1995–2005
A DECADE OF CHANGE IN HOME BUILDING WITH ENERGY STAR®

Market Transformation Through Effective Public-Private Partnerships

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"As consumers become more educated and familiar with all of the benefits that energy efficiency has to offer, in five years non-ENERGY STAR rated homes will become functionally obsolete."

—Home Appraiser, Melrose, FL

DID YOU KNOW . . .

For the past 10 years, the U.S. Environmental Protection Agency's (EPA) ENERGY STAR has worked with the housing industry, utilities, raters, and states, as well as with other government programs such as DOE's Building America to help the home building industry view energy efficiency as a value-added benefit rather than a cost. By working through partnerships with industry leaders and providing them with a proven marketing platform, EPA has helped bring many in the home building industry into the forefront of energy efficiency and environmental stewardship.

Introduced in 1992 for energy-efficient computers, ENERGY STAR is a voluntary public-private partnership program that gives people the power to protect the environment. The ENERGY STAR label on products makes it easy for consumers to identify energy-efficient performance in the marketplace and do their part for the environment at the same time. Today, the ENERGY STAR mark is found on products in more than 40 different categories including appliances, lighting, home office equipment, consumer electronics, and heating and cooling equipment.

Recognizing that energy consumed in homes accounts for nearly 17 percent of total U.S. greenhouse gas emissions and 15 percent of energy consumption nationwide, EPA expanded ENERGY STAR in 1995 to include new home construction. Since then, ENERGY STAR's presence in the home building industry has grown dramatically:

- More than 2,500 builders are committed to building ENERGY STAR qualified homes.
- Over 360,000 ENERGY STAR qualified homes have been built nationwide.
- ENERGY STAR is nearing 10 percent market penetration of annual new homes built nationwide.
- 20 to 40 percent or more of new housing starts have been achieved in a growing number of regional markets.

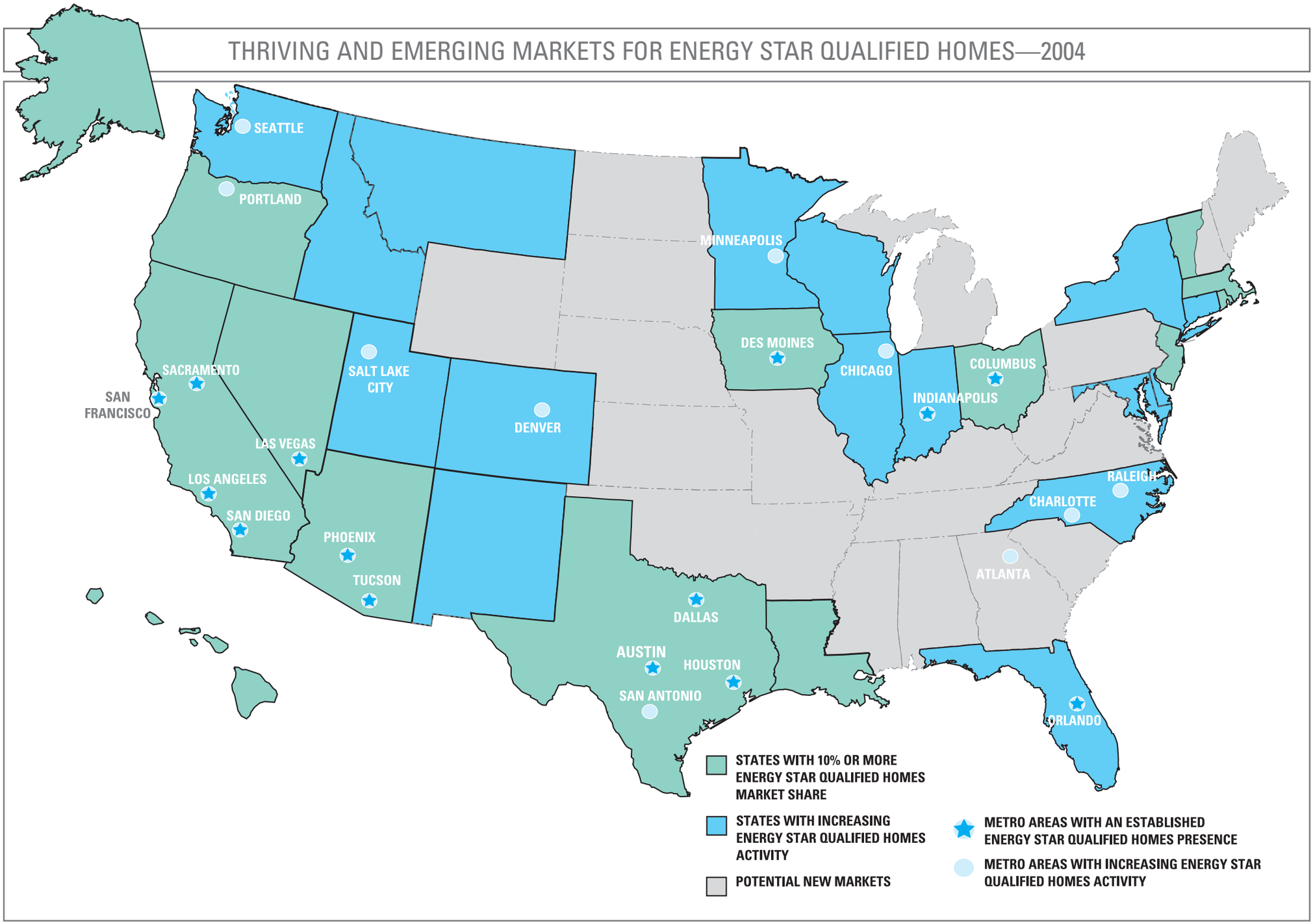
This growth puts ENERGY STAR and its partners on track for meeting EPA's goal of 60 percent market penetration nationwide by 2012, which would have a cumulative effect of preventing nearly 9 million metric tons of carbon emissions and saving homeowners over $4 billion on their energy bills. Under the ENERGY STAR banner, businesses, organizations, and consumers saved about $10 billion in energy costs in 2004, demonstrating how a broad-based partnership under this government-backed consumer label can be used as an effective tool for market transformation. EPA looks forward to another decade of success in partnership with the home building industry, its trade allies, and the energy efficiency community, continuing ENERGY STAR's efforts to change our lives for the better.

