

More Lessons Learned in the ENERGY STAR® Homes Program

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ABSTRACT

A summary of the early progress of the ENERGY STAR Homes program was presented at the 1998 ACEEE Summer Study. Since then much has changed. Many states and utilities have adopted the ENERGY STAR Homes model. Others are eyeing it for the future. This paper provides an update on the ENERGY STAR Homes program, including a description of successes, failures, challenges already faced and opportunities ahead. Some of the key changes in the program include: a shift in program focus from builders to allies to consumers, ally alliances, new tools developed, and increased use of the internet for “marketing”. Key challenges include: building consumer demand, unrecognized success, and the complexity of program verification. From these lessons, future direction for the program is outlined.

Introduction

Market Transformation Programs

Market transformation (MT) can be defined as incrementally influencing a market. Effective MT occurs when market actors continue the desired new behavior (i.e. energy efficient construction) after the MT program has ended. Many market actors have attempted to influence the level of energy efficiency in the US home building industry for over two decades. Early on, many of these efforts were focussed on financial incentives. The key lesson learned in these early efforts was that financial incentives often had only a short-term effect on the market. When the incentives were discontinued, the market often lost interest in energy efficiency. While some exceptions exist (e.g. Wisconsin’s Condensing Furnace Program), this has been the experience of many discontinued incentive-based programs.

Another early lesson learned in these MT efforts was that the public perceived that “using less energy” implied a less comfortable lifestyle (e.g. a lower thermostat setting). We now know that with today’s energy efficient technologies, comfort can be improved with reduced energy use. Thus, the term “energy efficiency” has replaced “energy conservation”.

These two early lessons suggest the importance of understanding a market and its players, if it is to be effectively transformed. In the US home building industry, there are numerous market players, each with their own needs and wants. They include home buyers, builders, real estate professionals, utilities, product manufacturers and distributors, home energy professionals (i.e. HERS raters), and mortgage lenders. Which of these perspectives are most important to address in a MT initiative? If a program is designed from a narrowly focused perspective, it is unlikely the program will receive a broad base of support. Clearly, a successful MT program must adequately meet the needs of all of the key market actors. Over the last five years, the ENERGY STAR Homes program has been *learning* who these key market actors are, and how to adequately meet their unique needs.

Push or Pull?

Generically, there are two halves to a market - the suppliers (including manufacturers, distributors and retailers) and the consumers. Market Push is the effect that suppliers have on consumer purchase decisions. Market Pull is the effect that consumers have on the behavior of product suppliers. In addition, external players (i.e. government, utilities) can influence both sides of a market. Codes (e.g. the Model Energy Code) and Demand Side Management (DSM) programs that provide incentives for builders are both examples of externally driven Market Push programs. These programs usually spell out a very specific set of mandatory actions that must be completed by the suppliers (i.e. builders) - in order to streamline the enforcement or implementation process. In such programs, most participants only perform the minimum level of actions required without achieving a substantial understanding of why they are taking these actions. As a result, Market Push programs are successful in achieving *modest* incremental improvements. In addition, codes are costly to enforce and incentives are costly to administer. Furthermore, these programs rarely lead participants to value energy efficiency on its own merits.

In contrast to Market Push programs, Market Pull programs are designed to encourage consumers to voluntarily take actions they perceive are in their own best interest. For example, most DSM programs provide financial incentives to encourage consumer action. Consumer Education is another example of Market Pull. The most common example of a voluntary program is a utility-funded DSM program. Similar to building codes, DSM programs are often focused on a very specific set of mandatory actions that must be completed - in order to streamline the enforcement process. Again, most participants only perform the minimum level of actions required without understanding additional benefits of taking these actions (i.e. comfort, health, safety, and increased resale value). As a result, these rebate-based programs rarely lead to *substantial* improvements in energy efficiency or lead participants to value energy efficiency on its own merits.

Purpose of the Energy Star Homes Program

The EPA's ENERGY STAR Homes program is a voluntary, market-based program that differs significantly from most existing voluntary programs. It includes both a Market Push component and a Market Pull component. It does not rely on financial incentives to influence consumers' purchasing decisions. Unlike rebate-based programs, the ENERGY STAR Homes program promotes energy efficiency on its own merits - without program funded financial incentives. Also, the program is designed to include the interests of a wide audience, including: home builders, home buyers, realty professionals, mortgage lenders, Home Energy Rating System (HERS) professionals, and utilities.

