

New ENERGY STAR[®] Homes Requirements: Is It Harder To Recruit And Keep Builders

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Abstract

ENERGY STAR Homes Programs across the country vary considerably in the level of financial incentives offered, the expenses participating builders are expected to pay, marketing strategies and market penetration. However, they all say that one of their biggest challenges is convincing builders to participate, especially under the new, stricter EPA requirements for ENERGY STAR certification. This is especially true in markets where builders believe they are already building energy-efficient homes; most builders, at least until the current slowdown in the housing market, have not had any problem selling their homes; and consumers are not demanding more energy-efficient homes.

Steps programs are taking to make their programs more attractive to builders include adding participation paths; providing training on duct sealing and/or air infiltration; encouraging builders to install ducts in conditioned space to avoid the need for duct testing; and encouraging the use of better insulation materials. Going forward, several programs are considering adding green building, solar, and/or renewable program components to provide builders with more ways to differentiate their homes from their competitors' homes. In addition, some programs have introduced incentives for builders whose homes either fail to meet ENERGY STAR requirements or who are not interested in trying to meet all the requirements for ENERGY STAR certification.

Introduction

Many ENERGY STAR Homes programs across the country are finding it more difficult to recruit builders and projects under the new EPA requirements for ENERGY STAR certification. Early in 2006 the Massachusetts ENERGY STAR Homes Program found many builders hesitant to sign up projects under the new EPA ENERGY STAR-certification requirements. In response, the Massachusetts Program conducted in-depth interviews in July and August with several ENERGY STAR Homes programs across the country to find out if they were having the same problem and, if so, what they were doing to address the problem. Interviews were conducted with representatives of ENERGY STAR Homes Programs in the following states: California, Connecticut, Iowa, New York, New Jersey, Texas, Wisconsin, Vermont and the Northwest Energy Alliance program covering Oregon, Washington, Montana and Idaho. Interviews were also conducted with the National Director of ENERGY STAR for Homes and the national sales manager of the Environments for Living[™] program, which has completed over 38,000 ENERGY STAR homes. Also, in late 2006, in-depth interviews were conducted with 40 Massachusetts builders, 24 who are currently participating in the ENERGY STAR Homes Program and 16 who are not, to gain further insight on the impact of program changes on builder interest in building ENERGY STAR homes (NMR & Conant 2007).

Last summer, five of nine ENERGY STAR Homes programs interviewed said they expected to see a drop in participation in 2006. Follow-up interviews in December revealed that several of the interviewed programs have not experienced a drop in participation in 2006. Furthermore, representatives of programs that did see a drop in participation say it is hard to know how much of the drop is due to the stricter

ENERGY STAR-certification requirements and how much is due to the slowdown in the new housing market. The true test will be in 2007 when all participating homes have to meet the new certification requirements.

This paper explores the steps ENERGY STAR Homes programs are taking to maintain participation levels under the new EPA ENERGY STAR-certification requirements and the changes they are considering going forward to draw more builders into their programs. What different ENERGY STAR Homes programs are doing to maintain participation under the new Environmental Protection Agency (EPA) requirements and how they are treating homes that do not meet the new ENERGY STAR requirements depend to a great extent on current building practices in their area, the perceived value of being able to put the ENERGY STAR label on homes, and the extent to which duct leakage and air infiltration standards were in place prior to the introduction of the new EPA requirements.

Two of the interviewed programs, the Northwest Energy Efficiency Alliance and California programs, are not dealing with the impact of the new EPA requirements for ENERGY STAR homes on participation because their regional program requirements were grandfathered.¹ However, these programs are included in the discussion because they are dealing with other issues that affect participation and also making changes to retain currently participating builders and bring new builders into their programs.

Background

ENERGY STAR Homes Programs across the country vary considerably and have different penetration rates. Background on the various ways programs address marketing and incentives, the participation paths they offer, how they address air infiltration and duct sealing, etc. provides perspective on ENERGY STAR home markets in different areas.