Kathleen Hogan
Director
Climate Protection Partnerships Division
U.S. Environmental Protection Agency

STATES WITH HIGHEST SHARE OF ENERGY STAR QUALIFIED HOMES–2004

ALASKA	54%	IOWA	25%	NEVADA	34%	RHODE ISLAND	14%
ARIZONA	14%	LOUISIANA	13%	OHIO	12%	TEXAS	27%
CALIFORNIA	15%	MASSACHUSETTS	10%	OREGON	11%	VERMONT	20%
HAWAII	25%	NEW JERSEY	23%				

THRIVING AND EMERGING MARKETS FOR ENERGY STAR QUALIFIED HOMES—2004



DESIGNS OF A DECADE—ENERGY STAR'S IMPACT ON HOME BUILDING

SAMPLE MONTHLY CASH-FLOW FOR AN ENERGY STAR QUALIFIED HOME

UTILITY SAVINGS	$35
ADDED MORTGAGE	$15
REDUCED COST	**$20**

ENERGY STAR qualified homes represent 20 to 40 percent or more of the new housing market in a number of large metropolitan areas and states—the result of forming key public-private partnerships with the home building industry.

The number of ENERGY STAR qualified homes grew from only 55 in 1995 to more than 360,000 by the end of 2004. Today, some 2,500 home builders spanning each of the 50 states and the District of Columbia have committed to building ENERGY STAR qualified homes. These homes use about 30 percent less energy than they otherwise would and are helping prevent a significant amount of greenhouse gas emissions from entering our air. This shift to more energy-efficient homes has saved Americans an estimated $200 million in energy costs and eliminated nearly 4 billion pounds of greenhouse gas emissions. These figures continue to grow.

ENERGY STAR is proving to be an effective force for change as qualified homes approach and exceed 20 percent market penetration in an increasing number of areas. Behind this growth are strong local champions committed to building and selling more energy-efficient homes, utility programs that promote better home energy performance, and large production builders who understand the value proposition and competitive advantage of building energy-efficient homes.