In light of the "weaknesses" of previous Market Push and Market Pull programs, the ENERGY STAR Homes program was designed around the market forces that drive construction industry players (not just builders) and home buyers to action.

The Market Push component of the ENERGY STAR Homes Program. The following aspects of the ENERGY STAR Homes program are Market Push activities:

- Educate builders on opportunity to increase **profits** by selling energy efficient homes;

- Educate home realty professionals on **how to sell** energy efficient homes;
- Marketing assistance to ALL participants: builders, contractors, manufacturers and distributors, HERS raters, mortgage lenders, and utilities;
- Provide tools and education for increasing the effectiveness sales staff;
- Rely on the market to provide sales incentives, verification, and consumer education.

The Market Pull component of the ENERGY STAR Homes program. The following aspects of the ENERGY STAR Homes program are Market Pull activities:

- Promote a high visibility **brand name** that is readily identifiable by consumers;
- Promote **energy efficiency mortgages** (EEM's) for energy efficient homes;
- Educate consumers and builders on the **value** of energy efficient construction;
- Educate consumers that energy efficient homes **cost less** to own and operate.

Program Performance

Program Growth

The following exhibits show key statistics that illustrate program growth in terms of recruitment and ENERGY STAR Homes certified. Also shown are average efficiency achieved (as measured by HERS scores) and the number of ENERGY STAR Homes by verification type.

Recruitment. The growth in partner and ally recruitment is shown in **Exhibit 1**. This is measured by the number of organizations that have signed the ENERGY STAR Homes Memorandum of Understanding (MOU). These data show continuing growth in partner recruitment since the beginning and continuing growth of ally MOU's through 1998. The decline in ally recruitment in 1999 coincides with a decline in active recruitment of allies and partners by EPA, since the number of program participants is large. Builder recruitment has not slowed because allies continue to actively recruit builder partners.

Exhibit 1: Partner and Ally Recruitment by Year

Year	Builders Recruited	Allies Recruited
1995	19	0
1996	74	42
1997	264	185
1998	441	345
1999	483	236
Total	1281	808

ENERGY STAR Homes Certified. EPA has measured program growth by the number of homes certified. This measure does not capture all the homes affected by the ENERGY STAR Homes program. Some participants have built homes that may meet the ENERGY STAR Homes

performance standard, but have not rated or certified them¹. EPA is in the process of evaluating program effectiveness to determine program effect on the new construction market, in terms of reduced energy consumption. Until the results of this evaluation are available, the number of ENERGY STAR Homes Certified and the percent market penetration in specific markets are the only measures available. ENERGY STAR Homes Certified by certification method and year are shown in **Exhibit 2**. Equivalent Program certification (see "Verification using equivalent program compliance") is not shown separately, since these programs differ in their certification methods². Virtually all of the Sampling Protocol Pilot certified homes were certified based on sampled homes by Full HERS Rating.

This exhibit shows two key observations: 1) the growth rate of the program and 2) the types of certification methods used. After a quick start in 1996, the first full year of ENERGY STAR Home certifications, the program grew at a rate of over 500% in 1997. In 1998 the program grew another 234%, and then grew by 46% the fourth year. The projected growth rate for 2000 is between 30% and 50%.

Exhibit 2: ENERGY STAR Homes Certified by Year and Certification Method

Year	Full HERS	Builder Option Package (BOP)	Sampling Protocol Pilot	All Homes
1996	178	0	0	178
1997	1084	0	536	1,620
1998	4054	1049	246	5,349
1999	5209	769	1807	7,785
Total	10,525	1,818	2,589	14,932

Average Efficiency of ENERGY STAR Homes. The average HERS scores³ of the 10,883 ENERGY STAR Homes certified through Full HERS Ratings to date is 87.9. Scores range from 86.0 to 99.2. Thus, ENERGY STAR Homes are on average approximately 40% more efficient (for heating, cooling, and water heating) than typical new construction⁴.

Successes

Are there any signs of successful market transformation? While no single geographic market (i.e. city or metropolitan area) has exceeded 25% market penetration of ENERGY STAR

¹ The MOU does not commit partners to certify a specific number of ENERGY STAR Homes; however, to remain an active partner a builder must certify at least one ENERGY STAR Home per year.

