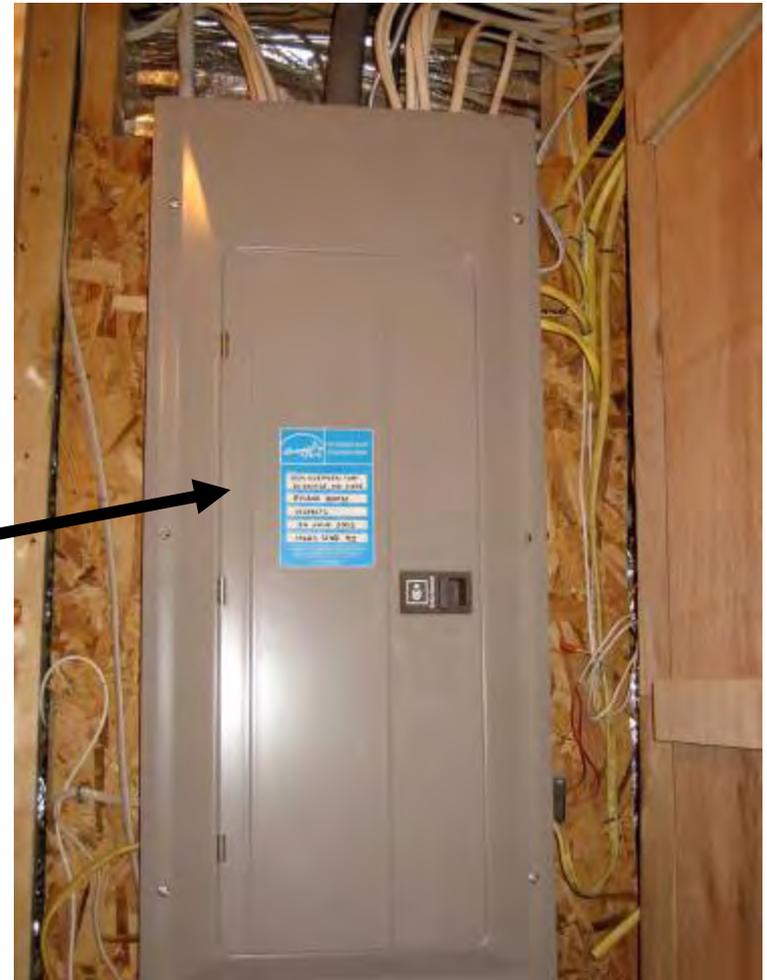


Partnership Mark

ENERGY STAR MARKETING RESOURCES: LABEL



	AN ENERGY STAR[®] QUALIFIED HOME
Address:	9722 Main Street Baltimore, MD 21224
Built by:	Smaller Homes
Verified by:	Energy Wise, LLC
Date:	September 15, 2008
Optional information:	HERS INDEX - 80
<p>This home has been independently verified through an EPA-approved sampling protocol to meet ENERGY STAR's strict guidelines for energy efficiency. Each ENERGY STAR qualified home can keep 4,500 lbs of greenhouse gases out of our air each year.</p>	
www.energystar.gov	



ENERGY STAR MARKETING RESOURCES

ENERGY STAR WEB SITE



PROTECT OUR ENVIRONMENT FOR FUTURE GENERATIONS
U.S. Environmental Protection Agency • U.S. Department of Energy

ENERGY STAR About ENERGY STAR • News Room • FAQs Search Go

PRODUCTS ▶

- Stay Warm With ENERGY STAR @home
- Explore Products >
- Appliances
- Heating & Cooling
- Home Electronics
- Lighting
- Office Equipment
- Smart Lamps
- Refrigerators

HOME IMPROVEMENT

- Explore Home Improvement
- Common Home Problems
- Home Energy Audits
- Air Seal & Insulate
- Heat & Cool Efficiently
- Home Performance with ENERGY STAR
- For Contractors

