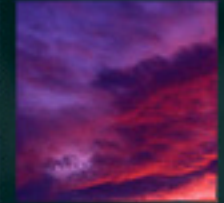
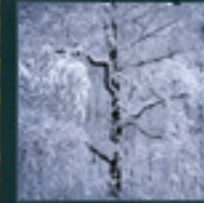
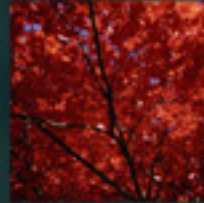
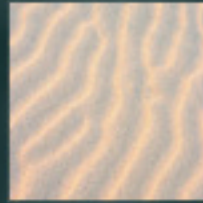




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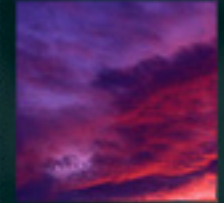
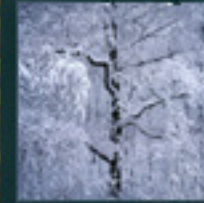
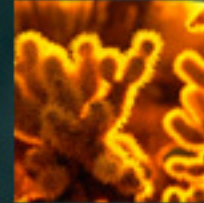
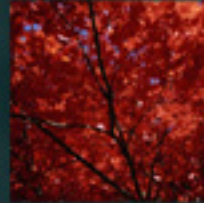
Paths of Glory: Elements of Successful ENERGY STAR Homes Labeling Programs

Steve Baden - RESNET

John Livermore - Conservation Services Group

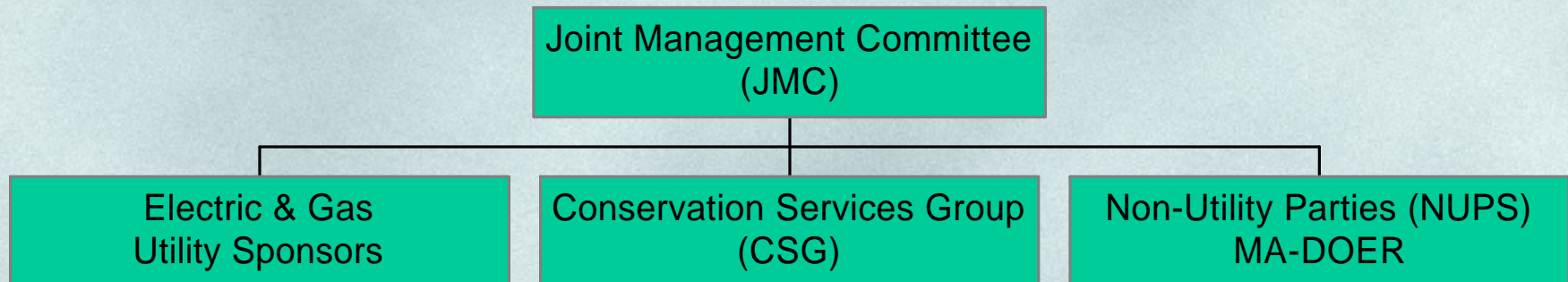


Conservation Services Group



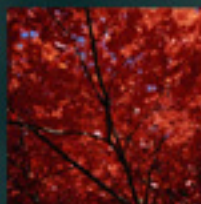
ENERGY STAR Home Program

Sponsorship: *JMC*





Conservation Services Group



ENERGY STAR® Homes

The best value in new construction in New England

Building or buying a new home?

Massachusetts

Rhode Island

New Hampshire

Vermont

Connecticut

Maine

US EPA
National Program



Building or buying a new home in New England? Select the location for your new home on the map to learn more about ENERGY STAR Labeled Homes and how to participate in your region's program.

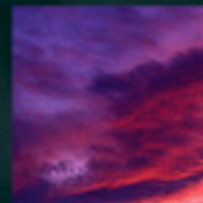
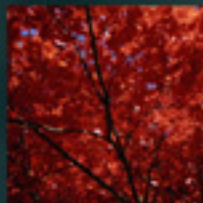
ENERGY STAR is a national, voluntary program developed and sponsored by the US [Environmental Protection Agency \(EPA\)](#) that promotes energy-efficient products, including homes. ENERGY STAR Labeled Homes meet the EPA's performance guidelines for energy efficiency and receive third party verification from an accredited organization.

This map provides links to organizations that have partnered with the EPA to implement the ENERGY STAR Homes program in New England. If you are building or buying a new home outside the New England region, please visit the [Environmental Protection Agency's \(EPA\)](#) website for more information.

This website is maintained by Conservation Services Group, local administrator of the ENERGY STAR Homes Program



Conservation Services Group



ENERGY STAR® Utility Sponsors*

Rhode Island

- Blackstone Valley Electric
- Narragansett Electric
- Newport Electric

New Hampshire

- Granite State Electric
- Public Service of NH
- NH Electric Coop
- CT Valley Electric Coop
- Unitil

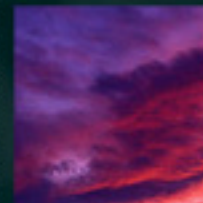
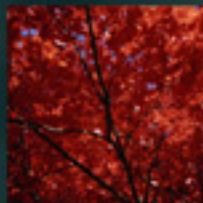
Massachusetts

- Bay State Gas
- Berkshire Gas
- Cape Light Compact
- New England Gas
- KeySpan Energy Delivery
- Massachusetts Electric
- Nantucket Electric
- NStar Electric / NStar Gas
- Unitil/Fitchburg Gas and Electric
- Western Massachusetts Electric

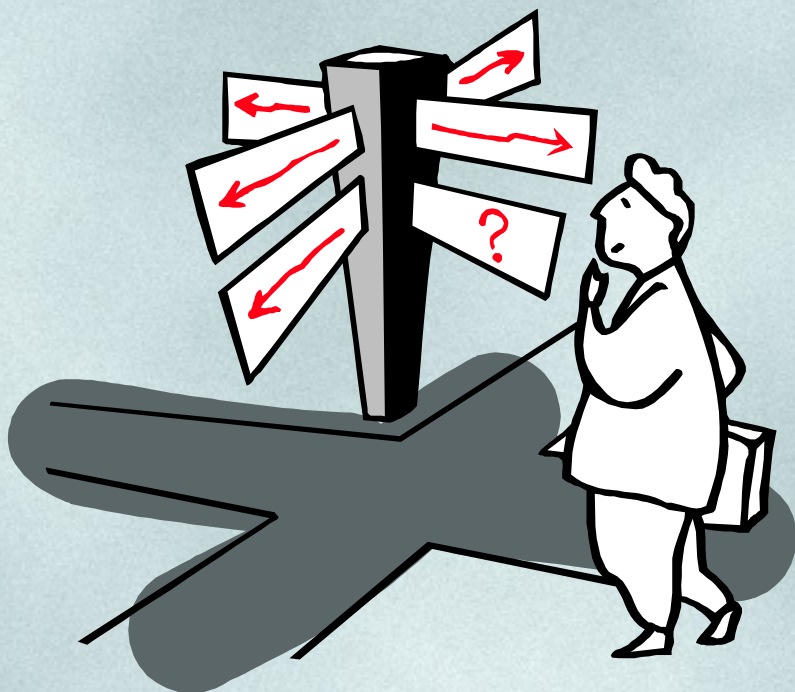
*Winner of EPA's 1999 ENERGY STAR®
Homes Utility "Ally of the Year" award.



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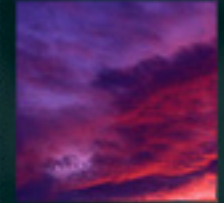
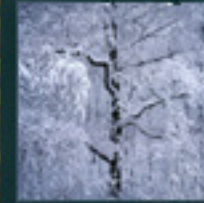
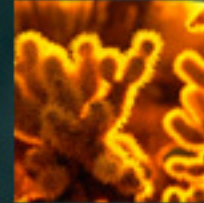
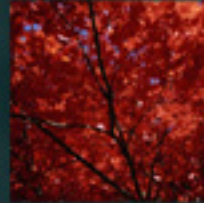
Brief History of the JMC



- **1989:** Energy Crafted Home Program
- HERS 90
- Limited participation
- **1998:** ENERGY STAR Homes Program
- **2002:** Program re-design and MT Plan



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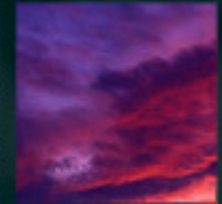
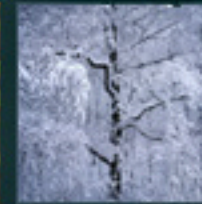
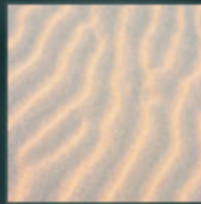


“The JMC is unique in that it’s members are committed to actually *getting stuff done.*”

