



Arkansas Energy Code Field Study: Energy Savings Opportunities



OVERVIEW

The Southeast Energy Efficiency Alliance (SEEA) conducted a study of 226 new single-family homes under construction in Arkansas to determine the level of compliance with the building energy code in 2015, using an accepted methodology.

During this time, the residential code in Arkansas adhered to the 2009 International Energy Conservation Code (IECC) with additional state-specific amendments.

Significant savings opportunities for improving compliance in **four high-impact areas** were identified. Each year, this has the potential to cut household energy costs by **\$317,895**. The full report can be found [here](#).

AT A GLANCE

Goal

Assess energy efficiency and energy savings potential

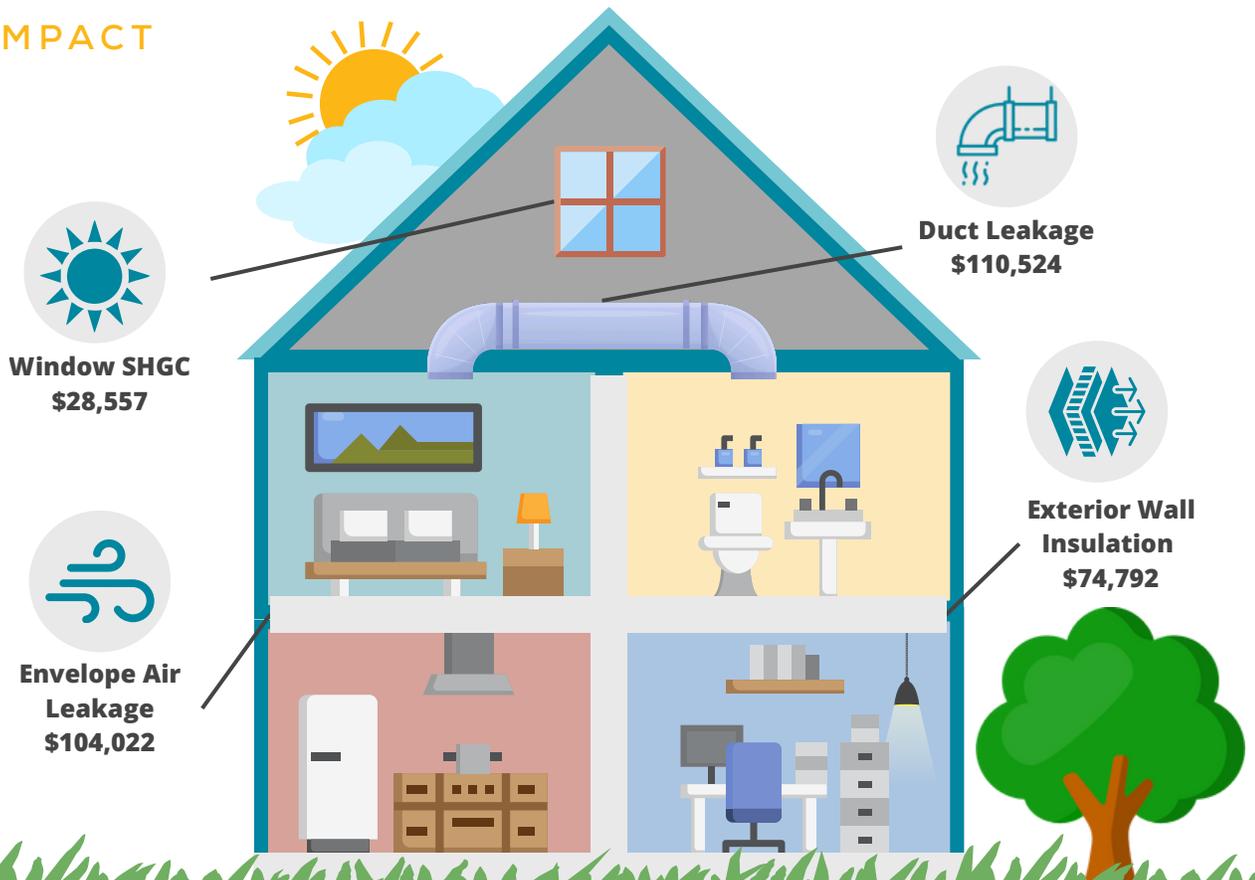
Annual Savings Potential

\$317,895

Largest Savings Impact

Duct Leakage

HIGH-IMPACT AREAS



CEILING INSULATION

- All but one observation exceeded the required R-value of 30, with an average of R-37.3.
- Grade I insulation installation quality was observed in 77% of cases; Grade I represents the highest quality, while Grade III is the lowest.

DUCT LEAKAGE

- Compliance was achieved in 73% of observations; 3% met the requirement, while 70% exceeded it.

ENVELOPE AIR LEAKAGE

- Compliance was 79% in Climate Zone 3 (CZ3), and 88% in Climate Zone 4 (CZ4).
- Overall, compliance was 81%; 5% met the requirement, and 76% exceeded it.

FOUNDATION AND FOUNDATION INSULATION

- Foundation insulation is not included due to a small number of observations.

LIGHTING

- The Arkansas Energy Code did not include high-efficacy lighting requirements; however, 57% of observations met or exceeded the 2009 IECC standard.

WALL INSULATION

- All R-value cavity insulation met or exceeded the code requirement.
- From an assembly perspective, installation quality remains a concern; 57% of observations (39 out of 68) were rated as Grade II or III with substantial defects.

WINDOWS

- Window U-Factor compliance was 100% in both climate zones.
- Compliance with SHGC requirements was 78%.