HEADLINES

- ENERGY STAR LEDs reach 20%
- ENERGY STAR Leaders Awarded
- Next Generation of ENERGY STAR Qualified Computers Offers Big Savings
- Save Energy this Winter with the ENERGY STAR Home Advisor
- 2008 ENERGY STAR Awards Ceremony is April 1

BUILDINGS & PLANTS ▶

- Take the ENERGY STAR CHALLENGE!
- Explore Buildings & Plants >
- Guidelines for Energy Management
- Tools & Resources Library
- Expert Help
- Commercial Building Design
- Green Buildings

NEW HOMES ▶

- ENERGY STAR Qualified Homes
- Take A Tour Behind the Walls
- Explore Qualified New Homes >
- Find an ENERGY STAR Builder
- ENERGY STAR New Home Features
- Benefits for Homeowners
- For Residential Professionals

GO TO PARTNER RESOURCES ▶

Login

Username:

Password:

[Sign In](#) [Forgot password?](#)

10 Million Visitors/Year

1040 Tax Credits Under the Energy Bill

Take the ENERGY STAR Change A Light Pledge

ENERGY STAR PODCAST ENERGY STAR Podcast

ENERGY STAR MARKETING RESOURCES WEB SITE LOCATOR TOOL



A NEW ENERGY STAR® QUALIFIED HOME IMPROVES OUR ENVIRONMENT
U.S. Environmental Protection Agency

About ENERGY STAR • News Room • FAQs • **KIDS**

Go

ENERGY STAR
Products
Home Improvement
New Homes
Buildings & Plants
Partner Resources

Home > New Homes > Partner Locator > Results

New Homes Partner Results in Virginia						
						Printable: Results 1 - 50 All Results
Name <input type="checkbox"/>	Service Area/Phone	Partner Since	Homes Labeled (Apr 2007-Mar 2008)*	Homes Labeled (Grand Total)*	Homes Labeled (State Total)*	
Better Housing Coalition	Richmond, VA 804-644-0546	2007	3	3	3	
Bozzuto Homes, Inc.	Northern Virginia, VA 301-446-2209	2005	202	329	0	
Camberley Homes	Northern Virginia, VA 301-803-4800	2005	34	41	41	
Caruana Construction Inc.	Virginia Beach, Suffolk, Chesapeake, VA 757-717-2233	2007	New Partner	New Partner	0	
CBD Custom Homes, LLC	Northern Virginia, VA 703-930-3562	2007	New Partner	New Partner	0	
Centex Homes	Northern, VA 703-679-1600	2006	64	64	64	
Central Valley Habitat for Humanity	Bridgewater, Rockingham County, VA 540-828-6288	2007	New Partner	New Partner	0	
Cityspace Construction, Inc.	Richmond, VA 804-353-0491	2008	New Partner	New Partner	0	
Clark Pinna Communities	Fort Belvoir, VA 703-781-2008	2007	405	941	941	
Dodson Homes, Inc.	Centreville, VA 703-830-9503	1996	14	365	365	

ENERGY STAR MARKETING RESOURCES

WEB SITE MARKETING RESOURCES



www.energystar.gov/homes

A screenshot of the Energy Star website's "Homes" section. The header features the Energy Star logo on the left, a banner image of a person sitting on a boat with the text "BE A LEADER—CHANGE OUR ENVIRONMENT FOR THE BETTER" and "U.S. Environmental Protection Agency • U.S. Department of Energy" on the right, and a search bar. Below the header is a navigation menu with buttons for "Products", "Home Improvement", "New Homes", "Buildings & Plants", and "Partner Resources". The main content area is titled "ENERGY STAR Qualified Homes" and includes a sidebar with a list of partner categories, a "Quick Finder" menu, and a "Marketing Resources" menu. The "Marketing Resources" menu is highlighted with a red box and a red arrow pointing to the text "Marketing Resources" on the right side of the page.