² Some use rating-based and others use prescriptive path certification (e.g. Builder Option Packages).

³ Energy efficiency of ENERGY STAR Homes is typically measured by a HERS Rating, which results in a score between 0 and 100. This score compares the estimated annual energy use (for heating, cooling, and water heating) of a rated home with a reference house of the same dimensions, built to the Model Energy Code (MEC). The reference house is assigned a score of 80. For every 5 percent decrease or increase in energy use (compared to the reference house) the score increases or decreases by one point, respectively. Thus, a home with a HERS rating of 86 will use 30% less energy - the ENERGY STAR Homes performance guideline.

⁴ Typical new homes in the US do not exceed energy codes, and therefore are expected to perform at approximately 80.

Homes, there are signs of movement in the right direction. The following sections highlight a few of the key program successes to date:

Logo usage growth. The ENERGY STAR Brand Campaign has aggressively pursued placement of ENERGY STAR Public Service Advertisements (PSA's) and media outreach. This applies across the family of ENERGY STAR programs, including all ENERGY STAR labeled products. The results of this campaign are impressive. The total number of placements of the ENERGY STAR PSA's and logo in the media was 1,264,024 at the end of February 2000. This translates to 2,253,888,219 consumer impressions. That's over 2 Billion sightings of the ENERGY STAR!

In the ENERGY STAR Homes program, this brand growth is evident in both builder behavior and adoption of the ENERGY STAR by numerous State & Utility programs. Brand growth is most prominent in the Phoenix area, where four of the areas largest builders have adopted ENERGY STAR. They helped to sponsor Parades of Homes and other promotional events featuring ENERGY STAR Homes, and have experienced rapid growth of ENERGY STAR Homes sales. Some prominent examples of State and Utility programs adopting ENERGY STAR include the 2000 ENERGY STAR Homes ally award winners: Florida Power Corporation's ACT Plus program, Public Service Electric & Gas Company of New Jersey's Energy Efficient 5 Star Program, and FirstEnergy.

Builder successes. Builders around the country looking to differentiate their homes from their competition have joined the ENERGY STAR Homes program. A few examples of successful ENERGY STAR builders are highlighted below.

In Phoenix, AZ, three of the area's largest builders are building and marketing ENERGY STAR Homes. Continental Homes, the largest builder in the program and the 1999 ENERGY STAR Homes Builder of the Year, built and sold hundreds of ENERGY STAR Homes in 1999. Pulte Homes of Phoenix and Beazer Homes of Phoenix are also building entire sub-divisions exclusively made of ENERGY STAR Homes.

WattHomes in Salt Lake City, UT, has been building and selling ENERGY STAR Homes since the early days of the program and continues to display the ENERGY STAR prominently in their model homes, in their ads, and on the thermostats of every (ENERGY STAR) Home they sell. The average energy savings for Watt Homes customers is 47% compared to minimum code (i.e. average HERS score is 89.4).

Ally Alliances. Building and selling ENERGY STAR Homes requires changing the way builders do business for the better. It often requires technical assistance, verification services (usually paid for by builders), new marketing approaches, and education of sales staff. One of the keys to recent successes in the ENERGY STAR Homes program has been the emergence of ally alliances. These are partnerships forged between ENERGY STAR Homes allies who develop business relationships to provide this wide array of products and services needed to build and sell ENERGY STAR Homes. The following paragraphs illustrate how successful allies in the program are combining forces to do just that.

D.R. Wastchak, LLC, a rating company in Phoenix, AZ, built its business around ENERGY STAR Homes. Daran Wastchak, President of D.R. Wastchak, LLC, began providing home energy ratings for ENERGY STAR Homes builders in Phoenix in 1997. His business grew rapidly as he forged successful relationships with Southwest Gas, a local utility company, and with large

Phoenix area builders, provided rating and ENERGY STAR certification services. He is currently the largest provider of ENERGY STAR Homes certificates in the country, certifying over 1,000 ENERGY STAR Homes in 1999. Southwest Gas has also played a significant role in this partnership, providing advertising and promotional support to builders in the program.