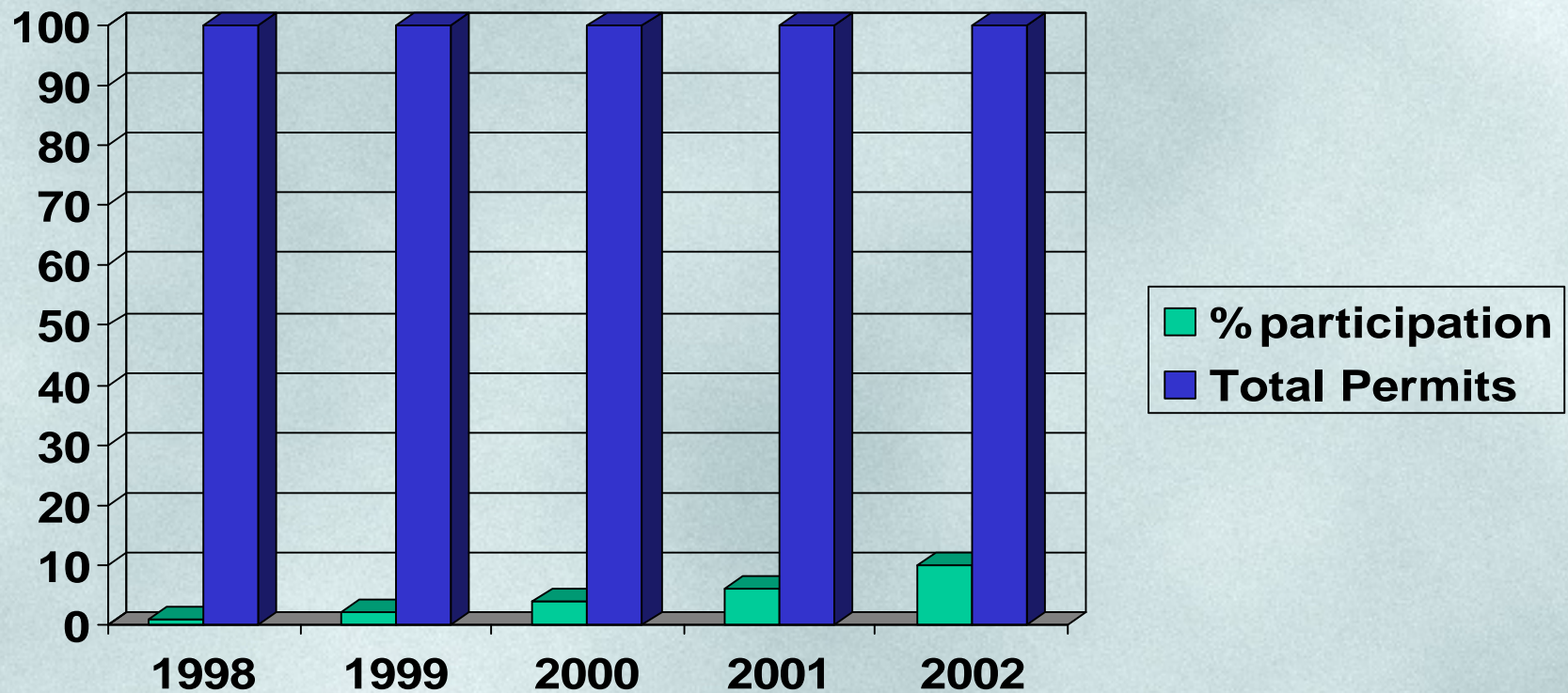
- Greg Rahe, Former JMC member



Conservation Services Group

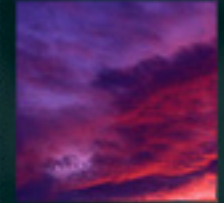
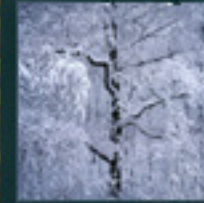
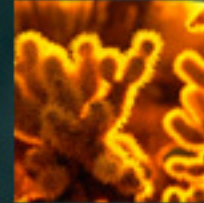
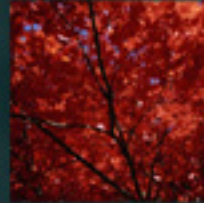


Program Participation: MA

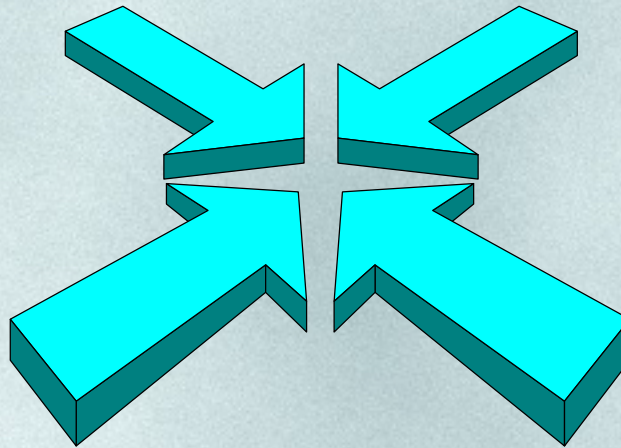




Conservation Services Group

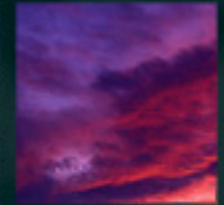
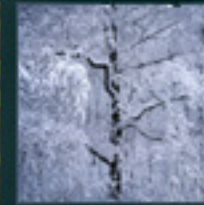
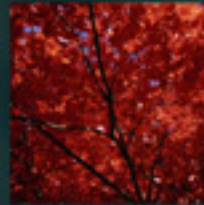


Goal:
MARKET
TRANSFORMATION



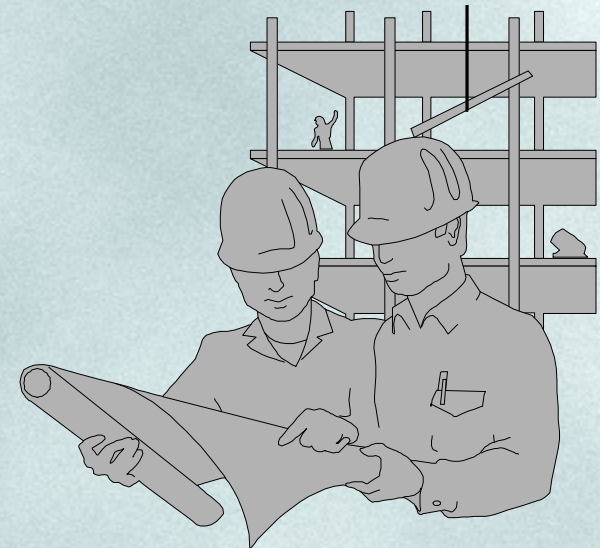


Conservation Services Group



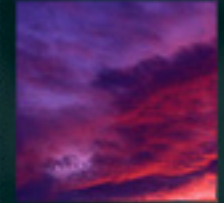
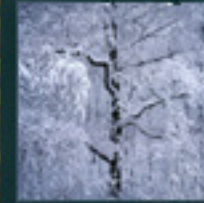
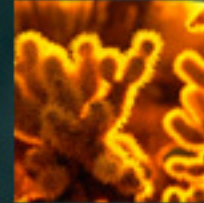
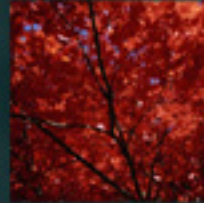
Program Services

- *Plans analysis to determine Home Energy Rating*
- *On-site Insulation and Air Sealing inspections*
- *On-site Performance testing of finished home: Air leakage, Ventilation, and HVAC commissioning*





Conservation Services Group



Rebates/Services Summary

\$ 500/200 Builder Bonus

\$ 100 Mechanical Ventilation

\$ 200 HERS 88

\$ 400 HERS 89

\$ 600 HERS 90+

\$ 400 High Efficiency Gas HVAC

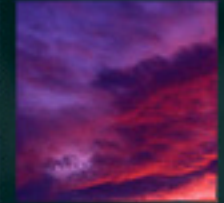
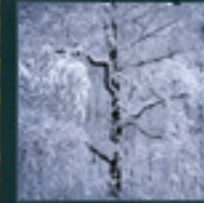
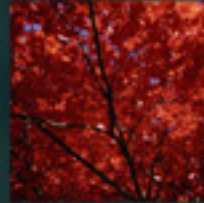
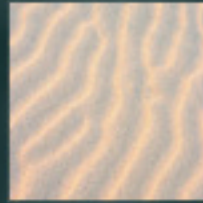
\$ 450 *Value* ENERGY STAR certification