ENERGY STAR

BE A LEADER—CHANGE OUR ENVIRONMENT FOR THE BETTER
U.S. Environmental Protection Agency • U.S. Department of Energy

About ENERGY STAR • News Room • FAQs

Search Go

ENERGY STAR Products Home Improvement New Homes Buildings & Plants Partner Resources

Home > Partner Resources > ENERGY STAR Qualified Homes

ENERGY STAR Qualified Homes

Homes that earn the ENERGY STAR must meet guidelines for energy efficiency set by the U.S. Environmental Protection Agency. ENERGY STAR qualified homes are at least 15 percent more energy efficient than homes built to the 2004 International Residential Code (IRC), and include additional energy-saving features that typically make them 20–30% more efficient than standard homes.

ENERGY STAR qualified homes can include a variety of [energy-efficient features](#), such as effective insulation, high performance windows, tight construction and ducts, efficient heating and cooling equipment, and ENERGY STAR qualified lighting and appliances.

Through ENERGY STAR, builders and other home industry professionals can differentiate themselves in the market. New homes that qualify as ENERGY STAR provide greater comfort and durability for home buyers. In addition, ENERGY STAR qualified homes help protect the environment by reducing the greenhouse gas emissions associated with global warming.

For more information, choose one of the following:

- [I am not an ENERGY STAR partner or I am a new partner and want to Learn More](#)
- [I am an active ENERGY STAR partner looking for Marketing and Technical Resources](#)

Quick Finder

- [Partner Resources](#)
- [Partnership Agreements](#)
- [Update My ENERGY STAR Account](#)
- [Partner Locator](#)
- [National Awards](#)
- [New Homes Newsletters](#)

Marketing Resources

- [Logos](#)
- [Marketing Toolkit](#)
- [Outreach Partnership](#)
- [Brochures](#)
- [Fact Sheets](#)
- [Web Linking Policy](#)

Partner Resources

- [Manufacturers](#)
- [Retailers](#)
- Builders, Lenders, Raters & Sponsors of New Homes**
- [Benefits for Partners](#)
- [Partner Resources](#)
- [Utilities/EEPS](#)
- [Service & Product Providers](#)
- [Buildings & Plants](#)
- [Small Businesses](#)
- [Congregations](#)
- [For Contractors](#)
- [For Federal Agencies](#)
- [Join ENERGY STAR](#)

Marketing Resources

ENERGY STAR MARKETING RESOURCES: ONLINE MARKETING TOOLKIT



Customizable Templates:

- *Features Flyer*
- *Checklist Flyer*
- *Benefits Flyer*
- *Cost Flyer*
- *Lighting Flyer*
- *Environmental Flyer*
- *Benefits Display Card*
- *Web Buttons/Banners*



ENERGY STAR MARKETING RESOURCES: MARKETING TOOLKIT



HOLTON HOMES
www.holtonhomes.com

You'll appreciate your ENERGY STAR® qualified home every time you open a utility bill.

Look for these important energy efficiency features that can save you up to \$400 a year:

- ENERGY STAR qualified windows employ advanced technologies to improve performance.
- The government-backed ENERGY STAR label identifies homes that are truly energy efficient.
- ENERGY STAR qualified windows employ advanced technologies to improve performance.
- The government-backed ENERGY STAR label identifies homes that are truly energy efficient.
- Independent testing and inspection ensures energy-efficient home performance.

Builder Logo



www.holtonhomes.com

Builder URL

Builder Features

Buy a new home that has a view of the future with ENERGY STAR® and Holton Homes.

Builder Name

Builder Text

THE ENERGY STAR LABEL
Homes that earn the government's ENERGY STAR label meet strict guidelines for energy efficiency set by the U.S. Environmental Protection Agency (EPA). Our ENERGY STAR qualified homes are at least 15% more energy efficient than standard homes.

