



## Fuzzy Logic?

# The Overlap Between ENERGY STAR & Code

October 25, 2016





# Introduction

Is this coffee hot?



No



Kinda



Yes

# Introduction

Does an ENERGY STAR home meet code?



No?



Kinda?



Yes?



## Introduction

- Where requirements of the local codes.. overlap with these program requirements, EPA offers the following guidance:
  - a) Where the overlapping requirements exceed the ENERGY STAR requirements, these overlapping requirements shall be met;



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- Where requirements of the local codes.. overlap with these program requirements, EPA offers the following guidance:
  - b) Where overlapping requirements conflict with a requirement of the ENERGY STAR program, then the conflicting requirement within these program requirements shall not be met.

Certification shall only be allowed if the Rater has determined that no equivalent option is available that could meet the intent of the conflicting requirement.

Note that a home must still meet its ENERGY STAR HERS Index Target. Therefore, other efficiency measures may be needed to compensate for the omission of the conflicting requirement.



## Audience Poll

- Should an ENERGY STAR Home be required to meet a code requirement, like an infiltration limit, even if it's not part of the ENERGY STAR program?
  - A. Yes
  - B. No
  - C. Let's ask Fonzie



# Introduction







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- Three reasons for Plan A:
  1. We don't control code.
  2. Code is not enforced with same rigor as ENERGY STAR.
  3. We're weary of scope creep into code.

# ENERGY STAR & Code Factsheets





## Comparison of ENERGY STAR and Code


- How the IECC references above-code programs:
  - Section R102.1.1

The *code official* or other authority having jurisdiction shall be permitted to deem a national, state, or local energy-efficiency program to exceed the energy efficiency required by this code. Buildings *approved* in writing by such an energy-efficiency program shall be considered in compliance with this code. The requirements identified as “mandatory” in Chapter 4 shall be met.




# Factsheets on Code & ENERGY STAR

- One page front and back
  - Front: Relevant code language and background.
  - Back: Listing of all mandatory requirements compared to ENERGY STAR.
- Created for both Version 3 vs the 2009 IECC and Version 3.1 vs the 2012 IECC




**ENERGY STAR® & Code:**  
How Version 3 Certified Homes  
Help Meet the 2009 IECC





Homes that earn the ENERGY STAR label meet strict requirements set by the U.S. EPA, including a high-efficiency performance target. Homes that are certified under Version 3 of the ENERGY STAR program requirements are designed to perform above code and satisfy many of the requirements of the 2009 IECC. This factsheet details how ENERGY STAR certification can help demonstrate code compliance.


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**What is an ENERGY STAR Certified Home?**  
ENERGY STAR certified new homes are designed and built to standards well above most other new homes on the market today, delivering energy efficiency savings of up to 30%. A new home that has earned the ENERGY STAR label has undergone a process of inspections, testing, and verification to meet strict requirements set by the U.S. EPA, delivering better quality, comfort, and durability.

  
REDUCED LEAKS  
AND DRAFTS

  
MORE CONSISTENT  
TEMPERATURES

  
BETTER  
DURABILITY

  
IMPROVED  
INDOOR AIR

  
PEACE OF  
MIND

**How does ENERGY STAR intersect with code?**  
Both the IECC and the ENERGY STAR Certified Homes program include efficiency requirements. By certifying a home under Version 3 of the program, many of the 2009 IECC code requirements are also met or exceeded. To demonstrate compliance with code, Section 102.1.1 of the 2009 IECC states that *“the code official or other Authority Having Jurisdiction (AHJ) shall be permitted to deem a national, state or local energy efficiency program to exceed the energy efficiency required by this code. Buildings approved in writing by such an energy efficiency program shall be considered in compliance with this code. The requirements identified as ‘mandatory’ in Chapters 4 and 5 of this code, as applicable, shall be met.”* Therefore, to use ENERGY STAR certification to demonstrate code compliance, the following criteria must be met: (1) the code official recognizes ENERGY STAR as an above-code program, (2) the home is ENERGY STAR certified, and (3) the home meets all of the mandatory requirements in Chapter 4. The following page lists these requirements and indicates whether ENERGY STAR certification satisfies each of them.

**How can a Code Official or other AHJ use this information?**  
A code official or other AHJ considering recognition of certification under Version 3 of the ENERGY STAR Certified Homes program as one path towards code compliance should ensure that the home receives the ENERGY STAR label and meets the mandatory items in the following table.

For more information, visit: [www.energystar.gov/newhomes](http://www.energystar.gov/newhomes)  
Questions? Write to [energystarhomes@energystar.gov](mailto:energystarhomes@energystar.gov)



## Factsheets on Code & ENERGY STAR

- Mandatory requirements met by ENERGY STAR
  - Recessed luminaires ICAT rated and installed with gasket.
  - U-factor/SHGC meets code required limits.
  - Mechanical ventilation w/ automatic dampers
  - Ducts not inside thermal envelope insulated to  $\geq R-6$



## Factsheets on Code & ENERGY STAR

- Mandatory requirements partially met by ENERGY STAR
  - Whole house infiltration and air sealing
    - ENERGY STAR meets:
      - Prescriptive air sealing requirements
      - Blower door test performed
    - ENERGY STAR does not meet:
      - 7 ACH50 (2009 IECC) or 3 ACH50 / 5 ACH50 requirement (2012 IECC)





## Factsheets on Code & ENERGY STAR

- Mandatory requirements not addressed by ENERGY STAR
  - Items likely to be done otherwise:
    - Thermostat for each HVAC system.
    - Fenestration infiltration requirements/ratings.
  - Items that are not present in many homes:
    - Fireplace doors & air for wood burning fireplaces.
    - Pool heaters, time switches, and covers.
    - Ice melt system shut-offs.
    - Hydronic system pipe insulation.



# ENERGY STAR Certified Homes

## Web:

Main: [www.energystar.gov/newhomespartners](http://www.energystar.gov/newhomespartners)  
Technical: [www.energystar.gov/newhomesguidelines](http://www.energystar.gov/newhomesguidelines)  
Training: [www.energystar.gov/newhomestraining](http://www.energystar.gov/newhomestraining)  
HVAC: [www.energystar.gov/newhomesHVAC](http://www.energystar.gov/newhomesHVAC)

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