Marketing

All reviewed programs market to both builders and consumers. However, some programs market primarily to builders and others primarily to consumers. New York's message to consumers is getting a better house; their message to builders is that they will be able to differentiate their homes. The Northwest and Wisconsin programs initially focused their marketing on builders. The Northwest program moved to targeting consumers because of builder feedback; builders want consumers to know about the program. As the Wisconsin program grew they decided they did not need to target builders as much and moved to consumers so they would ask for ENERGY STAR homes. Approximately one-third of Wisconsin's budget goes to marketing.

All programs say they market to affordable housing projects. In California, the state had a mandate in 2004 and 2005 that at least 20% of the homes certified had to be hard-to-reach, and they easily fulfilled the mandate.² Twenty-one percent of the housing units certified in 2006 by the Massachusetts program were low income. In all other programs affordable housing accounts for ten percent or less of certified units.

¹ Due to the unique nature of some state codes and/or climates, EPA has agreed to allow regionally developed definitions of ENERGY STAR in California, Hawaii, and the Pacific Northwest to continue to define program requirements. The States of Montana and Idaho may use either the requirements of the national program or the regionally developed program in the Pacific Northwest. Source: ENERGY STAR Qualified Homes National Builder Option Package, http://energystar.gov/index.cfm?c=bldrs_lenders_raters.homes_guidelns09.

² The California hard-to-reach category includes affordable, age-restricted, and certain neighborhoods with high percentages of low-income people.

Builder Marketing. All but the Iowa program have dedicated field or outreach staff. Iowa originally used outreach staff to court the largest builders, and says after they found and recruited a few key players in each market the rest followed. Now that many of the large builders are in the program they do not need to market to them, but still go after new builders entering the market. The Northwest has eight builder outreach specialists for four states; Vermont has one. Pacific Gas and Electric (PG&E) in California has a field team of four people who follow certain builders. Wisconsin has four regional outreach staff to reach out to industry actors, builders, and manufactured home companies.

All programs market to all types of builders—custom, spec and production—and all programs have websites.³ Working with local Home Builder Associations, advertising in trade publications, and meeting presentations are the most frequently mentioned methods the programs employ to reach builders. Other marketing strategies mentioned include: media advertising, mass mailings, newsletters, builder e-mail network, sponsoring local builder events and/or energy-efficient building awards, conducting breakfast meetings and participating in trade shows and other industry events.

Programs use a variety of ways to identify and contact potential new projects and builders. Under the new, stringent California energy code everyone has to hire a building energy consultant to certify that code is met. PG&E works with local building energy consultants to have them recommend the program to builders and consumers inclined toward energy efficiency. Wisconsin works with more than 51 consultants, Home Energy Rating System (HERS) raters, who market the program and their services to builders. These consultants work closely with Home Builder Associations to keep tabs on building in their regions and compete for builders; builders can choose who they work with, so the consultant needs to keep the builder happy to keep his business. The other programs use a variety of methods to identify potential projects including exploring websites, tracking permitting information, using construction databases, checking newspapers, and sometimes just driving by new projects. When potential new projects are identified someone either calls the builder or goes to the building site.

Consumer Marketing. Few programs know or have tried to measure consumer awareness of ENERGY STAR homes. New York claims 50% consumer awareness, and the Northwest found 19% of new homebuyers were aware of ENERGY STAR homes in 2005.⁴ Wisconsin claims at least 70% of homeowners with certified homes are aware they live in an ENERGY STAR home.⁵ In Massachusetts, 44% of non-ENERGY STAR homeowners who participated in a 2005 Baseline Study of new construction practices (NMR & Conant 2006, 44), and 33% of non-ENERGY STAR home buyers and 59% of ENERGY STAR home buyers who participated in a 2007 phone survey of new home buyers were aware of ENERGY STAR homes (NMR & Conant 2007, 44); 55% of the ENERGY STAR home owners who participated in the 2007 phone survey were aware that their homes are ENERGY STAR-certified (NMR & Conant 2007, 75).