INSULATION INSTALLED RIGHT
Properly installed insulation in the floors, walls, and attics of our homes provides even temperatures, increased comfort, and lower utility bills. Our homes undergo a rigorous, 16-point insulation inspection by an independent Home Energy Rater to ensure that your new home is properly insulated to provide maximum efficiency.

ENERGY STAR QUALIFIED HEATING
Our homes' high-efficiency furnaces will keep you warm without breaking the bank. ENERGY STAR qualified furnaces are up to 15% more efficient than standard models - saving you up to \$80 each year on your heating bills.

ENERGY STAR QUALIFIED HEATING
Our homes' high-efficiency furnaces will keep you warm without breaking the bank. ENERGY STAR qualified furnaces are up to 15% more efficient than standard models - saving you up to \$80 each year on your heating bills.

ENERGY STAR ADVANCED LIGHTING PACKAGE
Your new home includes a specially designed package of energy-efficient lighting that has earned the ENERGY STAR label. This lighting uses less energy, emits less heat, and saves you money.

Builder Images



Cold stuff Hot diggity! It's tight!

EPA Text

To earn the government's ENERGY STAR, a home must meet strict energy efficiency guidelines set by the U.S. EPA. ENERGY STAR qualified homes are quieter and more comfortable, have lower utility bills, and help protect the environment by reducing greenhouse gas emissions.

To earn the government's ENERGY STAR, a home must meet strict energy efficiency guidelines set by the U.S. EPA. ENERGY STAR qualified homes are quieter and more comfortable, have lower utility bills, and help protect the environment by reducing greenhouse gas emissions.

ENERGY STAR MARKETING RESOURCES

FACT SHEETS



ENERGY STAR Advanced Lighting Package

Experience Full Design Choice and Energy Efficiency



ENERGY STAR Qualified Appliances

Save Energy through Advanced Technologies



ENERGY STAR Qualified Cooling Equipment

Enhance Comfort and Improve Durability



ENERGY STAR Qualified Homes

Experience Advanced Home Building Practices and Technologies

Buying a new home can be overwhelming. While choosing flooring, countertops, and colors, it's easy to overlook other important things like durability, comfort, and affordability. Finding a home that meets these requirements may be easier than you think – just look for the ENERGY STAR Homes that meet the ENERGY STAR Home Connect to meet EPA's guidelines for energy efficiency. These guidelines require homes to be significantly more efficient than homes built to minimum code requirements. In addition to saving money on your utility bills, the advanced building practices typically used in ENERGY STAR qualified homes can also provide more comfort and durability.

FEATURES OF A TYPICAL ENERGY STAR QUALIFIED HOME

- Tight Construction and Flexible Advanced Insulation: for ceilings, floors, and walls in the home's "envelope," and duct systems help reduce drafts, minimize heat gain and loss. As a result, a tightly sealed home can minimize unwanted moisture and air leaks, and reduce utility bills.
- High-Performance Windows, Advanced Technologies, such as air-source heat pumps and improved coils, help energy efficient windows keep heat in during the winter and out during the summer. They also block damaging ultraviolet sunlight from fading carpets and furnishings.
- Effective Insulation: Properly installed insulation in floors, walls, and attics not only reduces heat loss in the winter and heat gain in the summer, but also helps maintain more comfortable indoor year-round in your home and in the areas between these rooms.



ENERGY STAR qualified homes combine high-efficiency appliances and advanced building practices to make your new home more energy efficient.



Air Distribution Systems

Efficiently Distribute Conditioned Air Throughout Your Home



ENERGY STAR Qualified Heating Equipment

Enhance Comfort and Durability



Insulation

Improve Comfort While Saving Energy



ENERGY STAR Qualified Windows

Protect Your Home and Increase Your Comfort

What more from your windows than a view of the outdoors? ENERGY STAR qualified windows and skylights can save money on your utility bills, while improving the comfort of your home and helping to protect your valuable furnishings and finishes from sun damage. Independently tested for superior energy performance, ENERGY STAR qualified windows and skylights are also better for the environment because to energy your energy use means less air pollution from power plants.