Another strong ally in the ENERGY STAR Homes program is Energy Rated Homes Midwest in Indianapolis, IN. ERH Midwest has also been with the ENERGY STAR Homes program since the beginning. Part of the secret to its success is the resourcefulness of its leader, Mark Jansen. Mark was convinced that ENERGY STAR Finance partners would be willing to pay the rating fees for ENERGY STAR Homes certification, in return for use of the ENERGY STAR logo to market and differentiate their energy efficient mortgages. He currently works with a number of ENERGY STAR Finance partners in his service territory, and rated nearly 1,000 ENERGY STAR Homes in 1999 through his affiliate raters.

A third example of a successful ENERGY STAR Homes Ally Alliance is in Gainesville, FL. The Gainesville alliance includes the Gainesville Regional Utilities, Bosshardt Realty, and Florida Home Energy Rating Organization (FL HERO). The Gainesville Alliance has achieved approximately 20% market penetration for ENERGY STAR Homes. They have sponsored successful media events and consumer seminars, raising both builder and consumer awareness of ENERGY STAR Homes in their market.

Educational Materials. Throughout the history of the program, a number of educational materials have been developed and disseminated to partners and consumers. Several of these have emerged as the most effective. They include the ENERGY STAR Homes Website, which is updated almost daily with program statistics, contact information for participating builders and allies, and the latest news about program events and developments. Recent revisions include a streamlined roadmap to success, and a tally of ENERGY STAR Homes built by participating builders. Another new addition to the program is a simple and clear, full color consumer brochure, developed with input from consumer and builder focus groups. Builders are using the new brochure in their model homes and allies distribute them at trade shows and through direct mail. Finally, the award winning CD ROM Marketing Toolkit provides valuable information and tools (such as Home Calc, fact sheets, and ad modules) for successfully participating in the program. Information about these materials can be obtained through the ENERGY STAR website (www.energystar.gov/homes) or the ENERGY STAR hotline (1-800-STARYES).

Program Evolution

Builders to Allies to Consumers

Much has been accomplished in the early years of the ENERGY STAR Homes Program. It began with a powerful sharply focussed vision of market transformation:

Educate builders to change the way they sell new energy efficient homes – using the “more home for less cost” message.

Builders would be trained to communicate the message to their customers. With the proper knowledge and tools, they could differentiate their homes from typical construction and their competition. Once enough builders caught on, consumer awareness would build and the rest of the industry would have to follow or risk missing the boat (i.e. lose sales).

This message has been delivered effectively to small audiences within the industry. Effective tools have been developed to help the early adopters communicate the message to their customers. Motivated program staff and allies have hit the streets with this message. New partners and allies all over the country have signed up for the program and continue to sign up at a rapid rate.

However, by the end of 1997, program growth was stretching program resources. Account managers could not provide Sales Training for each builder partner who joined the program. Furthermore, HERS rating verification was not available in every market. This required alternative solutions that sapped program resources. At this time, EPA added a second key component to their MT strategy:

Leverage industry allies to recruit and educate builders of the benefits of ENERGY STAR Homes participation, and provide turn key verification solutions.

In the ensuing two years, allies have played an increasingly important role in delivering the program to builders in their markets. They have become the primary recruiters of ENERGY STAR Home partners, and provide every service related to ENERGY STAR Homes.

In 1999, after two more years of growth, another program adjustment was needed. Despite recruiting successes and increased ally activity, progress (measured by the number of new ENERGY STAR Homes certified) was slowing. Many partners signed up, but fewer were consistently building and certifying ENERGY STAR Homes. Some began to market with the logo, but certified very few ENERGY STAR Homes. At this time, EPA decided to focus more on a third key component to their MT strategy:

Increase consumer awareness of ENERGY STAR Homes – through targeted outreach.

Strategic plans were developed to increase consumer demand in several target markets. These plans were focussed on getting the ENERGY STAR Homes message out to consumers directly. Program resources were shifted into targeted marketing activities, an improved consumer web site, and plans to work with Realtors.

Consumer awareness is increasing in several target markets, indicated by growth in ENERGY STAR Home sales and anecdotes of participants. In addition, the ENERGY STAR Brand campaign is making strides in increasing consumer awareness of the logo for all ENERGY STAR labeled products. Industry allies and partners are taking notice, and State and Utility programs around the country are beginning to incorporate ENERGY STAR into their programs. Some are even building their programs around the ENERGY STAR. These include the Wisconsin ENERGY STAR Homes Program, New York's EnergySmart Programs, several utility programs in California, and budding efforts in New England, Texas, and New Jersey.