\$ 440 *Value* HVAC Commissioning Service





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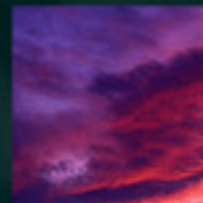
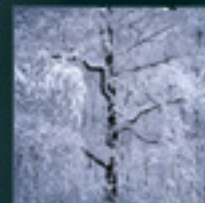
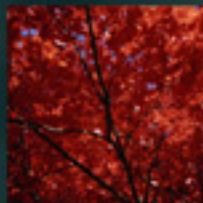


Low-Income/Affordable Housing





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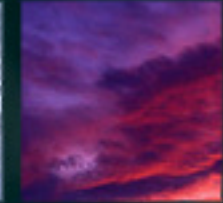
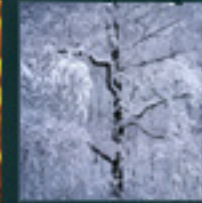
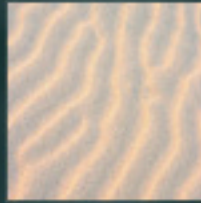
Gut Rehab: Historic Buildings / Challenged Neighborhoods



2/5/2003



Conservation Services Group

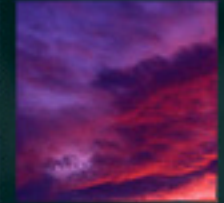
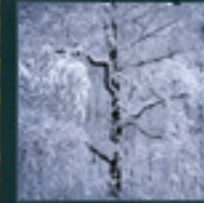
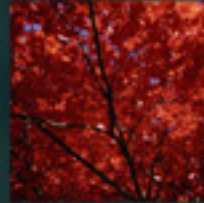
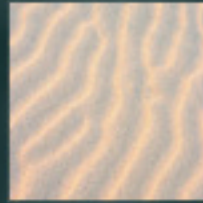


Voc-Tech School Projects





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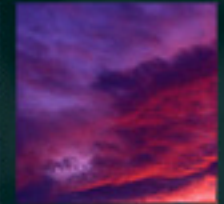
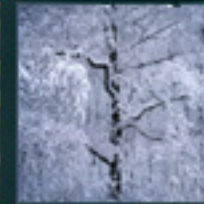
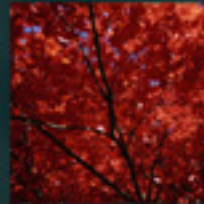
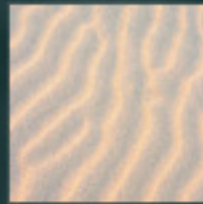


“We got everything we wanted and more. The most impressive thing is being warm in the winter without having to spend lots of money. I feel there is a better quality of air in the house and my two children get fewer colds in the winter.”

Home buyer in Cumberland, RI



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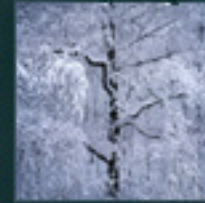
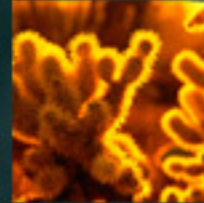
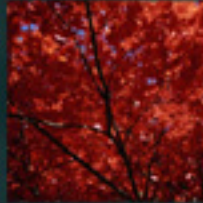
“I can look my customers straight in the eye and tell them ‘*you’ve never lived in a house like this*’. It’s a superior value.”

Paul Bourke
ENERGY STAR[®] Builder





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Builder Outreach



What is an ENERGY STAR Home?



The U.S. Environmental Protection Agency (EPA) and the U.S. Department of Energy (DOE) have developed the Energy Star Home program to certify high-performance homes that are significantly more efficient than building code. The Energy Star Homes program is sponsored in New England by a consortium of electric and gas utilities. This utility consortium has enhanced the national program with a comprehensive package of rebates and free services.



An ENERGY STAR Home in Weyland, Mass.

Some of the performance features that distinguish an ENERGY STAR Home from an average quality home are:

☆ Enhanced Insulation

Insulation is measured in R-value: the higher the R-value the greater the insulating effect. Higher insulation levels in walls, floors, and attics result in better energy performance and improved homeowner comfort. The insulation value of the windows is also an important determinant of comfort.

☆ Air Sealing

Simply caulking, foaming and gasketing the holes and gaps in the heated building envelope can reduce annual heat loss and utility bills by up to 30%.

☆ Ventilation

All Energy Star Homes come equipped with mechanical ventilation, which ensures a continuous supply of fresh air to the home.

☆ High-efficiency Appliances

Energy Star Homes typically have high-efficiency household appliances, lighting, and heating & cooling systems, which use less energy to perform the same job.

ENERGY STAR Homes • 800-628-8413 • www.energystarhomes.com

Marketing Materials



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ENERGY STAR® HOMES

Building a competitive advantage



News

VOL. 1 SUMMER/FALL 2000

ENERGY STAR HOMES — BETTER HOMES, BETTER VALUE

The ENERGY STAR Homes label is quickly becoming the clear sign for energy efficiency, comfort and health in new homes built in New England. Created by the Environmental Protection Agency (EPA) and Dept. of Energy (DOE) and sponsored

In 1999, that number jumped to 1,100. For 2000, the projections show over 3,000 residential units in Massachusetts, Rhode Island, New Hampshire and Connecticut will participate. By 2001, another 5,000+ projects are estimated.

For 2000, the program projections show over 3,000 residential units in Massachusetts, Rhode Island, New Hampshire and Connecticut; for 2001, another 5,000+ projects are projected to participate.

regionally by a consortium of gas and electric utilities, the program provides a simple, effective process to support builders in the delivery of better homes at better value.

ONE SIZE FITS ALL

The ENERGY STAR Home can apply to any new residence.



HOPKINTON, MA
Hopkinton Highlands, Toll Bros. Construction



MILFORD, CT
Milford Hunt
T&M Homes

In the last six months, projects have ranged from \$1 million custom homes to \$100,000 Habitat for Humanity homes, high-end condominiums to low-income rental units.

ENERGY STAR Homes have been certified on single lots, in subdivisions ranging from 6 lots to 101 lots, in duplexes, townhouses and 8-story buildings, covering the Berkshires and Pioneer Valley through the Blackstone Valley to greater Boston, North and South Shores and the Cape all the way out to Provincetown, plus Connecticut and Rhode Island.

UNCOMMON STEPS OR COMMON SENSE?

So what does it take to reach ENERGY STAR Home standards? Triple glazed windows, double walls, and a thermos bottle-tight shell?

How about moderate upgrades of insulation levels, low-e windows, some attention to detail on sealing shell penetrations and higher efficiency heating, cooling and DHW

THE RISING TIDE

Utility sponsorship of the program began in April 1998. About 300 homes were completed or committed to the program.



CHARLTON, MA Charlton Farms, Mutual Builders

contents

- 1 Better Homes, Better Value
- 2 Energy Star Developments
- 3 The Energy Star Home Advantage News and Notes
- 4 Report from the Open House Tour 2000
- 5 Featured Energy Star Builder
- 6 Lighting and Appliance Rebates — An Added Incentive ENERGY STAR Ally Corner
- 7 The House as a System — the ENERGY STAR Approach
- 8 The ENERGY STAR Advantage On-Line

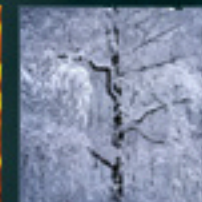
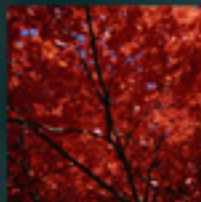
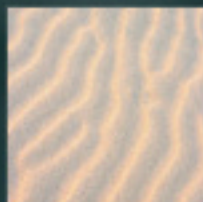
equipment, all readily available and easy to spec?

An ENERGY STAR Home focuses on the house as a system, and seeks a common sense approach to moderately improve four major areas: glazing, insulation, shell tightness and ventilation, and mechanical system efficiency.

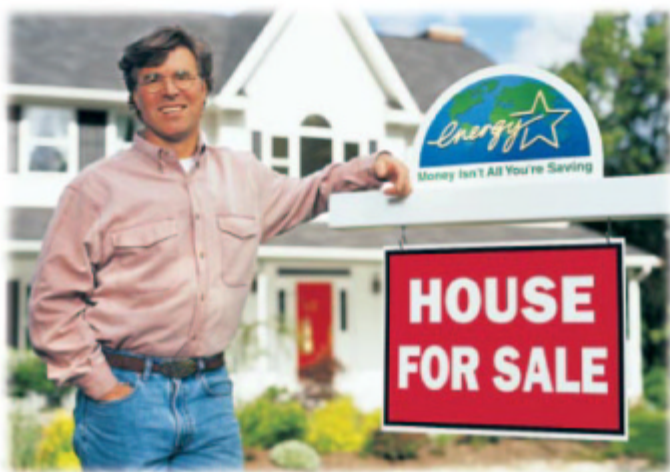
CONTINUED PAGE 2



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IMAGINE A NEW HOME THAT USES
30% LESS ENERGY
EVERY YEAR YOU OWN IT.