BENEFITS OF ENERGY STAR QUALIFIED WINDOWS AND SKYLIGHTS

- Energy Savings: ENERGY STAR qualified windows and skylights feature energy-saving technologies such as advanced coatings, recessed metal gas-filled spaces between panes, improved framing materials, better weatherstripping, gas-tight casings, and more edge spacers.
- Improved Comfort: Demand to heat-efficient windows. ENERGY STAR qualified windows help keep homes warmer in the winter and cooler in the summer. This is because they can block 70 percent or more of the solar heat gain in the summer and reflect the radiant heat indoors during winter. So you can relax next to your window year-round, regardless of the temperature outside.
- Protection of Your Home's Interiors: The specially photographic blocking, filtering, and visible-light-transmission coatings offer superior protection against ultraviolet light. ENERGY STAR qualified windows with these coatings can reduce fading. These coatings also block ultraviolet rays from your furniture, blocking 99% more damaging ultraviolet light.
- Reduced Condensation: If an inefficient window or window frame gets too cold, water can condense in the space between the window frame and the wall or floor. Over time, chronic condensation can damage walls, cause paint to crack, and encourage the growth of mold. Advanced frames, gas-tight casings, and other technologies make ENERGY STAR qualified windows to keep the air between the frame and frame seal dry, reducing the potential for condensation and ensuring a clear view from inside.



ENERGY STAR MARKETING RESOURCES OUTREACH PARTNERSHIP



Min. 3 partners work together and provide:

*Funds to run an 8-13 week placement of an
EPA-developed ad or radio spot or equivalent
alternate media plan*

EPA provides:

Funds to run a complementary ad campaign

ENERGY STAR MARKETING RESOURCES OUTREACH PARTNERSHIP RESULTS



- In 2008, more than 1,000 builders in nearly 40 cities and municipalities participated in the Outreach Partnership. Together, these campaigns placed:
 - Print ads in 23 newspapers
 - Color print ads in 59 magazines
 - TV and radio spots, billboards, paid search, and web banners in 17 markets