Expansion of Verification Alternatives

While consumer outreach and program marketing have resulted in significant growth, the number of ENERGY STAR Homes completed and certified continues to lag behind the original aggressive program goals. One of the primary reasons identified for this trend is the complexity of the verification process. This complexity is a result of the gradual evolution of the program to provide verification solutions in all markets. It has been a challenging evolutionary process, balancing two sometimes-conflicting objectives:

- Maintaining brand integrity through third party verification

- Adapting program delivery to the needs and motivations of builders

Since the beginning of the program, EPA has required that homes be verified to meet the ENERGY STAR Homes performance standard before they can be labeled as ENERGY STAR Homes.

This performance standard requires ENERGY STAR Homes to be at least 30% more energy efficient for heating, cooling and water heating than a comparable home built to minimum energy code (1993 Model Energy Code) and equipment efficiency requirements (National Appliance Energy Conservation Act).

Verification using the Home Energy Ratings System (HERS). Originally, the only means available for determining compliance was a Home Energy Rating System (HERS) rating. This process includes an inspection and testing of the home conducted by a qualified third party inspector (HERS Rater). A HERS rating evaluates the energy efficiency of a home (heating, cooling, and water heating only), and results in a score between 0 and 100. This score indicates the estimated annual energy use of a rated home relative to a reference house built to the Model Energy Code (MEC) and assigned a score of 80. A rated home with identical predicted annual energy use would also receive a score of 80. For every 5 percent reduction in energy use the score increases by one point. Thus, a home with a HERS rating of 86 will use approximately 30% less energy for heating, cooling, and water heating - the ENERGY STAR Homes performance standard. HERS Raters are typically private sector energy professionals who charge a fee to the builder for their services. In many states, programs exist that subsidize these fees through federal, state, or PUC funds.

The EPA has continued to encourage the use of HERS ratings as a means of verification. However, third party verification of energy performance is new to most builders, and the infrastructure for providing HERS services is not available in many States. These factors led to development of alternative verification methods.

Verification using equivalent program compliance. Programs promoting energy efficient housing existed prior to the ENERGY STAR Homes Program. They were primarily existing utility Demand Side Management (DSM) programs. EPA recognized the value of these programs for verification and very early in the program began to allow them to verify ENERGY STAR homes through their existing program infrastructure, provided they met equivalency requirements. Equivalent programs were individually approved by EPA. EPA considered for ENERGY STAR equivalency any residential new construction program that met the following criteria:

1. met or exceeded the ENERGY STAR Homes performance standard,
2. included an equivalent verification component.

Verification using Builder Option Packages (BOP's). EPA created BOP's for two reasons: 1) as an alternative verification method in States where HERS ratings are not available, and 2) because builders wanted a more standardized approach to certifying homes. The HERS process was originally developed for evaluating the energy efficiency of existing homes to standardize the process of facilitating Energy Efficient Mortgages (EEM's). It required an inspection, testing, and computer modeling of each home to determine estimated energy consumption. Many builders in the ENERGY STAR Homes program were not interested in custom energy efficiency evaluations for each home. They wanted a set of specifications that would ensure ENERGY STAR Homes compliance for every home they built in a sub-division. EPA responded by developing Builder

Option Packages (BOP's), a set of prescriptive specifications designed to meet the ENERGY STAR Homes performance standard for homes with similar specifications in the same climate.

The implementation of BOP's for ENERGY STAR Homes compliance evolved to require similar field inspection and testing to a HERS rating, performed by a BOP Inspector. However, they produce a "pass/fail" result, rather than a "score". BOP's have also been used as a "marketing" tool for communicating typical features of Energy STAR Homes to prospective customers, even where HERS is used for compliance verification. For example, ENERGY STAR Homes allies can use specific BOP's to show potential customers a package of energy efficiency features that will qualify a home for ENERGY STAR.

Verification using ENERGY STAR manufactured housing compliance. Manufactured (HUD Code) Housing is a unique segment of new housing that needed an ENERGY STAR Homes verification method that fit its assembly line construction and regulated quality assurance process.