Steve Thomas, award winning television host, in front of an ENERGY STAR[®] labeled new home.



Hi, I'm Steve Thomas. Over the years you've seen me working on a lot of old houses, but today we're celebrating the completion of a new one that's built to achieve the ENERGY STAR[®] guidelines for new construction.

This high-energy efficiency is the result of increased insulation levels, high performance windows, as well as high efficiency heating, cooling, lighting and appliances.

This makes for a home that is more comfortable and uses 30% less energy than conventional new homes built nationwide. Just call 1-800-628-6413 and we'll send you complete information for you and your builder on how your new house



can be built to meet the ENERGY STAR guidelines for high efficiency and lower costs.

Or you can simply look for a new house with the ENERGY STAR symbol on the For Sale sign.

WITHOUT IT, YOU'RE WASTING YOUR ENERGY.

Sponsoring utilities and energy efficiency service providers in MA and Rhode Island: Baystate Gas, Berkshire Gas, Cape Light Compact, Englewood Energy Partners (EWP), Gas, Pleasanton Electric, Worcester Electric, Narragansett Electric, New England Gas Company, RGS Electric, ACES Gas, Southcoast Gas and Electric Light Company, and Western Massachusetts Electric.



Visit our website at www.energystarhomes.com

Advertising



The times have changed and so have the tools.

Energy Star[®] These builders have access to all the latest tools that building science has to offer in designing and building energy efficient homes.

How do you measure quality? Is energy efficiency detailing incorporated into the design of the homes you build? Do you use a blower door test to measure the air-tightness of the homes you build? Do you know how much ventilation air your homeowners are receiving? Do you measure if a heating system is delivering its optimum heat output?

Determining the answers to these questions are just a few of the advantages of participating in the Energy Star Homes program.

Our builders are supported by a staff of technical experts in the whole-home system approach to new construction and performance testing. This approach balances quality home construction with accurate energy performance measurement. Each Energy Star home is third party tested with a blower door and flow hood, and meets the performance criteria set by the U.S. Environmental

Protection Agency, some of the highest standards in the industry.

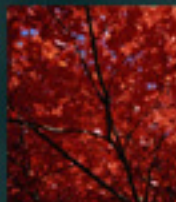
Don't become a relic. Join the hundreds of high performance Energy Star builders across Massachusetts, New Hampshire, and Rhode Island. For more information about these and the many other benefits of becoming an Energy Star Homes builder, call us at 1-800-628-6413 or visit our web site at www.energystarhomes.com.

Sponsoring electric utilities in MA, RI, and NH include: Baystate Gas, Berkshire Gas, Cape Light Compact, EWP Electric, Gas, Pleasanton Electric, Worcester Electric, Narragansett Electric, New England Gas Company, RGS Electric, ACES Gas, Southcoast Gas and Electric Light Company, and Western Massachusetts Electric.





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Outstanding Achievement In New Home Construction



—U.S. Environmental Protection Agency and Department of Energy

Only homes meeting the highest standards for energy performance earn the 5-star rating of an ENERGY STAR Home by the EPA and DOE. Using a lot less energy, they're more comfortable, quiet and durable. No invite you to come visit the ENERGY STAR Homes being built by the largest and best builders in New England.



ENERGY STAR® HOMES
Open House Tour

FALL 2000

SUNDAY, OCTOBER 15TH, 12-4PM

*See for yourself
how new homes
should be built.*

OPEN HOUSE LOCATIONS

MASSACHUSETTS SITES

BARBOLDS The Glen at Chestnut Hill (5 home development), Newton Street, The Green Companies
CHARLTON Charlton Farms (20 home development), Fitzgerald Road, Mutual Builders
SALT LONGMEADOW Orchard Hill (41 home development), Orchard Road, Capabilities & Sons
HOPKINTON Hopkinton Highlands (97 home development), Elmwood Road, Tall Bros. Construction
ELLENSTEAD Forest Edge at The Highlands (43 home development), Star Colony, The Green Companies
WESTPORT Orchard Estates (18 home development), Orchard Drive, C&H Builders
WILMINGTON Edison Farm Estates (97 home development), Leamwood Drive, Edison Farm Inc.
WINTHAM Marjorie Estates (181 home development), Larkside Road, R.Plunk Development Corporation

CONNECTICUT SITES

HARTFORD Water Circle (5 home development), Water Circle, T&N Homes
MILFORD Millard Street (62 home development), Mayfield Road, T&N Homes

RHODE ISLAND SITES

East Greenwich East Greenwich Preserve (62 home development), Off Division Street, T&N Bros. Construction
Westerly Sun & Lane Farms (19 home development), Route One, P&H Home Corporation

Call 800-628-8413 or visit www.energystarhomes.com for directions and more information.

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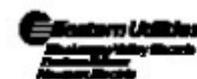
or visit our web site at <http://www.energystarhomes.com> for information about building an

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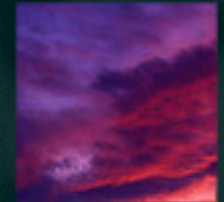
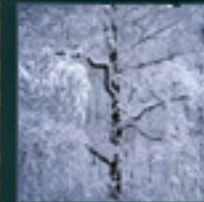
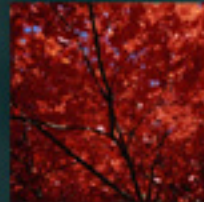
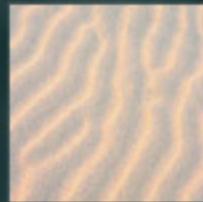


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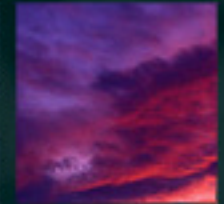
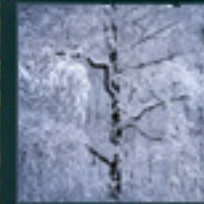
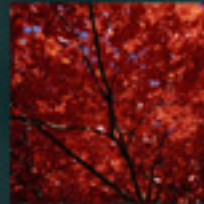
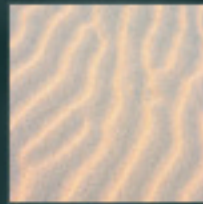
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ENERGY STAR Home Web Site

- Program outline
- Building Science Q&A
- List of E* Builders and Program Allies
- Hotlinks to websites
- 300+ hits per day

ENERGY STAR® Homes
The best value in new construction in New England

Building or buying a new home?

Building or buying a new home in New England? Select the location for your new home on the map to learn more about Energy Star Labeled Homes and how to participate in your region's program.

ENERGY STAR is a national, voluntary program developed and sponsored by the U.S. [Environmental Protection Agency \(EPA\)](#) that promotes energy-efficient products, including homes. Energy Star Labeled Homes meet the EPA's performance guidelines for energy efficiency and receive third party verification from an accredited organization.

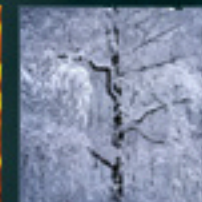
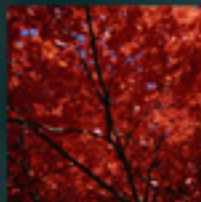
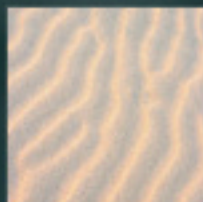
This map provides links to organizations that have partnered with the EPA to implement the Energy Star Homes program in New England. If you are building or buying a new home outside the New England region, please visit the [Environmental Protection Agency's \(EPA\)](#) website for more information.