Programs employ a variety of consumer marketing strategies including bill inserts; newspaper ads and inserts; EPA partnership ads; media advertising (most use radio, only New York mentioned television); billboards; listings of ENERGY STAR homes, developments and/or builders on program websites; advertising in home magazines, real estate magazines, and parade of home flyers; and taking advantage of media press opportunities. Vermont gets line extension requests from the utilities and mails homeowner packages to these people. The Massachusetts program does not currently use media advertising targeting consumers because they believe limited program funds are better spent on recruiting builders. The Northwest program encourages builders to use the ENERGY STAR logo in their advertising in new homes

³ Vermont is the only program that certifies predominantly custom homes.

⁴ They consider the 2005 survey results a baseline since the program started in mid 2004.

⁵ Based on 70% response rate to hard copy surveys sent to homeowners of newly certified ENERGY STAR homes.

magazines; their goal is to have the ENERGY STAR logo everywhere, but with builders paying for the advertising.

Program managers in California, New York, Iowa and at United Illuminating (UI) in Connecticut say they think consumer marketing is cost effective. California cites consumer response to newspaper inserts including a phone number for consumers to call to get a homebuyer's kit; in 2005 there were 7,500 calls to that number, and when they ran TV ads they would get 20,000 calls. New Jersey says consumer advertising can be effective with a very well coordinated and financed marketing campaign, but that little bits of advertising or promotion here and there do not get them anything. Other program managers say it is hard to say whether or not consumer marketing is cost effective because it is hard to quantify the impact of advertising on consumer awareness of ENERGY STAR homes and getting them to ask about or look for more energy-efficient or ENERGY STAR homes. Regardless, these program managers say they think marketing to consumers is worthwhile. Texas notes that their incentives are so small that consumers have to be aware to motivate builders to participate, so anything that increases consumer awareness is worthwhile. Wisconsin says anything that increases consumer awareness helps because builders do not want to be marketers and builders complain that consumers do not demand ENERGY STAR homes because they do not know about them. The Northwest believes the goal is not simply to increase consumer awareness, but also to have builders see the advertising directed to consumers and figure that they need to get on the ENERGY STAR bandwagon since their customers are seeing all these ads.

Incentives

Comparing incentives across programs is tricky. In some programs incentives include rebates for installing eligible HVAC equipment, appliances and/or lighting; in other programs there either are no equipment or appliance/lighting rebates available or the rebates are available through other programs. Some programs cover the cost of inspections and HERS ratings, while in other programs the builder has to hire and pay for a qualified HERS rater or Builder Option Package (BOP) verifier. In addition, some programs offer builders up to several thousand dollars of co-op advertising per year. Base incentives in the programs reviewed range from \$100 to over \$2,000 per certified home, but when rebates for HVAC equipment, appliances and lighting, incentives for model homes on display for an extended period, and co-op advertising are included, incentives can total well over \$3,000. Base incentives in some programs are straight fixed payments per certified home, in other programs incentives are based on the size of the home or the achieved HERS score/index. Also, incentives may be higher for a builder's first few ENERGY STAR homes or vary by heating fuel or building type.

Participation Paths

Some program managers say offering more than one participation path is confusing to builders; others say offering different ways to get to the same end is useful in any market transformation program. Five of the ten programs reviewed offer only the HERS-based Performance Path and one, the Northwest program, offers only the BOP path. The Northwest program offers HERS training to builders interested in applying for the federal tax credit and they are also negotiating with RESNET to develop a BOP-based approach for the tax credit so builders will not have to deal with both the BOP requirements for ENERGY STAR certification and the HERS rating for the tax credit. All other programs, including the Massachusetts program, offer both the Performance and BOP paths.

