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ENERGY STAR for New Homes Version 3 – Program Sponsor Fact Sheet

ENERGY STAR, the government-backed symbol for energy efficiency, provides a powerful platform for utilities, state agencies, and other organizations implementing energy efficiency programs. ENERGY STAR for New Homes are significantly more energy efficient than minimum code while improving affordability, comfort, indoor air quality, and durability of homes. Sponsoring an ENERGY STAR for New Homes program is an opportunity for long-term peak and energy demand savings that can stand-alone or complement other residential energy efficiency initiatives.

In 2010, EPA released new, Version 3 guidelines for the ENERGY STAR for Homes program that will allow ENERGY STAR to continue to define energy-efficient home construction. In particular, the additional cost-effective technologies and quality installation practices specified ensure that every qualified home includes a comprehensive package of best building science measures.

What are the primary changes?

With Version 3, homes must meet baseline ENERGY STAR requirements using either a prescriptive or performance path. Both options are based on a set of specifications called the ENERGY STAR Reference Design. When the prescriptive path is used, the home is simply built according to the Reference Design specifications (similar to the Builder Option Package approach used in ENERGY STAR Version 2). No trade-offs are allowed when the prescriptive path is used.

In contrast, the Version 3 performance path has been significantly changed from the Version 2 approach. Using the Version 3 performance path, the home is modeled using the ENERGY STAR Reference Design specifications to establish an Initial HERS Index Target Score. For larger homes, a Size Adjustment Factor (SAF) is applied to the Initial Target Score when the home exceeds a defined 'Benchmark Home Size,' based on the number of bedrooms. The builder then has the flexibility to select a custom set of energy-efficiency measures, so long as the resulting HERS Score for the home meets or performs better than the HERS Index Target Score (size-adjusted, when appropriate) and all other requirements are met (e.g., minimum efficiency for windows, insulation).

In addition to the baseline requirements, there are new checklists with detailed mandatory requirements for Thermal Enclosures, HVAC Quality Installation, and Water Management. Note that there will be other customized requirements in states where the energy code exceeds the 2009 IECC.

How will these changes impact our ENERGY STAR for New Homes Program?

More detailed verification of efficiency measures: The ENERGY STAR Version 3 HERS rater checklists provide raters with a tool to ensure comprehensive building science. The Thermal Enclosure checklist will help ensure that there are no thermal defects. The HVAC Quality Installation checklists for the HVAC contractor and HERS rater will help ensure that HVAC systems are installed using industry best practices and perform at rated efficiencies. Additionally, the Water Management builder checklist will help ensure roofs, walls, and foundations are fully protected from water intrusion. This higher level of verification will provide sponsors with greater assurance that efficiency measures are being properly installed and that ENERGY STAR qualified homes meet performance and quality expectations.

Greater savings per home: ENERGY STAR Version 3 homes are approximately 20% more efficient than homes built to the 2009 International Energy Conservation Code (IECC). As a result, ENERGY STAR qualified homes under Version 3 will be approximately 15% more efficient than homes built under Version 2. Further, the size adjustment factor ensures that larger homes include additional energy efficiency measures to account for their added size.

More definitive savings: Demand and peak savings will be much more reliable with every qualified home due to greater rigor of the Reference Design and mandatory checklists. As a result, there will be less opportunity for builders to omit important energy efficiency improvements, and utilities can more confidently quantify the specific savings associated with ENERGY STAR qualified homes.

Continue to leverage nationally recognized ENERGY STAR name: More than 75% of households recognize the ENERGY STAR logo, with even higher awareness in areas where utilities are actively promoting the brand. ENERGY STAR makes it easy for homebuyers to select energy-efficient homes. Efficiency programs based on ENERGY STAR benefit from this awareness, and offer a straightforward framework for designing incentive structures. Builders also benefit from being able to leverage ENERGY STAR for effective differentiation from the resale market.

To see detailed information about the new guidelines, including resources, visit www.energystar.gov/homes.