This website is maintained by Conservation Services Group, local administrator of the ENERGY STAR Homes Program

www.energystarhomes.com



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ENERGY STAR® Homes

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LOCATIONS

Orlando, FL

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Westborough, MA

Wednesday, March 26, 2008

Spokane, WA

Thursday, March 27, 2008

Minneapolis, MN

Wednesday, April 16, 2008

Lincoln, NE

Thursday, April 17, 2008

8:30 am to 4:00 pm

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- Heat Recovery
- Windows

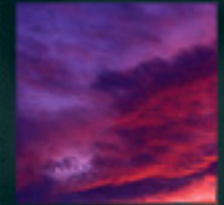
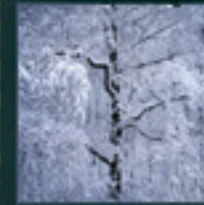
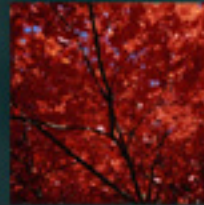
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I-SMART House



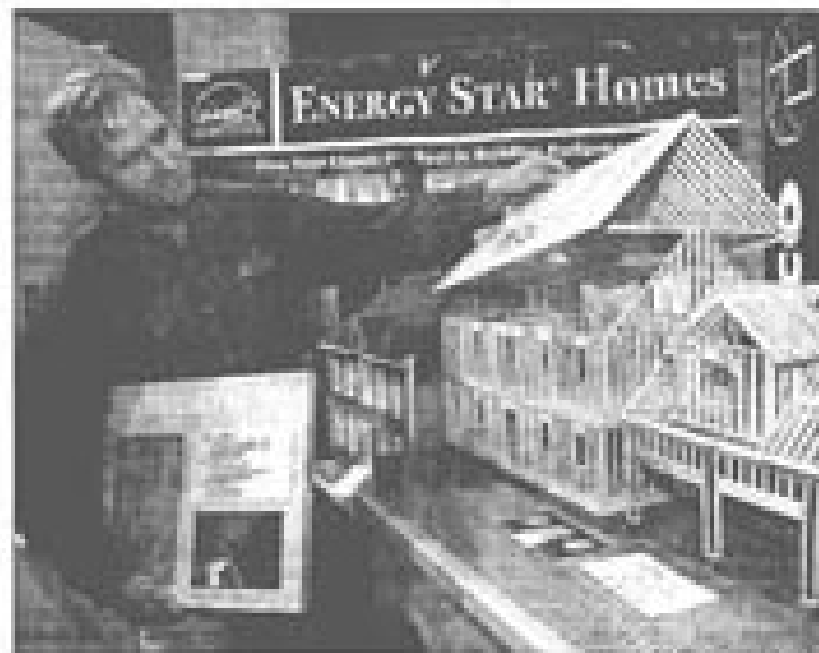
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Media Attention:

- Print
- Radio
- TV

BOSTON Herald

FRIDAY, DECEMBER 6, 2002 • 50 CENTS



EFFICIENCY EXPERT: Paul Wulff of Energy Star Homes shows off a model last month during the Better Homes trade show.

Model behavior aids in building efficient houses

By PAUL HOFFMAN

What makes an Energy Star home?

Using a two-story scale model of a proto-type colonial home called the I-SMART Home, Energy Star Homes expert Paul Wulff illustrates the concept of a house designed for optimal energy performance.

"We see an Energy Star home as an integrated building system that includes wiring, foundations, framing, insulation, air sealing, windows, ventilation, heating systems and efficient appliances," Wulff says. "All of these elements have to work together."

Wulff, who studies architecture at Harvard's Graduate School of Design, built the model and uses it for presentations to builders at training seminars and at industry trade shows. He stresses that Energy Star certification is open to any kind of home regardless of fuel type.

The model took the form of a typical colonial

home," he says. The model contains "peel away" layers that show such recommended features as reduced framing costs.

"It's possible to save up to 50 percent in lumber costs from conventional 16-inch, on-center framing by going to 24-inch on-center," Wulff says.

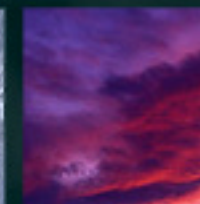
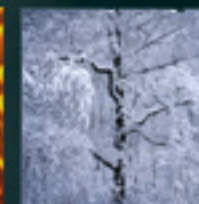
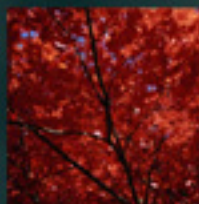
He adds that Energy Star homes will typically have enhanced insulation — whether batt, rigid foam or wet cellulose — high-performance, low-E argon gas-filled double-pane windows, and improved air sealing by caulking, framing and gasketing holes and gaps.

Energy Star homes require an upgrade to either high-performance mini-split or an air-to-air heat exchanger that will properly ventilate a tightly built house.

Wulff says homes usually have high-efficiency appliances and sealed-combustion heating systems that are up to 50 percent more efficient than conventional



Conservation Services Group



Energy Design Update

The Monthly Newsletter on Energy-Efficient Housing, from CUTTER INFORMATION CORP.

Vol. 21, No. 12

December 2001

INDUSTRY NEWS

Workers in Race Against Alaskan Winter to Repair Failed SIP Roofs

by Steve Anderson with Don Best

With winter basking at their heels, contractors in Juneau, Alaska, are racing to replace the rotted structural insulated panel (SIP) roofs on dozens of single- and multifamily homes. Estimates of the total number of housing units affected now range up to 120. Most of the damaged dwellings are relatively new, constructed

between 1994 and 1997 by at least nine different builders (see EDU, October 2001).

To the casual eye, the structures generally look good on both the interior and exterior. But a closer examination of the roofs — especially the shaded sides — reveals a lot of moss and fungi growing on the shingles (see Figure 1). "We've spotted at least five species of fungi so far," quipped one troubleshooter. But of course, it's not a laughing matter.

Underneath the shingles on these roofs, the top layer of OSB on the SIPs has turned to mush. Note in Figure 2 the soggy remains of the OSB skin and the darkened foam insulation underneath. Nearby, the worker has easily pushed the blade of his jackknife down into the roof, showing only the handle protruding. The measured moisture content of the panels is reportedly sometimes as high as 93%. Building inspectors are worried that if repairs aren't completed on some of the structures when winter really sets in, some SIP roof systems could collapse under a heavy snow load.

A Familiar Old Foe

After some early debate, there is a growing consensus in Juneau that the problems with the SIP roofs were

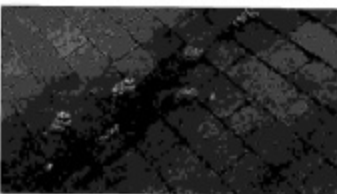


Figure 1 — Fungi, lichen, and algae sprouting on the roof are telltale signs that there's moisture — and lots of it — trapped in the SIPs underneath these shingles.

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30-YEAR MORTGAGE RATE DIPS

Fredrick Mac sold yesterday that the average 30-year fixed-rate mortgage fell from 7.73 percent last week to 7.65 percent this week.

46. BOSTON HERALD. TUESDAY, MAY 5, 2000

Real Estate

Giving homes (Energy) Star power

EPA touts labeling for new home construction

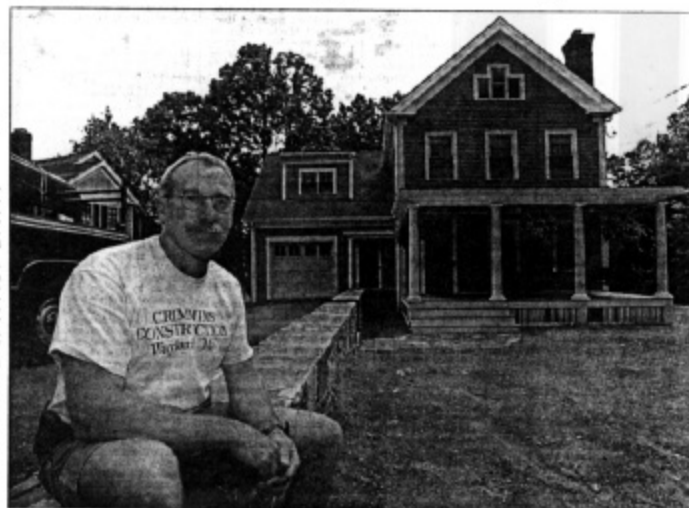
By NAREN VIKRANE
SPECIAL TO THE HERALD

Energy Star, a label you may have seen when buying appliances such as washing machines and refrigerators, will now be used to certify energy efficiency in newly constructed homes.

The U.S. Environmental Protection Agency (EPA) conducted an open house tour recently, showing houses from Ashland in Wayland that were built to save consumers about 30 percent on their utility bills, around \$400 a year, and help the environment at the same time.

Energy Star is a label developed by the EPA and the U.S. Department of Energy (DOE) and is awarded to products that conserve energy. The agencies set the energy efficiency criteria, which exceed the minimum national efficiency standards, sometimes by as much as 50 percent, and the manufacturer or retailer volunteers to place the Energy Star label on models that meet or exceed that criteria. In other words, as a consumer, looking for that label alone is an easy way to identify products that conserve energy.

Energy Star homes are built as robust as production, as well as save the home buyer money. The characteristics of an energy-efficient home are tight construction, increased insulation and tightly sealed ducts, among others. One such home featured at the open



GREEN DAY: Jack Cronin stands outside his energy-efficient home in Wayland.

house is a Victorian reproduction in Wayland, an elegant home which exemplifies the idea that conserving energy can be achieved without sacrificing beauty.

Jack Cronin, of Cronin

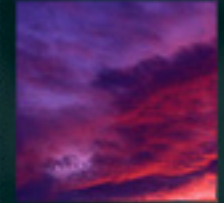
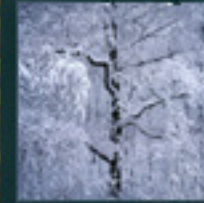
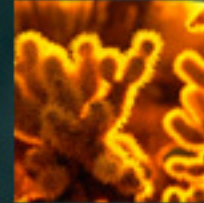
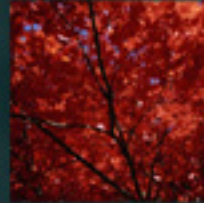
Construction in Wayland, is the owner and builder of this Energy Star home. The house is well insulated, with blown-in cellulose, a flame-retardant recycled newspaper, as well as high-density urethane foam, both of which are environmentally friendly, and have high R values.

