

Doug Rye Energy Efficient Model Home

Model Home
Open House

Home Owners: Bobby and Regina Clark
310 CR 749, Jonesboro, Ar

Sponsored by Craighead Electric Cooperative Corporation

This 1600 square foot new home was built by Koehn Builders of Jonesboro. This home features many energy saving components and materials. The home is truly energy-efficient, meeting the energy standards of nationally known energy expert Doug Rye, and carries a Doug Rye guaranteed heating & cooling cost not to exceed an average of **\$47.00** a month for two years.



ENERGY SAVING FEATURES:

Heating & Cooling: Air Source Heat Pump

The home is heated and cooled with a 2-ton, Carrier air source heat pump with a Seasonal Energy Efficiency Ratio(SEER) of 15.2 and a Heating Season Performance Factor(HSPF) of 8.7. The air source heat pump was installed by Nightingale Mechanical of Brookland, Arkansas.



Ductwork

Metal ductwork has been installed and sealed with mastic or mastic tape to insure proper air volume with minimal leakage to each room in the home. The supply and return ductwork is insulated with foil backed 2" duct wrap. The ductwork is sized to insure proper cubic feet of air output into each room. Supply air registers are located toward the outside walls, so the air washes the outside walls when the unit is operating.

Water Heating

A super efficient 50 gallon "Marathon" water heater was installed for all their hot water needs. Unlike most water heaters, Marathon has a seamless blow molded polybutylene tank with no anode rod required for a corrosion free life.

Energy-efficient framing

This technique allows corners and T's to be insulated.

Floor

Concrete slab insulated with 1 inch styrofoam perimeter insulation.

Wall Insulation

Blown Cellulose covers all wiring and plumbing in exterior wall, 2x6 walls, R-19

Attic:

Blown Cellulose insulation in attic, R-38, insulation was installed after the duct work, so the insulation can cover part of the duct work.

Roof Decking

Tech Shield, radiant barrier roof decking, can reduce attic temperatures up to 50 degrees. This is especially important when duct work is located in the attic.



Double pane windows, low-E-glass

Windows must be at least U Value of 0.30 or less and the SHGC of 0.30 or less.



Attic Ventilation

Ridge vents along with continuous soffit venting is required in a Doug Rye Home.



Caulking

All electrical and plumbing penetrations, sill plate, all exterior doors and windows, all framing joints on exterior walls are sealed



Recessed Lights

ICAT (Insulation Contact Air Tight) rated fixtures



Water Lines

All water lines insulated under slab and in walls.



Sill Sealer

Stops air from entering through the sill plate.

Other Energy Efficient Techniques

- Cook top vents vented to exterior of home, not into attic or living space.
- Garage walls and ceiling insulated and insulated garage doors
- Humidity sensing exhaust fans installed in bathrooms to remove excess moisture
- Return air is sized to two square feet for each ton of heating and cooling.



The energy efficient building techniques and products in the home were under the direction of Doug Rye & Associates and Craighead Electric Cooperative Corporation. The home is being shown for educational purposes to demonstrate proper energy efficient building techniques, energy efficient space conditioning equipment and other quality energy efficient products that can be used to make your home more energy efficient.

Businesses contributing to construction

Builder is Dale Koehn, Koehn Builders, Jonesboro, Ar.

Air source heat pump and duct work installed by Nightingale Mechanical, Inc. Brookland, Ar.

Cellulose insulation and some foam sealant installed by PJ's Insulation, Brookland, Ar.

Caulking and foam sealant by Bobby Clark, owner



Craighead Electric Cooperative Corporation

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