Several programs that traditionally offered only one path to ENERGY STAR certification, are now offering both the Performance Path and the BOP path. Iowa, which traditionally offered only the BOP path, introduced the Performance Path in 2006 to meet the needs of builders interested in pursuing the tax credit; almost half of the builders signing up projects in 2006 elected to follow the Performance Path. New York

and Massachusetts, which traditionally offered only the Performance Path, recently introduced the BOP path; to-date few builders have opted to follow the BOP path.

Ducts, Air Sealing and Mechanical Ventilation

Ducts. All the programs reviewed in states where installing ductwork in conditioned space is not standard practice offer training on proper duct sealing, but they do not all address sealing leaky cabinets. Six programs offer training on proper duct sealing, but only four specifically address sealing leaky cabinets.

Six programs say they encourage builders to install ducts in conditioned space. Builder response varies. The administrator of the Northwest program says builders looking to get the federal tax credit will do it as a way to qualify, but other builders will not likely change their practices. The Vermont program finds builders are receptive to the idea. The Wisconsin program manager says he thinks builders will be receptive to the idea, but their decision will be based on cost, design, HVAC guides and hassle. The implementation contractor for the New Jersey program says builders are not overly receptive to installing ducts in conditioned space, and that trying to get them not to install ducts in attics is a really tough sell, especially if they are building on a slab. It is not that big an issue in New York because the basements in most homes are conditioned space. Interviewed Massachusetts builders who said their project coordinator encouraged them to consider installing ducts in conditioned space typically said they would not do it on projects currently under construction, but would consider it for future projects.

The only utility offering financial incentives for duct sealing is United Illuminating in Connecticut. In 2006, the Massachusetts program offered builders up to \$200 of free duct sealing materials for their first five homes. None of the programs reviewed currently offer incentives for installing ducts in conditioned space, although some programs say they may consider this in the future

Air Sealing. Only Iowa and the Northwest say they do not provide air sealing training. However, in Iowa the blower door testing for homes under the new requirements for ENERGY STAR certification is opening their eyes quickly. In the past their program included duct leakage requirements, but not air infiltration requirements.

Prior Air Infiltration and Duct Leakage Requirements. Texas and Connecticut (UI) are the only programs that did not have air infiltration and/or duct leakage requirements prior to 2006.

Mechanical Ventilation. Iowa and Texas do not require mechanical ventilation, but they recommend it if a home is very tight—Iowa mentioned less than 0.31 natural air changes an hour. California did not require mechanical ventilation for ENERGY STAR homes before Title 24 was implemented. The Northwest program does not require mechanical ventilation, but it is part of code in Oregon and Washington. All the other programs have required mechanical ventilation for some time.

HVAC Equipment Sizing and Performance.

Only the California and Northwest programs provide training on proper HVAC sizing and installation and performance test installed HVAC systems. In California, everyone conducts performance testing to comply with code under Title 24. In the Northwest, the utilities subsidize the cost of performance testing. In Wisconsin, HVAC training and performance testing are done through their HVAC program.

Massachusetts, Texas, Iowa and New Jersey offer HVAC sizing and installation training, or at least discuss it with builders, but do not do any performance testing. New York provides training on all Manual J, Manual D, and minimum efficiency requirements. New York has no standard requirement for

using CheckMe![™] or similar performance testing approaches, but they conduct a quality insurance inspection that includes addressing proper cooling system operation at 15% of all installations. Only two programs, Vermont and Connecticut (UI), do not offer HVAC training. Vermont offered training in the past and says they will do it again if they get the necessary funding.

Linkages with Other Residential Construction Programs

Most programs work to at least some degree with other residential construction programs and several programs are working with Leadership in Energy and Environmental Design (LEED) and/or local green building groups. New York said they have no formal arrangements with any other programs and Wisconsin is frustrated with green building efforts in their state.

