



ENERGY SYSTEMS LABORATORY
TEXAS A&M ENGINEERING EXPERIMENT STATION

Energy Efficiency in Texas and the Energy Systems Laboratory

**North Central Texas Council of Governments
– Regional Codes Coordinating Committee
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The Texas Emissions Reduction Plan (TERP)

- a diesel emissions reduction incentive program
- a motor vehicle purchase or lease incentive program
- a new technology research and development program
- an energy efficiency grant program
- **Texas building energy performance standards (TBEPS)**



Texas Building Energy Performance Standards (TBEPS)

- Adopts state-wide codes for building energy performance
 - State Energy Conservation Office (SECO) has the authority to adopt by rule the latest published editions (not more often than every 6 years)
 - Provides for application statewide, including outside municipal jurisdictions
 - Currently 2009 IRC, Chapter 11 (similar to 2009 IECC)
 - Effective September 1, 2016: 2015 IRC, Chapter 11 (similar to 2015 IECC)
- Requires energy efficiency programs for existing facilities of local government in certain areas
- Requires that municipalities establish procedures
 - administration and enforcement
 - ensure that code-certified inspectors perform inspections

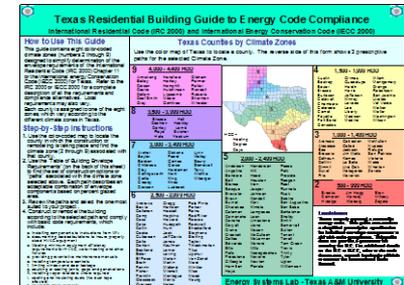


Why Energy Codes?

- Emissions reduction levels and the resulting SIP credits.
- Energy savings - **\$3 Billion** so far from improved residential building codes!

The Role of the ESL

- Mandated to review the latest ICC editions
 - Ensure stringency of the latest IRC and IECC compared to current adopted statewide energy codes
 - Provide a written recommendation based on analysis and review of public comments to SECO
- Evaluate energy efficiency programs
- Provide technical assistance with code implementation
 - Code implementation materials for builders, designers, engineers and architects
 - Provide local jurisdictions with technical assistance concerning implementation and enforcement
 - Evaluate proposed local amendments
- Evaluate energy rating software
- Help with code compliance tools (IC3/IC4)
- Report emission reductions to Texas Commission for Environmental Quality (TCEQ)





Local Amendments – Review process

- Prepare amendment package and forward to the ESL with a request for review

TYPICAL REQUEST

The City of (your city) is adopting both the 2015 IRC and 2015 IECC for use in the jurisdiction and have worked to correlate them in the amendments. Attached is the amendment package.

Please review and respond at your earliest convenience. If it is easier due to the necessity of timely code adoption, we would be happy to set up a phone conference to review the documents together.

Respectfully,



Amendment Review Example

This change is recommended to mandate that cool roofs are required for low-slope roofs. This language was previously added in the prescriptive method only; but should be required for all compliance paths.

5.4.3.5 Cool roofs. Low slope *roofs* up to 2:12 shall be provided with a roof covering where the exterior surface has:

- (a) a minimum total solar reflectance of 0.70 when tested in accordance with one of the solar reflectance test methods listed below, and
- (b) a minimum thermal emittance of 0.75 when tested in accordance with one of the thermal emittance test methods listed below.

Solar Reflectance Test Methods: ASTM C1549, ASTM E903, ASTM E1175, or ASTM E1918.

Thermal Emittance Test Methods: ASTM C835, ASTM C1371, or ASTM E408.

ESL Comment (7/22/08): This change adds stringency because it is being moved from the prescriptive section to the mandatory section, thus requiring this for all options. IECC 2001 does not appear to give roof reflectance or emittance requirements.



Resources

- Energy Systems Laboratory
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 - Shirley Ellis, shirleyellis@tamu.edu 979.458.1103
 - <http://esl.tamu.edu>
- SECO (State Energy Conservation Office)
 - Fred Yebra, P.E., fred.yebra@cpa.state.tx.us 512.475.0753
 - www.seco.cpa.state.tx.us
- ICC (International Code Council)
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