The manufactured housing industry uses factory assembly of each home subject to third party HUD inspections and fourth-party spot-checking. Thus, EPA has recently developed ENERGY STAR Manufactured Housing Verification Guidelines. This method is based on specifications developed for specific regions, similar to BOP's, and incorporates the existing quality assurance process with field inspection spot checking. The ENERGY STAR Manufactured Housing Verification Guidelines require manufactured housing companies to acquire the services of EPA-approved third party agencies to assist in administration and oversight of its program.

Sampling protocol pilot for production builders. The last and most contentious development in the evolution of ENERGY STAR Homes verification was the Sampling Protocol. The Sampling Protocol was developed as a pilot to test the viability of testing and inspecting a random sample of homes instead of each home (the usual requirement). This was developed for production builders who can maintain consistency in their specifications and production processes. Most production builders in the ENERGY STAR Homes program prefer the Sampling Protocol because it minimizes verification costs and production interruptions, while maintaining the advantage of third-party verification. However, builders' attitudes toward HERS ratings may change as consumer awareness increases (i.e. if consumers begin to ask for HERS ratings, builders will offer the service). This pilot requires that three homes by each builder successfully complete the ENERGY STAR verification process. Thereafter, a minimum of 15 percent of homes can be randomly selected by a third party for inspection and testing from a batch of homes with similar energy-efficient features located in the same climate region (typically the same subdivision). If any of the sampled homes fail to meet ENERGY STAR Homes performance guidelines (e.g. HERS 86), all homes in the batch must be individually inspected and tested. The Sampling Protocol has been used with HERS, Equivalent Programs, and BOP's. It has been a point of contention among the rating industry. Some HERS raters believe that quality in home construction is so inconsistent that sampling can not be used effectively to verify performance and that it is necessary to rate every home. Data are not available to substantiate or deny this assertion. EPA is in the process of evaluating this issue.

Program Challenges

Exhibit 5 shows significant program growth. However, growth in the past two years was

not sufficient to meet original Program goals. There are several reasons for this:

- Insufficient consumer demand for ENERGY STAR Homes results in builder caution,
- Some builders are marketing with ENERGY STAR, but not certifying homes,
- Complexity of the verification process makes partner action difficult.

These challenges are described in more detail below. EPA's strategies for dealing with these challenges are outlined in the following section, "The Future of the Program".

Insufficient Consumer Demand

The first of these challenges, building consumer demand has been an on-going concern for EPA. Consumer demand is the driving market force behind builders' decisions. While the ENERGY STAR brand campaign has been aggressively promoting the ENERGY STAR logo in public service ads (PSA's), editorials, and other outreach around the country, EPA has also recognized the need to raise consumer awareness for ENERGY STAR Homes specifically. However, EPA acknowledges that it cannot create this demand overnight. And, it cannot create this demand without the help of industry. Builders and real estate professionals are the most important sources of consumer information for homebuyers. Until a critical mass of builders in a market promote and sell ENERGY STAR Homes, consumer awareness of ENERGY STAR will not be complete. However, EPA can serve as the catalyst for builder action through cooperative efforts with allies in target markets.

Unrecognized Successes

The second challenge is evident when builders sign up for and promote their houses as ENERGY STAR compliant, but fail to take the steps to certify them as ENERGY STAR Homes. This problem stems from lack of consumer demand for ENERGY STAR Homes. Most builders are reluctant to put resources into new technologies or marketing approaches. However, they are also influenced heavily by the successes of their competitors. Many ENERGY STAR Homes partners have joined because their competitors joined. But, until their customers demand ENERGY STAR Homes, many partners will not take the extra steps to build, certify, and market ENERGY STAR Homes. EPA can overcome this "chicken and the egg" scenario by focusing efforts simultaneously on raising consumer awareness and helping strategic builders in target markets to succeed through aggressive marketing.

Complexity of the Verification Process

The third challenge is a critical roadblock to further program success. Partners and allies are less likely to participate, and help generate consumer demand, as long as the verification process is complex and burdensome. Furthermore, attention is diverted from generating consumer demand when the resources of program staff and allies are spent identifying and implementing complex verification solutions. By simplifying and standardizing this process, EPA will make it easier for partners to participate and free up more resources to focus on building consumer demand in target markets.