BETTER BUILDING PRACTICES AND TECHNOLOGY

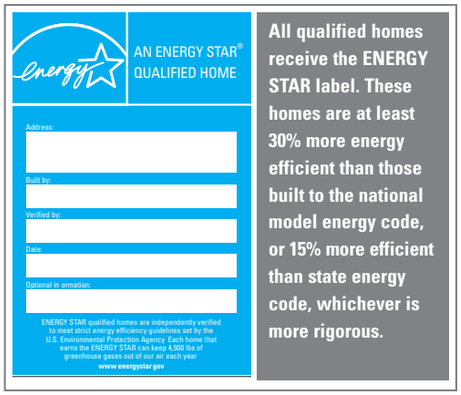
ENERGY STAR qualified homes provide home owners with better energy performance and other advantages compared with standard homes.

To qualify their homes for the ENERGY STAR label, builders incorporate strict energy efficiency guidelines set by EPA. This results in a whole system of building improvements that make these homes more energy efficient than those built to the minimum energy code requirements. In addition, these homes are independently verified to meet EPA's energy efficiency guidelines. Typical elements built into ENERGY STAR qualified homes include:

- EFFECTIVE INSULATION
- HIGH-PERFORMANCE WINDOWS
- TIGHT CONSTRUCTION
- TIGHT DUCTS
- ENERGY-EFFICIENT HEATING AND COOLING EQUIPMENT

These energy efficiency improvements deliver impressive performance advantages, such as:

- Improved comfort with even temperatures from room to room
- More durability with longer lived equipment and better moisture control
- Improved indoor air quality from tighter construction that limits penetration of moisture and other pollutants



- Greater environmental protection by reducing the need for energy and the associated combustion of fossil fuels, thereby preventing greenhouse gas emissions

ENERGY STAR qualified homes can also offer an impressive cost advantage to homeowners, where money saved on utility bills easily offsets any increase in mortgage for energy-saving improvements. In addition, these homes serve to lower the nation's dependence on volatile energy sources, increase net disposable family income, and improve air quality.

Homes that earn the ENERGY STAR must be at least 30 percent more efficient for heating, cooling, and water heating than homes built to the Model Energy Code, or 15 percent more efficient than the state energy code, whichever is more rigorous.

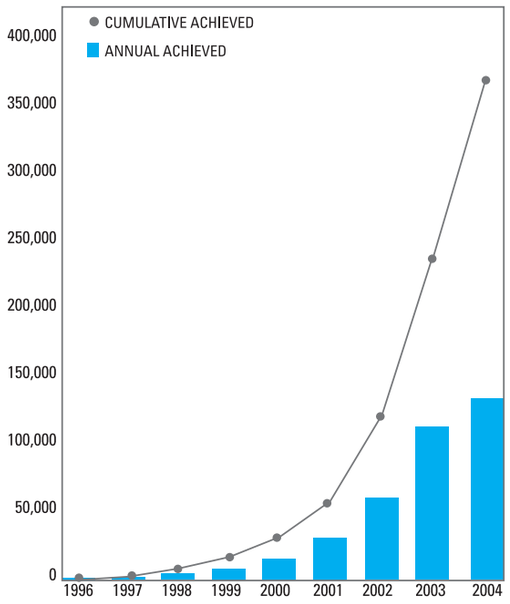
ENVIRONMENTAL PROTECTION CREATES BUSINESS OPPORTUNITIES

"The expense of heating and cooling a home is a major part of the cost of home ownership. By participating in the ENERGY STAR Program, we've drastically lowered this expense and been able to deliver what homebuyers really want—affordable value."

—ENERGY STAR Builder Partner, Indianapolis, IN

Building energy-efficient homes that cost less to own and help protect the environment is good business.

ENERGY STAR QUALIFIED HOMES GROWTH



The number of ENERGY STAR qualified homes built annually has nearly doubled in each of the past 5 years. Such impressive growth indicates that home builders correlate building energy-efficient homes with higher profit margins.

Constructing ENERGY STAR qualified homes allows builders to:

INCREASE REVENUE—Built-in energy-saving features enhance a home's value and can raise builders' revenues; energy savings may make additional upgrades affordable to buyers, further increasing revenue.

EARN RECOGNITION—Builders gain distinction as leaders in energy-efficient construction and environmental stewardship while increasing consumer awareness and preference for ENERGY STAR qualified homes.

ENHANCE CUSTOMER SATISFACTION—Energy-efficient features give added value and comfort to customers.

REDUCE LIABILITY—Better built, energy-efficient homes can reduce customer call backs and complaints.

IMPLEMENT A PROVEN MARKETING PLATFORM—Builders gain access to proven marketing tools and information from experts in the building and selling of ENERGY STAR qualified homes.