"Energy efficiency is about the intelligent use of insulation," says Cronin. "You lose more heat through leakage than through the insulation." The windows, doors and any other openings or connections, such as plumbing from one floor to another, are sealed all around. The windows and doors are high quality. All of

Turn to Page 34



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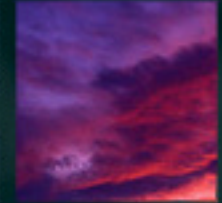
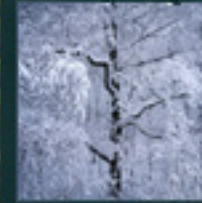
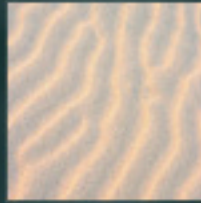
Awards

- 1999 EPA Utility *'Ally of the Year'* award
- 2000 EPA Energy Star Marketing award
- Energy Star Home *'Builder of the Year'* Award in MA & RI





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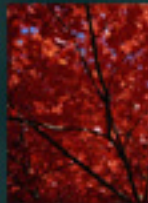


EVENTS

Ribbon-cuttings



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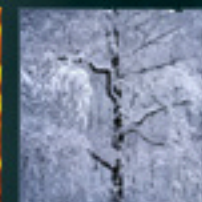
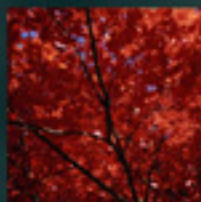


Open House Tours





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- Reduced noise transmission
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East Longmeadow - Chapdelaine & Sons
Hopkinton - Tall Trees Construction
Plymouth - The Green Companies
Woburn - GASA Builders
Worcester - Hidden Farm Inc.
Wrentham - DiPaolo Development Corporation

Rhode Island Sites

East Greenwich - Tall
Westerly - Pulse Homes

Connecticut Sites

Hamden - T&M Homes
Milford - T&M Homes

Register to win a Home Energy Rating (a \$500 value)
Plus, a \$500 Gift Certificate to The Home Depot

WORCESTER, MA

Hidden Farm Estates (57 home development)
Developer: Hidden Farm Inc.

Take Rte. 290 to Lincoln Square in Worcester center. Take right off exit ramp onto Congress Street. After approx. 100 feet, take right onto Salisbury Street. Take right on Forest Street which becomes Grove Street. Take left on Parkton Street. Take left into Laurelwood Drive. Hidden Farm Estates is at end of street.

WRENTHAM, MA

Wampanoag Estates (101 home development)
Developer: DiPaolo Development Corporation

Take 495 North or South to the 1A Exit. Take 1A North; proceed approx. 1/2 mile, take a left onto Eastside Road. The development is 200 yards on the left.

HAMDEN, CT

Blake Circle (5 home development)
Developer: T&M Homes

Take Rte. 15 to the Whitney Avenue exit. Proceed south on Whitney Avenue toward New Haven. After you pass by Hamden Hall Country Day school on the right, take the next right onto Blake Road. Proceed up Blake Road to Blake Circle.

MILFORD, CT

18 Wood Street (100 home development)

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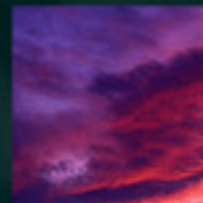
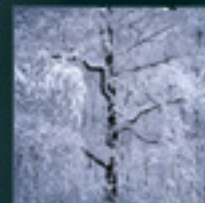
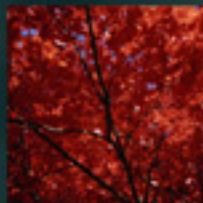
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**T&M Homes
Milford, CT**



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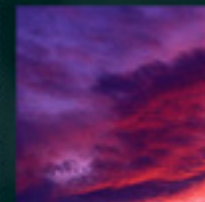
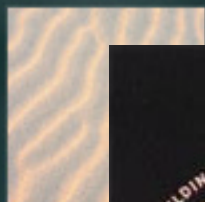
Supporting Massachusetts Code Compliance

- BBRs study found that *less than 50%* of new homes in MA meet all provisions of the state Energy Code!





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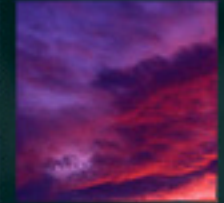
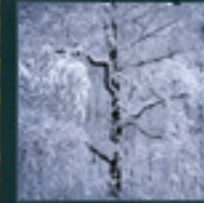
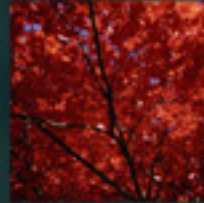
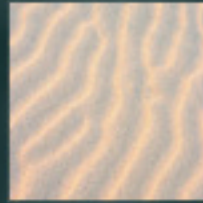
MASSACHUSETTS BOARD OF BUILDING REGULATIONS AND STANDARDS

Energy Efficiency *in* New Homes





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2002/2003 Energy Codes Pilot



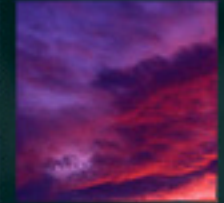
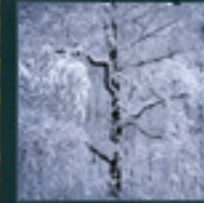
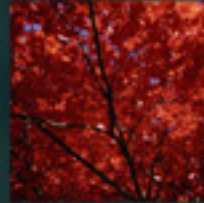
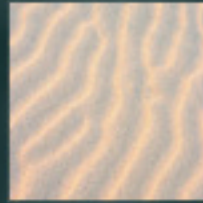
- 2-4 Municipal Building Inspection Departments in MA
- Code compliance documentation review
- HERS ratings
- Site inspections
- Building Science Education



“Sun Power for New Homes”



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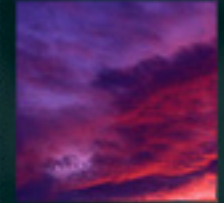
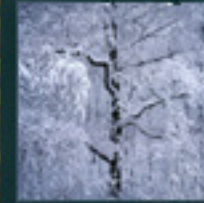
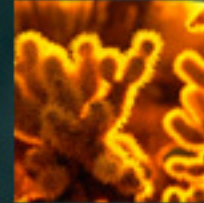
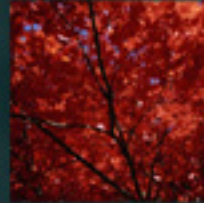


Factors that lead to commissioning “the study”

- JMC metric to produce 5-year program “blueprint”
- Program Theory
- Program Design & Market Transformation Plan: 2003-2007
- Put the JMC program in a *national context*
- Push the envelope – *Improve* the program



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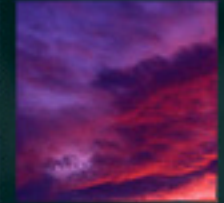
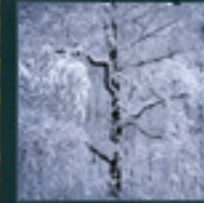
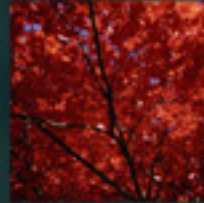
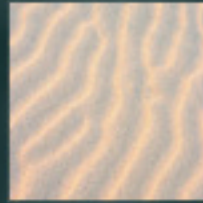


Specific Program Challenges

- Level Budgets...*Increasing* Participation
- Maintain program w/highest tech standards
- Builder misinformation & misunderstanding
- Many builders not even building to code
- Market *dynamics*



Conservation Services Group

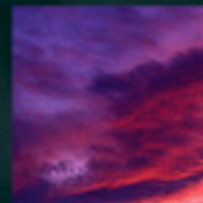
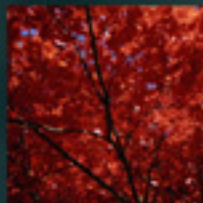


Crafting the Study Parameters

- States with significant rating activity and/or something interesting happening
- Geographic diversity
- Program maturity diversity
- Include State programs with close parallels with JMC program
- Ask informative questions



Conservation Services Group

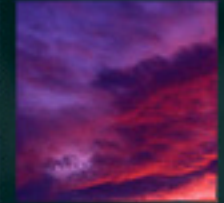
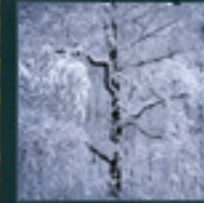
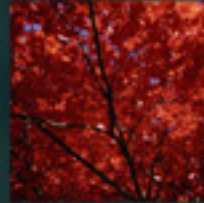
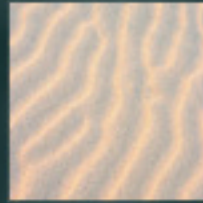


