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## *Designed to Earn the ENERGY STAR:*

### **A New Opportunity for Architects and Home Plan Designers to Partner with EPA's ENERGY STAR**

More and more home buyers say that energy efficiency is an important concern when they select their new home. In fact, a recent survey<sup>1</sup> found that more than 85 percent of Americans planning to build or buy a home within the next 2 years would choose one home over another based on energy efficiency. Today's buyers know that choosing a home designed with energy efficiency in mind helps ensure that they will be more comfortable, have lower utility bills, and protect the environment.

But how can consumers figure out which home plans are truly energy efficient? You can make it simple for them! ENERGY STAR—the national symbol for energy efficiency—helps consumers identify efficient products, homes, and buildings. With the new *Designed to Earn the ENERGY STAR*, architects and designers can show consumers that their home plans meet the rigorous energy efficiency guidelines set by the U.S. EPA's ENERGY STAR program.



### **Why label your home plans as *Designed to Earn the ENERGY STAR*?**

By partnering with ENERGY STAR, architectural design professionals can gain the following advantages:

**Market Differentiation and Recognition.** Labeling your home plans as *Designed to Earn* can distinguish you as a leader in energy-efficient design and environmental stewardship. Partnering with ENERGY STAR and using the government-backed symbol for energy efficiency can give prospective clients added confidence that their new home will be truly energy efficient when it is built.

**Increased Revenue.** Consumer demand for green homes is growing, and energy efficiency is a great place for you to start getting involved. The best way to show that your home plans are energy efficient is with the blue ENERGY STAR, which is increasingly recognized by consumers as the national symbol for energy efficiency.

**Program Flexibility.** A variety of “tried-and-true” energy-efficient features and equipment are available to ensure that your home plans meet *Designed to Earn* guidelines. These improvements can be easily integrated into your designs, layouts, and option packages.

**Enhanced Customer Satisfaction.** The energy-efficient features specified in *Designed to Earn* home plans can translate into increased comfort and satisfaction for homeowners, which can lead to more referrals from customers who have bought and built from your plans.

**Environmental Protection.** By creating *Designed to Earn* home plans, you are responding to the American Institute of Architects' national call to help prevent greenhouse gas emissions through sustainable design.

### **How are home plans qualified as *Designed to Earn the ENERGY STAR*?**

Home plans that are qualified as *Designed to Earn the ENERGY STAR* include requirements for the energy-efficient features and construction details typically found in ENERGY STAR qualified homes—tight construction and duct systems, properly installed insulation, high performance windows, efficient heating and cooling equipment, and ENERGY STAR qualified lighting and appliances. When built, *Designed to Earn* home plans will result in a home that is at least 15 percent more energy efficient than a home built to the 2004 International Residential Code

<sup>1</sup> Energy Pulse 2006: Where America Stands on Electric Utilities, Renewable Energy, Energy Efficiency and Conservation. The Shelton Group, 2007.

(IRC), and include additional energy-saving features that typically make them 20–30 percent more efficient than standard homes.

Architects and designers who want to label a home plan as *Designed to Earn the ENERGY STAR* must submit it to a Home Energy Rater<sup>2</sup> for review. These Raters are experienced in evaluating home plans to help you choose the most appropriate and cost-effective approaches for meeting ENERGY STAR guidelines.

Each home plan can be evaluated in one of two ways:

- Using the **performance path**, the home plan is modeled with specialized computer software to estimate the as-built home's energy use based on the specifications of the home plan. The results of this analysis help you identify the most effective upgrades needed to meet ENERGY STAR requirements
- Using the **prescriptive path**, the home plan is reviewed for consistency with an EPA-developed climate-specific construction specification called a Builder Option Package (BOP). Based on extensive analyses, BOP specifications have been determined to result in homes that consistently meet ENERGY STAR guidelines.

The Rater will also verify that your home plan contains all other elements required for it to be labeled as *Designed to Earn the ENERGY STAR* (specified below). This review will be performed using a specially designed checklist available from EPA. The completed checklist, as well as the HERS Rating or BOP checklist, should be attached to the final home plan. Once all of these requirements are met, the Rater will issue the *Designed to Earn* logo for the designated home plan.

#### **Required elements for a home plan to qualify as *Designed to Earn the ENERGY STAR***

##### **Attached Documents:**

- Projected HERS Rating or ENERGY STAR BOP checklist
- ENERGY STAR Thermal Bypass Checklist with all N/A items checked
- Any required specifications not already included on the plan

##### **Information on Plan (Floor Plan, Specifications, or Details):**

- Note stating that field verification by an EPA-approved verifier is required for the home to earn the ENERGY STAR
- Note stating that space cooling system sizing calculations must be provided and verified for the home to earn the ENERGY STAR
- Wall sections delineating complete thermal boundary of home
- Tight construction details and performance specifications
- Thermal Bypass Checklist air barrier installation details and/or specifications
- Proper insulation installation details and performance specifications
- R-values of insulation assemblies
- Window and door specifications
- Water heater specifications
- Heating and cooling equipment specifications
- Tight duct details and performance specifications and/or layout for ductwork and air handlers in conditioned space
- Required ENERGY STAR qualified products
- Critical plans and trade details in languages appropriate to the prevailing trade labor pool is recommended, but not required

<sup>2</sup> For readability, the term "Home Energy Rater" or "Rater" is used throughout this document. However, Builder Option Package (or BOP) Inspectors are also eligible to review and verify home plans under the *Designed to Earn the ENERGY STAR* program.

## Does qualifying a home plan as *Designed to Earn* mean that the home will be ENERGY STAR qualified?

A home built according to a *Designed to Earn* home plan does **not** automatically earn the ENERGY STAR qualified home label (image right). Field verification, including onsite inspections and testing by a Home Energy Rater and completion of a Thermal Bypass Checklist, is required to ensure that energy-saving measures specified in the home plan are incorporated into the as-built house. This field verification may or may not be performed by the same Rater who reviews the home plan.



## Ready to partner with ENERGY STAR?

Follow these steps to start working with and benefiting from ENERGY STAR:

**Step 1: Select a Home Energy Rater to review your home plans.** Use the ENERGY STAR Web site to find a Rater in your area.

**Step 2: Submit a Partnership Agreement.** Review the eligibility criteria, commitments, and requirements for partnering with ENERGY STAR; and then complete the simple online Partnership Agreement on the ENERGY STAR Web site.

**Step 3: Incorporate ENERGY STAR requirements into your home plans.** Ensure that your home plans include all required energy-efficient features and construction details, are verified by your Rater, and then are labeled with the *Designed to Earn* logo.

**Step 4: Market your home plans as *Designed to Earn the ENERGY STAR*.** EPA offers a variety of marketing resources to facilitate your marketing efforts, including ENERGY STAR logos, consumer brochures, fact sheets, and an online marketing toolkit.

Learn more about EPA's *Designed to Earn the ENERGY STAR* at:  
[www.energystar.gov/DesignedToEarn](http://www.energystar.gov/DesignedToEarn)