Tax Credit

In general, the programs reviewed are not pushing builders to pursue the federal tax credit, but most programs will provide the required certification report. Vermont sent out a mass mailing telling builders about the federal tax credit and how the ENERGY STAR Homes Program could help. If a home is ENERGY STAR-certified, Vermont will do the certification for getting the tax credit, so it is another benefit of getting the ENERGY STAR label. The Northwest is negotiating with RESNET to develop a BOP-based approach for the tax credit. In the meantime, they are offering training on HERS to interested builders and outreach specialists are helping builders figure out what to do from a design perspective. New York is working to develop a “Best of the Best” ENERGY STAR standard that will qualify for the tax credit. Massachusetts, Wisconsin, New Jersey and Connecticut (UI) will provide the certification report required for the tax credit for homes participating in their programs, but builders interested in the tax credit are told they must participate in the ENERGY STAR program if they want help meeting the tax credit requirements—the tax credit will be the icing on the cake. California, Texas and Iowa tell builders about the tax credit and then refer them to the IRS and other relevant websites and information sources.

Builder Interest. The level of builder interest in the federal tax credit varies across programs. In six programs (California, Northwest, Vermont, Wisconsin, Iowa and New York) builders have shown a high interest in pursuing the tax credit. New York says all types of builders are aware of and showing interest in the tax credit, and that a lot of builders with pride in their homes see the tax credit as a way to promote themselves. The California, Northwest and Iowa programs are seeing a lot of interest from high production builders, while the Vermont program is seeing interest from custom builders, but very little interest from other builders. Texas says only a few high-end custom builders have shown interest. Massachusetts, New Jersey and Connecticut (UI) say a few builders have inquired about the tax credit, but once they find out what is involved they back off—it seems unachievable and too costly.

Impact on ENERGY STAR Home Participation. Most programs do not see the availability of the federal tax credit having much impact on builder interest in their programs, especially since the credit is currently available only through 2007. In contrast, Wisconsin thinks the tax credit will absolutely have an impact on participation; when builders learn about the differences between ENERGY STAR homes and homes that qualify for the tax credit many builders will go for the tax credit. Their concern is that builders may opt to meet the minimal tax credit requirements and choose not to meet the combustion safety and other requirements of the Wisconsin ENERGY STAR Homes Program that are not requirements for the tax credit. Iowa says the tax credit is definitely generating interest in the HERS approach.

Penetration Rates

Market penetration rates vary widely, ranging from a low of two percent in the Northwest to over 50% in Iowa. The programs with higher in-program incentives tend to have higher penetration rates. Iowa, New Jersey, New York and Vermont program incentives can add up to over \$1,000 per home and their market penetration rates are 20% or higher. There are exceptions. Connecticut (UI) claims 40% market penetration with lower incentives, but they also pay for all certification expenses that builders have to pay for in some of the other programs, bringing the total value of services and incentives to over \$1,000 per home. Despite United Illuminating's high penetration rate, they say they think if they stopped outreach efforts the program could go unnoticed. Texas has the lowest incentives, but the implementation contractor claims 45% of new homes are ENERGY STAR.

Impact of New Certification Requirements on Program Participation

Last summer, the reviewed programs expressed mixed views of what impact the new EPA requirements would have on program participation and what types of builders would be most likely to drop out because of the new requirements. Some programs expected to see a sharp decline in participation while others expected the changes to have very little impact on participation. By year end, most programs found participation had not dropped, and where participation was somewhat lower than in previous years it was hard to say how much of the drop was due to the stricter certification requirements and how much was due to the slowdown in permits and the overall new housing market. Not all 2006 homes needed to meet the new certification requirements; different programs had different criteria for determining which homes completed in 2006 would be grandfathered and which would have to meet the new requirements for certification. The true test will be in 2007 when all homes in all programs have to meet the new certification requirements.