Questions for ENERGY STAR Homes program sponsors

- Program name
- # homes labeled in 2001
- % completions vs permits
- Program Sponsors
- Funding Source(s)
- Use of Sampling/BOPS
- Technical differences from HERS 86 baseline
- State Energy Code baseline
- Program funded services
- Value Added services
- Service Costs
- Incentives/Rebates Offered
- Marketing Elements (targeted to builders; targeted to consumers)
- Program Theory (if any)



Conservation Services Group

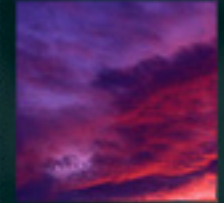
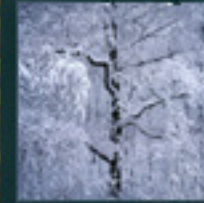
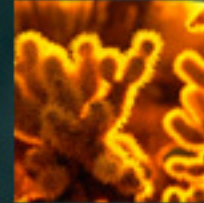
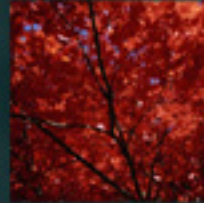


Questions for ENERGY STAR Homes program sponsors (cont.)

- # of builders in State
- # of builders in program
- Territory covered
- Housing market dynamics
- Organizational Structure & Features
- Brief Program history
- Types & % of Ratings performed
- Steps taken to reduce program costs
- Successful program elements
- Manufacturer cost-sharing/co-sponsorship
- Lessons Learned



Conservation Services Group

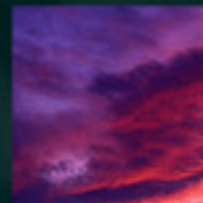
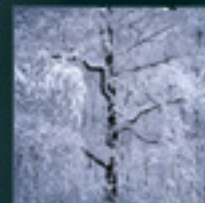
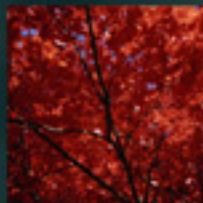


Choosing a vendor

- Over 10 organizations considered
- JMC members voted
- RESNET (Steve) was chosen



Conservation Services Group

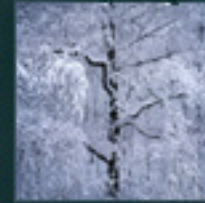
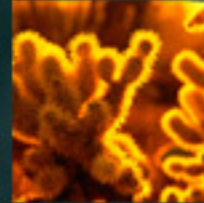
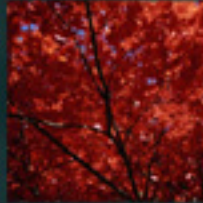
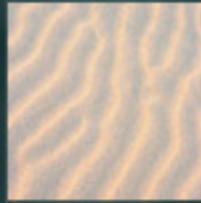


States Covered in JMC Study

- Alaska (38% ENERGY STAR Market Penetration)
- Arizona (12% Market Penetration)
- Iowa (10% Market Penetration)
- Nevada (6% Market Penetration)
- Louisiana (7% Market Penetration)
- Indiana (4% Market Penetration)
- Maryland (2% Market Penetration)
- Wisconsin (1.4% Market Penetration)
- Ohio (1.1% Market Penetration)
- Texas (.9% Market Penetration)
- California (.9% Market Penetration)
- Utah (.9% Market Penetration)
- Florida (.9% Market Penetration)



Conservation Services Group

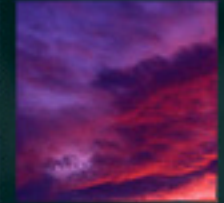
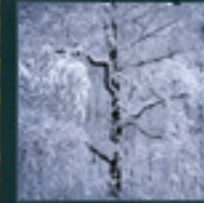
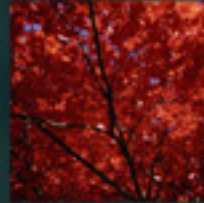
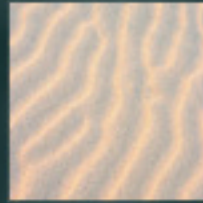


States With Utility Rebates Covered in JMC Study

- California
- Florida
- Iowa
- Texas
- Wisconsin



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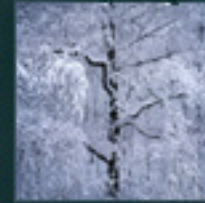
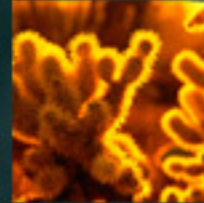
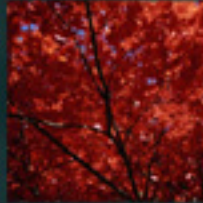
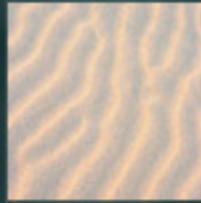


States With State Incentives

- Alaska
- Louisiana
- Ohio



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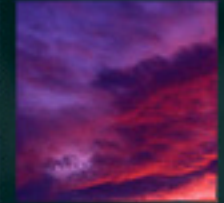
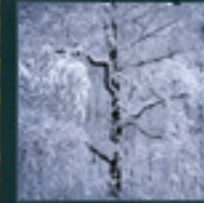
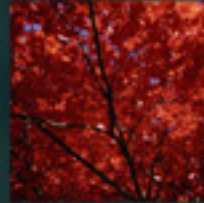
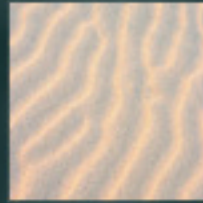


States With No Incentives

- Arizona
- Indiana
- Maryland
- Nevada
- Utah



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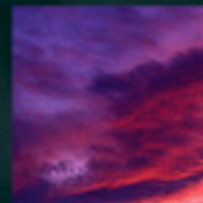
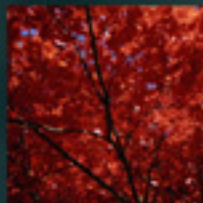


States We'll Focus On

- Indiana
- Nevada
- Wisconsin
- (Arizona, California, Louisiana, and Texas addressed at other sessions of conference)



Conservation Services Group

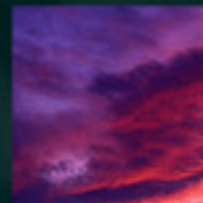
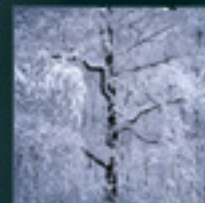
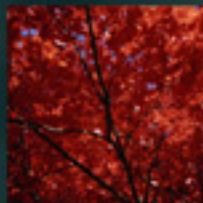


Indiana

- Program Name: Energy Rated Homes Midwest
- ENERGY STAR Homes Labeled in 2001: 1,513
- Projected for 2002: 2,000
- Funding source: Processing fees charged to raters and rater training fees (Seed funding from the State of Indiana)
- Technical differences / requirements from baseline 86 point standard: None
- Sampling/BOPS : None
- Keys to Success: Recruiting lenders to offer discounts on closing costs, one-on-one builder recruitment



Conservation Services Group

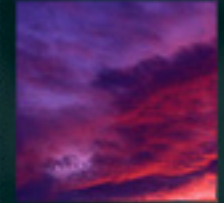
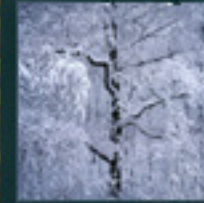
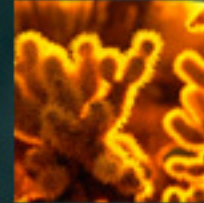
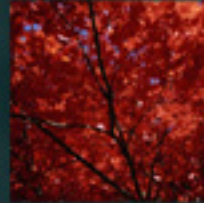


Nevada

- Programs Name: Energy Rated Homes of Nevada, Builders Choice Diagnostics, ConSol
- ENERGY STAR Homes Labeled in 2001: 2,077
- Projected for 2002: 2,005
- Funding source: Processing fees charged to builders
- Technical differences / requirements from baseline 86 point standard: None
- Sampling/BOPS : Sampling
- Keys to Success: Recruiting large production builders to participate, ENERGY STAR Home marketing, and sampling



