



July 8, 2016

Determination of Prescriptive Tradeoff Code Compliance Options for the NCTCOG Region

In accordance with the Health and Safety Code, Section 388.003, subsection (e), the Energy Systems Laboratory of the Texas A&M University System has analyzed tradeoff code compliance options for the North Central Texas Council of Government (NCTCOG) Region to meet the requirements of the *2015 International Energy Conservation Code (IECC)* and the *2015 International Residential Code (IRC)*.

These tradeoff options are deemed to be not less stringent than the residential provisions of the *2015 IECC* and the *2015 IRC*. The tradeoff relaxes the required 3ACH⁵⁰ per Sections R402.4.1.2 (N1102.4.1.2) of the residential provisions of the *2015 IECC* and the *2015 IRC*. The tradeoff will permit houses that test to less than or equal to 4ACH⁵⁰ as outlined in Options #1 and #2 below. The tradeoff is limited as follows:

1. Limited to one- and two- family residences with a conditioned floor area between 1,000 and 6,000 square feet.
2. Limited to one- and two-family residences containing between 2 to 6 bedrooms.
3. Assumes all ductwork and mechanical equipment is located in the unconditioned attic.
4. Assumes typical wood framing in the walls and roof.
5. Assumes one of the following heating/cooling systems:
 - a. All electric system with a heat pump for heating, or
 - b. A system with electric cooling and natural gas heating.

(Note: electric resistance strip heating does not qualify for this tradeoff.)

ESL 4ACH⁵⁰ Prescriptive Tradeoff Code Equivalency Compliance^a

Envelope Component	Option #1	Option #2
R402.4 Air Leakage	$\leq 4\text{ACH}^{50}$	$\leq 4\text{ACH}^{50}$
Wall Insulation <i>R</i> -value	$R13 + R3^b$	$R13 + R3^b$
Fenestration <i>U</i> -factor	≤ 0.32	≤ 0.32
Fenestration SHGC	≤ 0.25	≤ 0.25
Ceiling <i>R</i> -value	$\geq R49$	$\geq R49$
Duct Insulation <i>R</i> -value	R8	R6
Radiant Barrier Required	No	Yes

^a Except for the values listed in the table, all other mandatory code provisions are applicable.

^b The first value listed is the *R*-value of cavity insulation, the second value is the *R*-value of the continuous insulation or insulated siding.