Evidence that ENERGY STAR adds value for home builders in the form of enhanced customer satisfaction is found in a J.D. Power home builder study released in 2004.[1] The study shows that, on average, builders who are ENERGY STAR partners receive higher homebuyer satisfaction ratings than those who are not. Another study shows that corporate social responsibility is a concern among 80 percent of the general population. Most consumers will either avoid or patronize a business on the basis of its commitment to socially responsible business practices.[2] Builders, therefore, can use their status as ENERGY STAR partners to their marketing advantage. In short, environmental stewardship is good business.

[1] *J.D. Power and Associates, New-Home Builder Customer Satisfaction Study™ 2003*

[2] *The Natural Marketing Institute, LOHAS Consumer Report, June 2003*

SPOTLIGHT ON LAS VEGAS, NEVADA

As one of the nation's fastest growing cities, and a city with extensive energy requirements for air-conditioning powered by coal-fired power plants, Las Vegas presented a great opportunity for reducing greenhouse gas emissions through the construction of ENERGY STAR qualified homes. This proved to be correct, as Las Vegas offered a good mix of large production builders looking for additional market recognition and a competitive advantage, along with an infrastructure capable of meeting the demand for third-party verification of ENERGY STAR qualified homes. More importantly, Las Vegas had great local champions committed to helping the environment, including the local gas utility, housing industry marketing consultants, and builders themselves who were extremely effective at working together to implement large-scale consumer marketing initiatives. As a result of this group effort, consumer awareness of ENERGY STAR qualified homes reached 81 percent in 2004, and 58 percent of all homes built in Las Vegas that year were ENERGY STAR qualified. Today, eight of the top ten Las Vegas-based home builders are ENERGY STAR partners.

SUCCESS THROUGH EFFECTIVE PARTNERSHIPS

"Our subcontractors send their best crews because they know their work will be inspected."

—ENERGY STAR Builder Partner, Las Vegas, NV

Each of the top 10 home builders in the nation partner with EPA.

When ENERGY STAR qualified homes became available in 1995, the nation's 100 largest builders accounted for 17 percent of all housing starts. Today, they account for 56 percent. Much of the growth of ENERGY STAR qualified homes can be attributed to successful partnering with these large builders. In fact, among the nation's largest builders, ENERGY STAR qualified homes are offered by one or more divisions of each of the top 10 builders, 23 of the top 25 builders, and nearly 50 percent of the top 100.[3]

[3] *Builder Magazine, "Builder 100," May 2003*

MANUFACTURED HOMES EMBRACE ENERGY STAR

Manufactured homes built to the HUD-code represent the largest segment of affordable homes built in the nation. Today, approximately 70 percent of all manufactured housing plants have been qualified to produce homes earning the ENERGY STAR. Manufacturers have voluntarily transformed existing production lines to improve the energy performance of manufactured homes, knowing that ENERGY STAR qualified manufactured homes represent business opportunities among lower income home owners looking to save on their energy bills.

HOME ENERGY RATER VERIFYING EFFICIENCY OF NEW HOME

BUILDING AMERICA AND ENERGY STAR: AN EFFECTIVE PUBLIC-PUBLIC PARTNERSHIP

When EPA first introduced the ENERGY STAR label for homes, the Home Energy Rating System (HERS) industry was positioned to become the primary source of third-party verification for ENERGY STAR qualified homes and recruitment of ENERGY STAR builder partners. However, the HERS industry was not yet fully equipped to support a national program. The U.S. Department of Energy's Building America Program stepped in and lent much needed technical support. Building America deployed a set of cooperative research teams working directly with the nation's leading builders to develop energy efficiency innovations. These teams have successfully engaged many builders in using ENERGY STAR as a marketing platform for bringing innovations to market. This early support fueled ENERGY STAR's initial momentum while allowing the HERS industry time to mature. Today the HERS industry is widely developed across the country, offering building industry design and field support services as a value-added private sector service provider. Thus, Building America and ENERGY STAR dovetailed perfectly to help transform the building industry to energy-efficient building practices.