Conservation Services Group

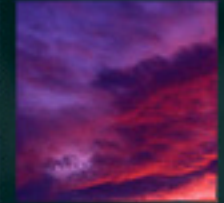
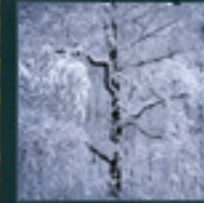
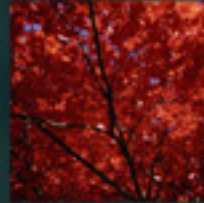
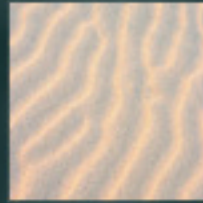


Wisconsin

- Programs Name: Wisconsin ENERGY STAR
- ENERGY STAR Homes Labeled in 2001: 488
- Projected for 2002: 1,000
- Funding source: Utility Public Benefit Funds
- Technical differences / requirements from baseline 86 point standard: In addition to 86 score, program has ventilation requirement
- Sampling/BOPS : None
- Keys to Success: Rebates from public benefit funds



Conservation Services Group

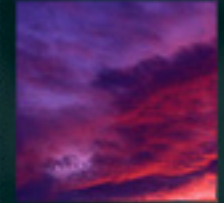
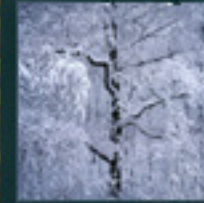
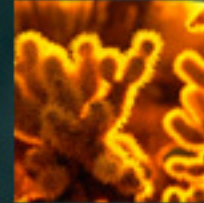
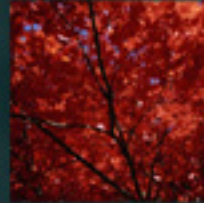


Key Findings of Study

- Market Intervention
- Regional Housing Market Differences
- Regional Climate Differences
- Sampling of Ratings



Conservation Services Group

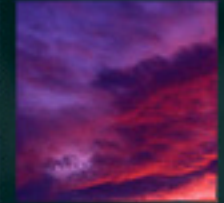
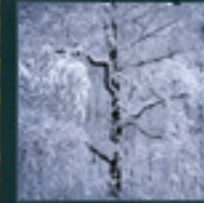
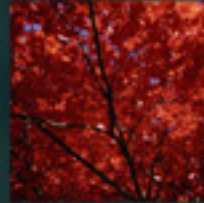
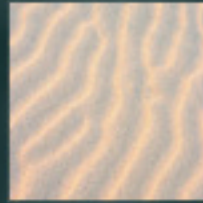


Market Intervention

- The most successful ENERGY STAR Programs benefited from market intervention in the form of:
 - * Free design analysis (Building America)
 - * Marketing support from EPA
 - * Utility rebates
 - * State energy office support in launching rating programs



Conservation Services Group

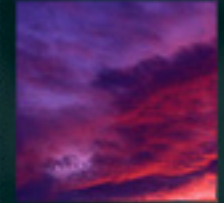
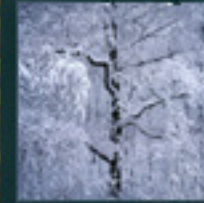
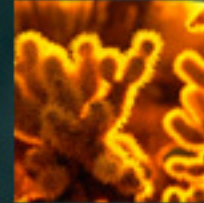
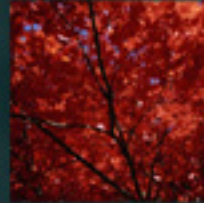


Regional Housing Market

- Greatest penetration in Southwest with the dominance of large production builders. Large number of homes can be labeled by small number of builders.
- Phoenix: 5,800 homes labeled by 14 builders (avg 418 homes per builder)
- Massachusetts: 841 homes labeled by 49 builders (avg 17 homes per builder)



Conservation Services Group

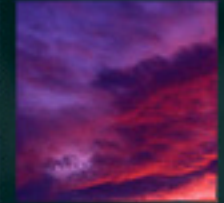
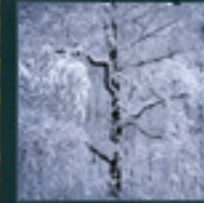
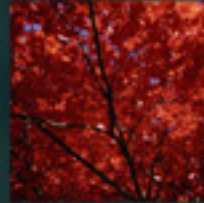
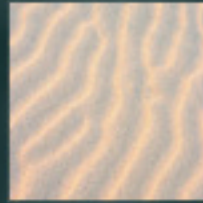


Regional Climate Difference

- It appears that it is relatively easier to meet ENERGY STAR in cooling climates:
 - * MEC window requirements vs. IECC
 - * Common practice of over-sizing a/c
 - * Availability of high efficiency a/c



Conservation Services Group



Sampling

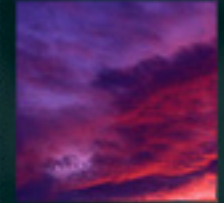
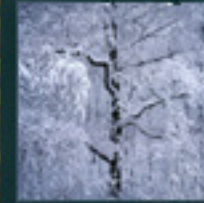
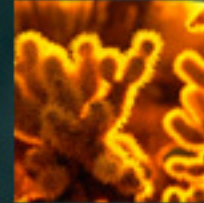
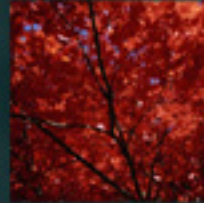
Outside of Alaska and Indiana the largest number of homes were labeled through sampling

Advantages:

- Lower cost per home labeled
- Allows single rating provider to label large number of homes
- Not as disruptive to construction schedule



Conservation Services Group



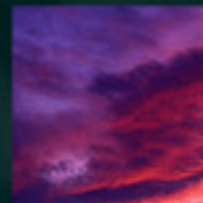
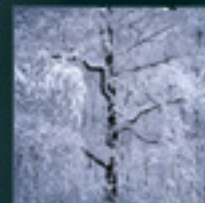
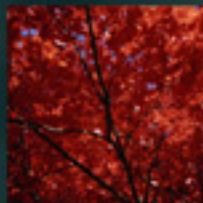
Sampling

Reported common attributes needed to work:

- Large production builder committed to total quality management
- Entire firm from top to bottom needs to be committed to project
- Builder must have track record with building high performance energy efficient homes



Conservation Services Group

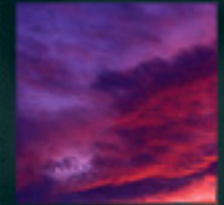
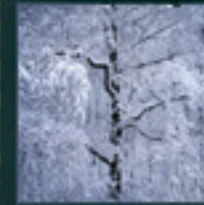
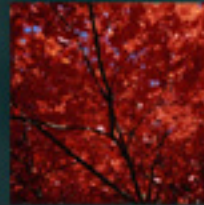


How study has influenced JMC program planning

- Confirmed things we knew and provided new insights
- JMC is on a good course
- A healthy marketing budget is important to maximize Program Success
- Rebates are effective tool: *Reduced for 2003.*
More rebate dollars tied to HERS score (performance)
- Don't concentrate \$ on marketing to consumer



Conservation Services Group

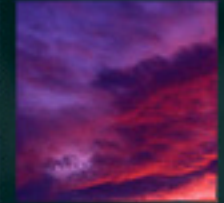
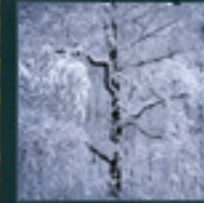
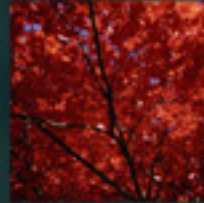
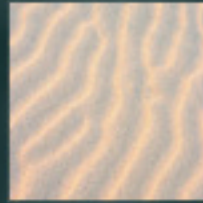


How study has influenced JMC program planning (Cont.)

- Sampling seems to work in some regions; JMC will consider it, but believes it would not be effective in New England.
- Linking energy ratings to standard Code compliance
- Develop marketing alliances (Leverage)
- Partner w/Mortgage co's, Fannie Mae office
- Parade of Homes (Open House Tour) events: Partner with local & regional HBA's



Conservation Services Group

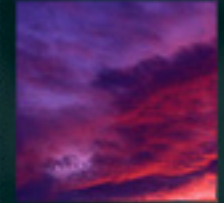
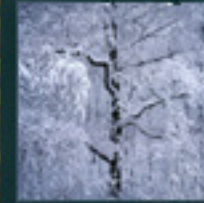
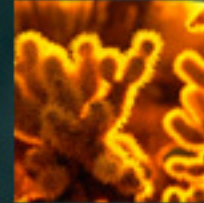
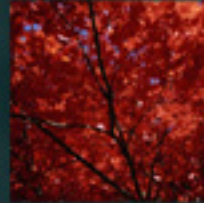


How study has influenced JMC program planning (Cont.)

- Even greater emphasis on Outreach and Training
- Add “Healthy Homes” program component
- No single “silver bullet”...Regionally appropriate approaches work best!



Conservation Services Group



Paths of Glory: Elements of Successful ENERGY STAR Homes Labeling Programs

Steve Baden - RESNET

John Livermore - Conservation Services Group