



ENERGY STAR®

Residential New  
Construction



## Technical Bulletin: Four Misunderstood Facts About ENERGY STAR Homes

October 29, 2019

Builder partners sometimes misunderstand ENERGY STAR program requirements and overestimate the level of upgrades needed to participate. The truth is that ENERGY STAR might be an easier lift than you think. Below are four facts about ENERGY STAR program requirements that are commonly misunderstood.

### Fact 1: ENERGY STAR Allows Ducts in the Attic

Partners are sometimes confused about this fact because the Version 3.1 ENERGY STAR Reference Design Home includes ducts in conditioned space. While the Reference Design Home defines the ENERGY STAR ERI Target, the individual elements of the Reference Design Home **are not mandatory**. Builders have flexibility to trade off measures to meet the ENERGY STAR ERI Target.

For example, though the Version 3.1 Reference Design Home lists all ducts and air-handlers as being in conditioned space, many builders choose to keep ducts in the attic and instead use an offsetting measure like an instant gas water heater.

### Fact 2: ENERGY STAR Provides Flexibility for Infiltration Rate

ENERGY STAR requires mandatory air-sealing measures, like sealing rough openings around windows and doors, but there is no hard limit on the tested infiltration rate (also known as the blower-door result). The program is designed to meet builders where they are and encourages improvement of their blower-door results over time.

The Reference Design Home, explained above, does include a benchmark infiltration rate. When a home's blower door result does not meet that benchmark, an offsetting measure will be required to meet the ENERGY STAR ERI Target. On the flip side, beating the benchmark earns credit that can be used to offset other items.



The one exception-where there would be an infiltration limit-is the alternative compliance path to high-performance insulation under item 3.1.2 of the Rater Design Review Checklist (Rater-D). This lesser-used option allows less insulation in exchange for a very tight infiltration rate.

### Fact 3: ENERGY STAR Certified Bath Fans Are Not Required in Every Bathroom

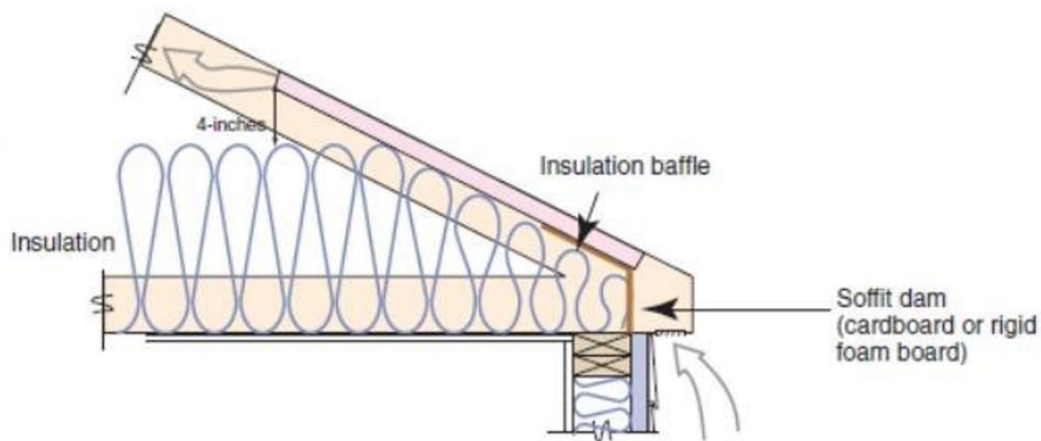
It is true that each bathroom must include an exhaust fan, which is already standard practice for most builders, but those bath fans are generally not required to be ENERGY STAR Certified.

Some builders elect to use a bath fan with a special controller as part of a whole-house ventilation system. In that case, the fan **is** required to be ENERGY STAR Certified, but the requirement only applies to the one fan that is part of the whole-house strategy.

See items 7.6 and 8.2 of the Rater Field Checklist (Rater-F) for more details on bathroom fan requirements.

### Fact 4: ENERGY STAR Does Not Require a Raised-Heel Truss

ENERGY STAR requires a minimum R-value of attic insulation around the perimeter, where the roof's slope usually prevents installing insulation to full height. While some builders choose to go above and beyond by installing a raised-heel truss that allows even more insulation, ENERGY STAR's minimum R-value levels can usually be met by using high-density insulation in standard roof truss designs.



See item 3.1 of the Rater Field Checklist (Rater-F) for more details on attic insulation requirements.

## Action Items for Raters

Help builders accurately estimate costs by correcting the record:

- Review these misconceptions with prospective builder partners so they have accurate information about the marginal costs required to participate in ENERGY STAR.
- Instead of referring to the Reference Design Home table, perform a modeling analysis to present the most cost-effective upgrades based on builders' current specs. For example, instant gas water heaters are often an easier upgrade than bringing ducts into conditioned space.

## Additional Resources

For information on checklists, state and region-specific requirements, and more, visit the [ENERGY STAR Residential New Construction National Program Requirements page](#).

View past [ENERGY STAR New Homes technical bulletins](#).

For tips on communicating the value of ENERGY STAR to homebuyers, download our Sales Training Kit. This resource is for sales teams and building professionals alike and can be accessed through your [My ENERGY STAR Account \(MESA\)](#).

Questions? Email us at [energystarhomes@energystar.gov](mailto:energystarhomes@energystar.gov)

Best regards,

The ENERGY STAR Residential New Construction team

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