The National Director of the ENERGY STAR for Homes Program expected to see short term attrition in some state programs because of the new certification standards. However, because very large production builders are joining the program and some new areas are implementing the program, he expected to see net growth at the national level in 2006. Preliminary national results show the number of homes certified in 2006 is over 191,000; 17% higher than in 2005

Environments for Living did not expect the new EPA requirements to have any impact on participation in their program because they have always had air infiltration and duct leakage requirements; EPA tracking reports show Environments for Living certified over 20,000 homes in 2006 (EPA 2007).

Response To The New EPA ENERGY STAR Certification Requirements

Response to the new EPA ENERGY STAR certification requirements varies. Some programs have increased or added new incentives; some have added participation paths; some are providing more training and education and/or encouraging builders to install ducts in conditioned space and/or use better insulation materials and technologies; some programs have revised their inspection process or requirements for qualified electric savings; and some programs have introduced incentives for homes that do not meet all the requirements for ENERGY STAR certification. Two programs, California and Wisconsin, sought policy changes from EPA.

Individual Program Responses

- **California** introduced a combined Quality Insulation Installation (QII)/ENERGY STAR

checklist for ENERGY STAR certification in January 2006 that paralleled the EPA's thermal bypass checklist. In May 2006, the EPA told them that it would not be acceptable because the California code incorporated the QII. This caused a major drop in participation in their program; they say some of the drop was probably a result of the softening new housing market, but builders felt the program's rules were being changed midstream in an arbitrary manner. The California Energy Commission along with the utilities lobbied the EPA; PG&E hired a consultant to do a detailed analysis of the ENERGY STAR requirements, the International Energy Conservation code (IECC) and the California energy code. On November 22, 2006, the EPA said California could go back to using the QII/Thermal Bypass Checklist, essentially what they had been doing earlier in the year. They are now trying to get word out to builders about this and hope it helps ENERGY STAR participation. Also, PG&E is offering a prescriptive option that allows builders and developers not participating in the California ENERGY STAR New Homes Program to upgrade one or more specific prescriptive measures for homes within their developments. An incentive will be paid for each of the chosen prescriptive measures that is not used to meet the 2005 Title 24 baseline.

- **Connecticut (UI)** is encouraging builders to insulate better with new materials and technologies, and to insulate ducts to EPA guidelines and place them in conditioned space. In addition they are offering incentives for duct sealing and providing more on-site duct sealing training to HVAC contractors working on ENERGY STAR homes. They also offer their equipment and duct sealing incentives to homes that fail certification; they say the big issue is tightening up the home. If homes do not meet all ENERGY STAR requirements they try to have them tighten ducts, or if that is not possible they offer compact fluorescent (CFL) bulbs and incentives for CFL fixtures. They thought some larger builders might drop out of the program because the incentives are not that attractive anymore, and many of these builders do not want to invest the additional dollars. However, at year end, participation had not dropped; builders already involved in the program were staying and new builders were showing interest because of higher oil prices.
- **Iowa** added the HERS approach to certification and offered their old (pre 2006) BOP package to builders with the same incentives as the 2006 EPA BOP, but without ENERGY STAR certification. They are the only program that will offer anything beyond equipment, appliance and lighting rebates to homes not qualifying for the ENERGY STAR label. They have never had a problem with ducts; HERS projects are subject to the same six percent leakage requirement they have had for some time, and they are working with raters to figure out how to get to four percent duct leakage for EPA BOP homes. They also added a cooling only rebate for electrically heated homes. Participation has not dropped, but they are surprised that about half of the builders are choosing the HERS path to certification..
- **Massachusetts** encouraged builders to insulate foundation walls and install ducts in conditioned space, and provided more on-site duct sealing training to HVAC contractors working on ENERGY STAR homes. They also introduced a non-ENERGY STAR option under which homes that did not meet all ENERGY STAR certification requirements could have free CFL bulbs installed in all appropriate sockets. New project signings were down sharply in 2006, but it is hard to tell how much of this reflects changes in program requirements and how much reflects the slowdown in the market for new homes.