The Future of the Program

The ENERGY STAR Homes program will continue to grow. Utility programs are evolving from incentive-based DSM programs to market based programs, with a strong ENERGY STAR component. In some States, Public Benefits Charges are used to administer programs based on ENERGY STAR. Other ENERGY STAR programs are successfully partnering with large corporations that influence consumer purchase decisions every day. And EPA is responding aggressively to the challenges outlined above by focusing on building consumer demand, simplifying the verification process, and capturing unrecognized successes in the marketplace. EPA's strategies for overcoming these challenges are summarized below.

Demonstrate Market Transformation in Target Markets

Limited program resources require a focussed target market strategy. With some visible successes in key target markets, EPA can draw attention to the program through various media, leverage national ally and builder interest, and highlight the benefits to allies and partners in new target markets. This targeted approach is expected to generate momentum as more and more markets are transformed to ENERGY STAR. The primary target markets for 2000 are Phoenix, Las Vegas, and Indianapolis. These were selected because of previous ENERGY STAR successes there, and their potential influence on other markets.

In addition to the primary target markets, EPA has identified several transition markets where energy efficiency products or services have already begun to have an impact on consumers. In these markets the ENERGY STAR Homes program can help leverage resources for increasing consumer demand. Many program allies have been recruited in these markets and they have begun to achieve some success. These markets include manufactured housing, modular housing, Geothermal Heat Pumps (GHP's), Structural Insulated Panels (SIP's), Insulated Concrete Forms (ICF's), and military housing.

Utility and State programs are also becoming increasingly active in the ENERGY STAR programs as they leverage ENERGY STAR program momentum to achieve their regional objectives. These programs often have significant resources available for promoting ENERGY STAR Homes, including ad campaigns, independent localized support to allies and partners, and creation of verification systems. EPA will continue to support these programs as long as they meet or exceed the ENERGY STAR Homes performance standard.

Create Consumer Awareness and Demand

Finding ways to generate consumer demand for ENERGY STAR Homes was a primary focus in 1999, and will continue to be the focus in 2000. EPA is taking a more active role in this effort through target market media outreach and working cooperatively with key allies.

A prominent example of consumer demand initiatives is an on-going effort to establish repetitive ENERGY STAR Homes advertisements in target market real estate venues. These efforts have been initiated through key allies in target markets, sometimes through co-op advertisement arrangements with the EPA. They include print, billboard, and radio spots highlighting both the simple benefits and local sponsors of ENERGY STAR.

Another key focus of the consumer awareness efforts is reaching consumers through an effective and comprehensive ENERGY STAR Homes consumer website. As consumers get an

increasing percentage of their consumer information from the Internet, EPA is striving to capitalize on this trend. The revised website provides simple and clear explanation of the benefits of buying an ENERGY STAR Home, easy access to information about how to contact partners in their area, and connections to the websites of other major industry players.

Simplify Builder Participation

The challenge of simplifying builder participation is a complex one, as indicated by the evolution of the verification process described above. As the ENERGY STAR Homes program expands, the need for varied verification solutions conflicts with the need for simple program delivery. While EPA does not plan to abandon existing verification methods, some standardization of all the methods is gradually occurring. Therefore, EPA's focus on this challenge will be primarily directed at simplifying delivery of the program to the market. Three initiatives are underway that will simplify the delivery of the program to builders.

The first is development and upkeep of a more comprehensive and clear building professional website. By clarifying participation steps, and making it easier for builders to find needed technical and verification resources, the building professional website can streamline the participation process for builders and allies.

Another initiative aimed at simplifying the message is standardization of ENERGY STAR labeling. EPA's goal is to see every ENERGY STAR Home labeled with the ENERGY STAR logo in a consistent and visible way. While each of the over 15,000 ENERGY STAR Homes built to date has been issued an ENERGY STAR Homes certificate, many of these certificates are lost. Some raters and builders never gave the certificates to the homebuyers. Some homebuyers place their certificates in their pile of closing papers, never to be seen again. By consistently labeling ENERGY STAR Homes in a consistent location (e.g. the utility panel), EPA hopes consumers will begin to look for it there.

Finally, EPA will continue to focus on assisting allies and ally alliances to provide turnkey services for participating builders. The objective is to build a network of ENERGY STAR Homes full-service providers that make it easy for builders to participate in the program. These allies provide builders all the assistance they need: technical support, ENERGY STAR Homes verification, and marketing assistance. When builders and consumers have access to one-stop-shopping, their decisions to participate are made easier.