Building America℠ U.S. Department of Energy

STRATEGY FOR SUSTAINED GROWTH

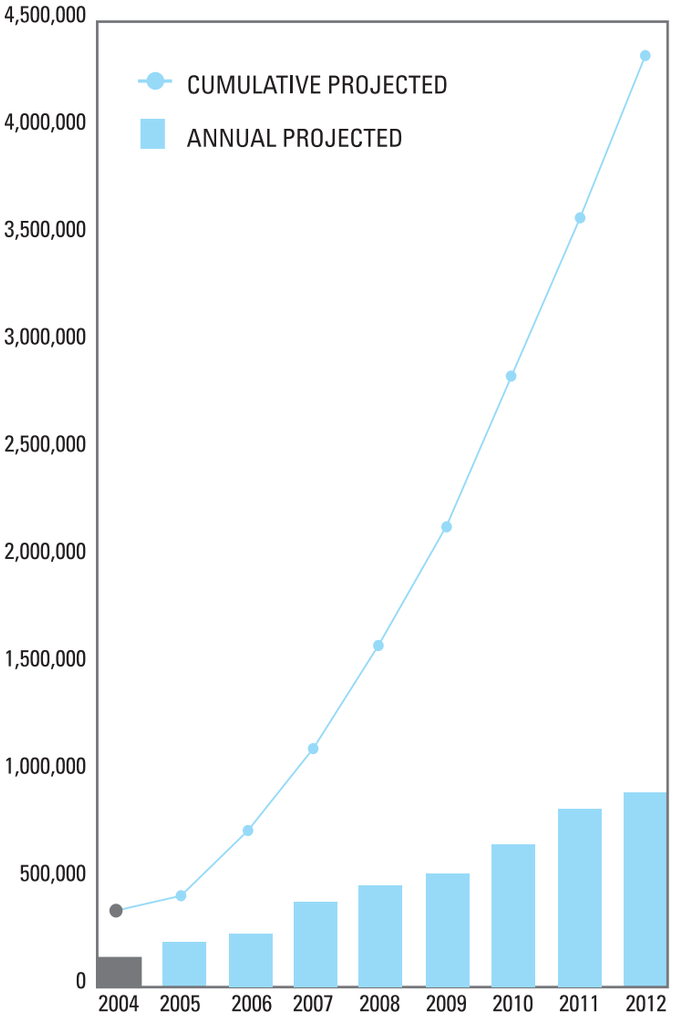
ENERGY STAR LONG-TERM GOALS AND BENEFITS

NUMBER OF QUALIFIED HOMES TO BE BUILT IN 2012	**861,000**
ANNUAL CARBON EMISSIONS PREVENTED IN 2012	**EQUIVALENT TO THOSE FROM 1.5 MILLION VEHICLES**
CUMULATIVE NUMBER OF QUALIFIED HOMES BUILT, 1995-2012	**4 MILLION**
CUMULATIVE UTILITY BILL SAVINGS, 1995-2012	**$4 BILLION**
CUMULATIVE CARBON EMISSIONS PREVENTED, 1995-2012	**9 MILLION METRIC TONS**

EPA will build on its success by focusing on new offerings that bring value to builders and consumers.

To ensure that ENERGY STAR remains the symbol of truly energy-efficient homes, EPA will continue applying proven strategies to expand into new areas and form new partnerships. EPA intends to bring ENERGY STAR into new regional housing markets and continue its growth in specialized housing sectors such as military housing and affordable housing. EPA will strengthen its ties to other federal housing programs such as DOE's Building America and HUD's PATH. EPA will seek new opportunities to support local program champions and improve value for builders by strengthening energy efficiency guidelines, exploring new marketing tools, promoting ENERGY STAR qualified lighting and appliance packages, and offering an added specification for indoor air quality features. This growth strategy will build on EPA's strong ENERGY STAR partnerships within the home building industry to further reduce greenhouse gas emissions resulting from home energy use and offer homeowners more energy-efficient, healthier homes.

ENERGY STAR QUALIFIED HOMES PROJECTED GROWTH



OPENING DOORS AND MAKING A DIFFERENCE TOGETHER

www.energystar.gov

We wish to thank all of our ENERGY STAR partners and supporters for their contributions to building and marketing homes that protect the environment, educating the public on the benefits of energy efficiency, and improving air quality.

- More than 2,500 ENERGY STAR Builder Partners
- 65 HERS Provider/Rater Partners
- 64 Utility/State Energy Efficiency Partners
- Residential Energy Services Network
- U.S. DOE Building America Program
- U.S. Department of Housing and Urban Development
- National Association of State Energy Offices
- Building Science Community/Associations
- Energy and Environmental Building Association
- National Association of Home Builders
- Manufactured Housing Institute
- Manufactured Housing Research Alliance

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