- **New Jersey** is conducting more education and training, including both individual builder and state-wide sessions on the federal bypass check list and other topics, and added a \$100 incentive for electronically commutated motor (ECM) motors on heating systems. They also require a preconstruction meeting/training with the builder and subcontractors on every project, not just a builder's first project. Furthermore, if the builder changes subcontractors during the project they set up another meeting. Their territory includes two climate zones and last summer they thought they might see a drop in participation in the colder climate zone, where certification requirements are stricter, but to-date they have not experienced a drop in participation.
- **New York** introduced the BOP package option and changed kWh savings requirement conditions; builders can no longer get all their kWh savings from CFLs. They put a cap on lighting savings so builders have to include some efficient appliances; required kWh savings are 500 kWh/year for standard homes and 650 kWh/year for modular homes. Participation in their program has not dropped.
- **The Northwest** has been grandfathered since they negotiated their BOP with the EPA; they are not sure how long this will last. Participation has not been affected.
- **Texas** was particularly hard hit in 2006 because they claim only electric savings and most of their savings come from air conditioning; the 2006 national 13 SEER standard reduced those savings dramatically. They expected to see a sharp drop in participation. They increased incentives, found the incremental cost to builders to meet the new certification requirements to be less than they originally estimated, and have been able to convince builders to install over 13 SEER air conditioning. They are now more optimistic about being able to maintain previous participation rates.
- **Vermont** added a second inspection for the thermal bypass checklist. They also considered adding a requirement that all ducts be in conditioned space, but have found that the design/build companies that have homes that do not pass the tight ducts requirement are willing to redesign homes to place ducts in conditioned space. They also added an incentive for ECM type furnaces, are switching incentives from electric to gas clothes dryers, and may offer an incentive for ENERGY STAR ceiling fans. They still expect the new requirements to result in fewer homes participating in the program.
- **Wisconsin** has not made any changes. However, they question the rationale and politics concerning how the software modeling handles ventilation and duct leakage. They believe there are regional differences and are conducting ongoing research studies and discussions with RESNET and EPA on what best fits their market. They are seeking an exemption from testing ducts, and say that if the EPA requirements had required testing all ducts installed in conditioned space they might have gone to a non-ENERGY STAR Wisconsin program. They say, "The people we are trying to influence don't accept change well and our credibility is on the line." At the end of 2006 they said it was too early to tell what the impact of the new requirements would be on participation, but added that they are seeing some homes choose to go for the tax credit without meeting all the requirements for ENERGY STAR certification through their program, which include meeting combustion safety and ventilation standards that are not required under the national program.

Builder Response

Twenty-four Massachusetts ENERGY STAR builders interviewed in late 2006 all say they are aware of the new program requirements, have not signed any homes up under the non-ENERGY STAR participation path that provides free CFL bulbs installed in all appropriate sockets, and are not building any homes that they would have previously signed up through the program but decided not to because of the stricter 2006 certification requirements. The builders who are building homes with ducts say the duct sealing training they received was helpful and that they are either now meeting the new duct leakage standards or think they will be able to meet them in 2007.

The 24 ENERGY STAR builders plus an addition 16 non-ENERGY STAR builders were asked how interested they would be in a participation path that would not lead to ENERGY STAR certification, but would provide incentives for installing high-efficiency HVAC equipment, require meeting duct leakage and air infiltration requirements less strict than required for ENERGY STAR certification, and include installing free ENERGY STAR CFL bulbs in all appropriate sockets. Almost all (21 of 24) ENERGY STAR builders interviewed say they would continue to build homes that earn the ENERGY STAR label; one of these builders says he would consider following the Code/Plus path for buyers who are not interested in the ENERGY STAR label. The non-ENERGY STAR builders interviewed are split. Of the 16 non-ENERGY STAR builders interviewed, four say they would choose the ENERGY STAR path because the label has value. Another three builders also think the label is valuable, but are somewhat interested in the Code/Plus path. Seven non-ENERGY STAR builders say they would choose the Code/Plus path; however, four of these builders add that they would only be interested if the incentives covered any additional cost.