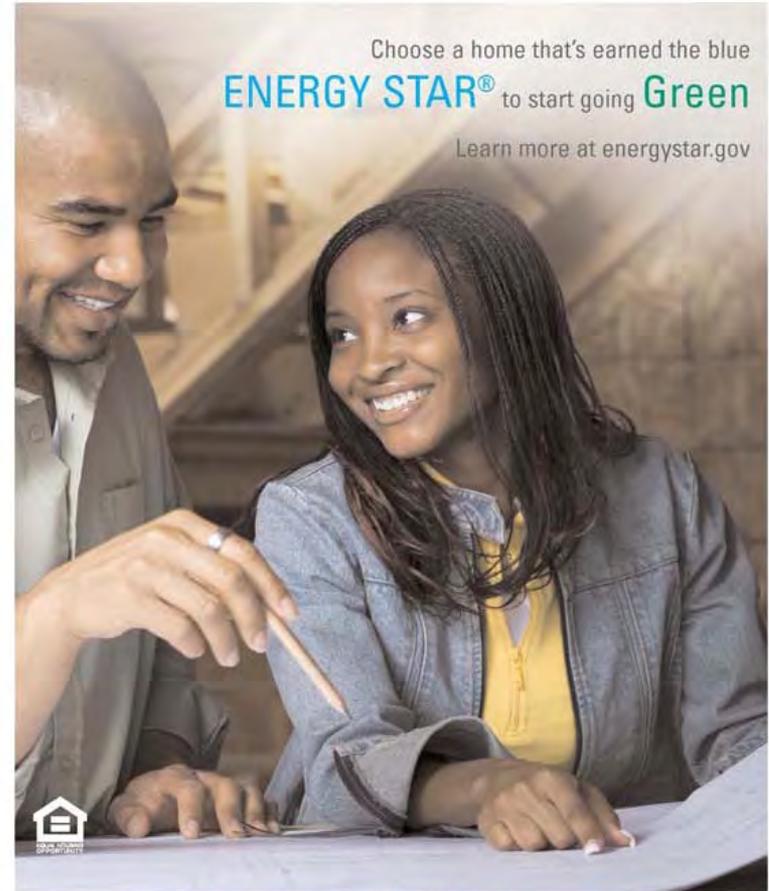
ENERGY STAR MARKETING RESOURCES: OUTREACH PARTNERSHIP EXAMPLES



Start living **Green** with a new home
that's earned the blue **ENERGY STAR®**
Learn more at energystar.gov



CHOOSE ENERGY STAR TO JOIN EPA IN THE FIGHT AGAINST GLOBAL WARMING.
For home buyers looking to go green and help protect the environment, energy efficiency is the best place to start. And the easiest way to make sure your next new home is energy efficient is to look for the blue ENERGY STAR. Learn more at energystar.gov



Choose a home that's earned the blue
ENERGY STAR® to start going **Green**
Learn more at energystar.gov



CHOOSE ENERGY STAR TO JOIN EPA IN THE FIGHT AGAINST GLOBAL WARMING.
For home buyers looking to go green and help protect the environment, energy efficiency is the best place to start. And the easiest way to make sure your next new home is energy efficient is to look for the blue ENERGY STAR. Learn more at energystar.gov

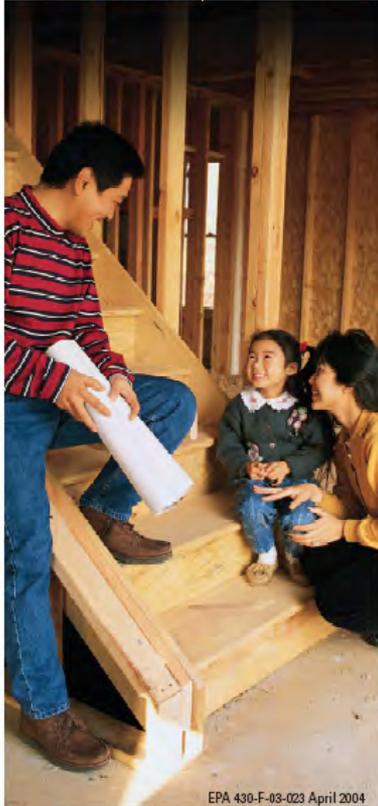


ENERGY STAR MARKETING RESOURCES CONSUMER BROCHURE



CHANGE FOR THE
BETTER WITH
ENERGY STAR

U.S. Environmental
Protection Agency



EPA 430-F-03-023 April 2004



WHAT IS ENERGY STARSM?

ENERGY STAR is the government-backed symbol for energy efficiency. The mark identifies new homes and more than 50 types of products that are energy efficient and offer the features, quality, and performance that today's consumers expect. Products that can earn the ENERGY STAR include appliances, lighting, home office equipment, consumer electronics, and heating and cooling equipment.

A home that earns the ENERGY STAR is significantly more efficient than a standard home. By purchasing an ENERGY STAR qualified home, you can have all the features you desire in your new home, plus lower utility bills—all while helping to prevent greenhouse gas emissions.

ENERGY STAR is a voluntary partnership between the government and more than 8,000 organizations, including 3,500 of the nation's home builders. Together with home buyers and their families, we are working to achieve a common goal—protecting the environment for future generations by changing to more energy-efficient practices today.

It's our future. Together, we can make a change for the better. In 2005, Americans with the help of ENERGY STAR saved about \$12 billion on their utility bills and reduced greenhouse gas emissions equivalent to those from 23 million vehicles.

HOW DO HOMES QUALIFY AS ENERGY STAR?