Response to Housing Market Slowdown

Most (six out of ten) program managers say they think that a slowdown in the new home market will make builders more interested in building ENERGY STAR homes because it will allow them to differentiate their homes. If awareness of ENERGY STAR homes increases, the value to builders of being able to use the ENERGY STAR label to differentiate their homes increases. Four program managers say some builders will be more interested in building energy-efficient ENERGY STAR homes, and other builders—those who think it costs more to build an ENERGY STAR home and that home buyers are not willing to pay for energy efficiency—will be less interested in building ENERGY STAR homes.

Both ENERGY STAR builders (24) and non-ENERGY STAR builders (16) interviewed in Massachusetts were asked how they would respond to a slowdown in the housing market: would they be more likely to build more energy-efficient homes and try to differentiate their homes by marketing their energy efficiency, or less likely to incorporate energy-efficient practices and/or equipment in order to cut costs because home buyers are not willing to pay for energy-efficiency. ENERGY STAR builders (71%) are more than twice as likely as non-ENERGY STAR builders (31%) to say that in a slow housing market they will build energy-efficient homes as a way to differentiate their homes. Builders who say they will build less energy efficient homes in a slow housing market say they will do this to cut costs and remain competitive, and because their customers do not seem willing to pay for energy efficiency.

Where Programs Are Headed

Views on where programs are headed vary. Several programs either have or plan to increase incentives. Massachusetts, Vermont, New Jersey, the Northwest and California mention incorporating some green building practices, although California says it is more likely they will focus on solar options. New Jersey believes rising energy prices create opportunities. They comment that the biggest environmental

impacts come from making the largest homes more energy efficient; the impacts are minimal on small homes. They say if someone is going to build a large home anyway, we should focus on making it energy efficient. California has a three-year program approved through 2008, when Codes will become more stringent and they will need to evaluate if their program is still appropriate. They say they think there may be a big market for their program as an entryway into solar funding and may form some sort of partnership with solar programs.

Wisconsin sees the slowdown in the housing market as an opportunity for encouraging builders to differentiate. They also think introducing renewable-ready homes and moving toward zero net energy homes may become reality with better builders if energy prices continue to rise. They recently introduced a renewable-ready incentive to encourage builders to build homes oriented and wired to be renewable-friendly. (They are running wiring and insulated copper piping from the mechanicals up to the roof; it is a pretty small incremental cost.) They believe the market differential benefit could be substantial, and that some builders are interested in it because they think it will help them sell more homes faster. Wisconsin also believes there are opportunities for increasing electric savings from lighting and appliances. New York is very optimistic and plans to increase market penetration, kWh savings, and public awareness; work with builders to decrease incremental cost; integrate renewable technology options; and use case studies based on builders building very high efficiency homes as a learning tool for other builders. New York is also introducing a “Best of the Best”—50% tax credit—home as a way of differentiating these homes from standard ENERGY STAR homes without demoting the status of ENERGY STAR homes.

Connecticut (UI) , Iowa and Texas are less sure about what lies ahead. United Illuminating in Connecticut says they are at the mercy of their public utility commission, but hope to promote and offer incentives for the many types of insulation other than fiberglass, and put forth a combined effort of tightening up the home and the ducts along with proper ventilation. Iowa believes there is a lot of opportunity, driven by the building industry, and definitely room for growth; however if participation increases they will have to lower incentives. They plan on addressing HVAC equipment sizing, but wonder what impact the tax credit will have on the market and program participation and what will happen when the tax credit goes away. The Texas program is not fuel neutral, it focuses on electric on-peak demand and energy savings. The Texas program interviewee said there is a possibility that the utilities may stop funding ENERGY STAR Homes, but that the state has air quality improvement goals that may lead the state to sponsor energy efficiency initiatives, although that may be pretty far down the road.

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