Homes that earn the ENERGY STAR are significantly more energy efficient than standard homes,¹ incorporating a variety of features, including

EFFECTIVE INSULATION

Properly installed and inspected insulation in floors, walls, and attics ensures even temperatures throughout the house, while using less energy. The result is lower utility costs and a quieter, more comfortable home.

HIGH-PERFORMANCE WINDOWS

Windows with advanced coatings and construction help keep heat in during winter and out during summer. They also block damaging ultraviolet sunlight that can discolor carpets and furnishings.

TIGHT CONSTRUCTION AND TIGHT DUCTS

Advanced techniques for sealing holes and cracks in the home's "envelope" and in heating and cooling ducts help reduce drafts, moisture, dust, pollen, pests, and noise. A tightly sealed home improves comfort and indoor air quality, while lowering utility and maintenance costs.

MORE EFFICIENT HEATING AND COOLING EQUIPMENT

Energy-efficient, properly installed heating and cooling systems use less energy, which reduces utility bills. You can expect higher quality and greater durability backed by longer warranties now available on many models.

INDEPENDENT TESTING

While it's easy for builders to claim that their homes are energy efficient, ENERGY STAR partners back that up with a third-party inspection to verify the home's energy performance.

ENERGY STAR qualified homes also undergo an additional comprehensive inspection of insulation and air sealing details to ensure that they deliver the full comfort and energy savings they are designed to achieve.

¹ ENERGY STAR qualified homes are at least 10% more energy efficient than homes built to the 2004 International Residential Code (IRC).



ENERGY STAR QUALIFIED HOMES HOME OWNER BENEFITS

PEACE OF MIND

Home buying is complex enough without having to know all the details of energy-efficient construction. Instead, look for the government-backed ENERGY STAR to easily identify homes that are truly energy efficient. Find the house of your dreams and enjoy peace of mind knowing that it also meets strict energy efficiency guidelines set by the U.S. Environmental Protection Agency.

LOWER OWNERSHIP COST

Compared with standard construction, ENERGY STAR qualified homes use substantially less energy for heating, cooling, and water heating—delivering \$200 to \$400 in annual savings. Over the average 7 to 8 years you may live in your home, this adds up to thousands of dollars saved on utility bills. Additional savings on maintenance can also be substantial.

BETTER PERFORMANCE

Properly installed energy-efficient improvements deliver better protection against cold, heat, drafts, moisture, pollution, and noise. An energy-efficient home helps to ensure consistent temperatures between and across rooms, improved indoor air quality, and greater durability.

SMART INVESTMENT

To date, 3,500 home builders have partnered with EPA to construct more than 650,000 ENERGY STAR qualified homes. By the end of the decade, more than 2 million homes are expected to earn the ENERGY STAR. The trend is clear. By choosing a home with the ENERGY STAR, you can be confident that it will have an increasingly valued feature when the time comes to sell.

ENVIRONMENTAL PROTECTION

Did you know that your home can be a greater source of pollution than your car? In fact, about 17 percent of U.S. greenhouse gas emissions are generated from the energy used in houses nationwide.

Energy used in our homes often comes from the burning of fossil fuels at power plants, which contributes to smog, acid rain, and global warming. Simply put, the less energy we use in our homes, the less air pollution we generate.

Homes that earn the ENERGY STAR prevent greenhouse gas emissions by meeting strict energy efficiency guidelines set by the U.S. Environmental Protection Agency.

For more information, visit www.energystar.gov



ENERGY STAR

Need Brochures? - Call the ENERGY STAR hotline at (888) STAR-YES or (888) 782-7937 or visit energystar.gov/publications

WHY GOOD IDEA...



"It's not the strongest of the species that survive, nor the most intelligent, but those most adaptive to change."

~Charles Darwin

Up Next...



***ENERGY STAR is
not extra credit,
it's mission critical...***

- *Truly Affordable Housing*
- *Comfortable Housing*
- *Durable Housing*
- *Healthy Housing*
- *Viable Communities*