



Builders Challenge

Recognizing Energy Leadership in Homebuilding

High Performance Builder Spotlight

Artistic Homes

Albuquerque, New Mexico

Every Artistic Home sold in 2010 qualified for DOE's Builders Challenge certification. Artistic has been a Building America partner for 11 years, working with Building America teams Building Science Consortium and Building Industry Research Alliance (BIRA).

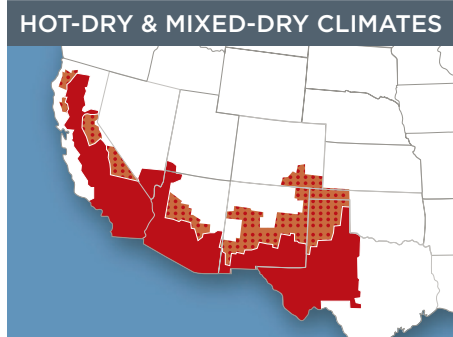
In a very slow real estate year, Artistic Homes of Albuquerque was able to raise prices 15% and still sell houses because buyers are seeing the value of its Builders Challenge-certified zero-energy homes. "2010 was the worst housing economy on record. We increased our prices and were still able to sell homes," said Tom Wade, co-owner of Artistic Homes of Albuquerque. "If we can sell in this market, I can't wait until tomorrow," adds Wade.

Artistic Homes is the first production home builder in the United States to offer a true net-zero upgrade option on all of its homes. According to Wade, in Albuquerque in 2010, 45% of its homes sold were built to near or true zero energy (with HERS scores of under 5). "Our largest demographic is people nearing retirement who are shoring up their finances and see the value in an energy-efficient home," said Wade. Artistic's standard home averages a low HERS score of 51.

Every one of the 100 homes Artistic sold in 2010 qualified for the U.S. Department of Energy's Builders Challenge, ENERGY STAR's Indoor airPLUS criteria, and LEED's silver to platinum level.

"Zero energy was not much harder than what we are already doing. When we sat down with our subs and told them our goals, they got excited about hitting that zero too."

TOM WADE, co-owner Artistic Homes



BUILDER PROFILE

Builder: Artistic Homes

Tom Wade, Co-owner
www.artistichomes.com
(505) 247-8400

Founded: 1986

Employees: 8, not counting subs

Square Footage: 1,305-2,905 sq. ft.

Price Range: \$160,000 to \$300,000

Standard features include advanced framed 2x6 24-inch on-center walls, R-21 blown insulation in the walls, high-efficiency windows, slab-on-grade foundations with R-10 rigid foam insulation under the slab and R-5 rigid foam slab edge insulation. Ducts are located in conditioned space in a dropped ceiling in the hallway and the airhandler is located inside in the utility room. In 2009, Artistic added R-50 blown fiberglass attic insulation (up from R-32) to its list.

To improve air quality, every home has a heat recovery ventilator with a HEPA filter, radon mitigation with a passive pipe venting from below the slab to the roof, and a garage venting system that uses a motion sensor to switch on a garage fan mounted to an outside wall.

Air sealing details include gasketing the sill plate and caulking or foam sealing all wiring and piping holes. Every home is tested for whole house and duct leakage. Whole house air leakage ranges from 500 to 800 cfm: a code-built house would

typically be about 2,700 cfm, according to Wade, who said Artistic’s goal is to get every home below 500 cfm in 2011.

In markets outside of Albuquerque, where Artistic is competing primarily with local builders, their 1,300-2,900 square-foot homes often sell for less, sometimes several thousand dollars less, than competitors’ homes. In Albuquerque, where they are sometimes underpriced by national builders selling code-typical homes, they hold their own by marketing energy efficiency. “At least half of the buyers coming in are looking for energy efficiency,” said Wade.

The zero-energy package includes roof-mounted solar photovoltaic panels ranging in size from 4.2 to 7.0 kWh at added costs of \$32,000 to \$42,000. The zero-energy homes also have a roof-mounted solar thermal water heater and 80-gallon storage tank. Artistic’s “Solar 30” package includes a 1.3 to 2.0 kW system and costs about \$11,000 to \$16,000. Rebates, incentives, net metering, or renewable energy certificates (currently 11 cents per produced kW paid by the Public Utility of New Mexico) make the solar systems much more affordable.

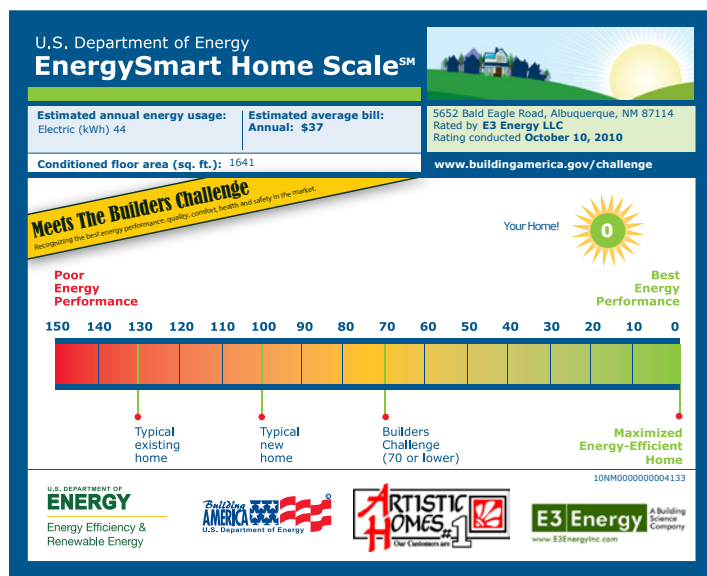
Artistic Homes offers homeowners web-based data collectors for hour-by-hour monitoring of their energy loads. The systems are free for homeowners participating in a 2-year study to help Artistic find ways to make its homes even more energy efficient.



Artistic installs high-efficiency furnaces and ducts in conditioned space and provides a fresh air intake and heat recovery ventilator with HEPA filter for greater efficiency, air quality, and comfort.

U.S. Department of Energy Builders Challenge

DOE seeks to give every consumer the opportunity to buy a cost-neutral, net-zero energy home anywhere in the U.S. by 2030. Homes that qualify for this Builders Challenge must achieve a 70 or less on the EnergySmart Home Scale (E-Scale) which is based on the Home Energy Rating System (HERS) index (www.natresnet.org). The E-Scale allows homebuyers to understand—at a glance—how the energy performance of a particular home compares with others.



To learn more about the Builders Challenge and find tools to help market your homes, visit www.buildingamerica.gov/challenge.

Energy-Efficient Features

- Air handler in sealed utility closet
- Ducts in conditioned space
- R-21 blown insulation in walls, R-50 blown insulation with wind baffles at soffit vents in attics
- Advanced framing techniques
- Heat recovery ventilator with HEPA filter
- Gasketing, foam sealing, and caulking of all envelope penetrations
- Fresh air inlet; jump ducts
- 3rd party HERS rater blower door and duct blaster testing of every house
- 15 SEER AC and 9.0 HSPF electric furnace
- Heating and cooling energy usage and comfort are guaranteed
- Low-e, dual-pane, Fibrex® windows
- Borate treatment of studs and bottom plate
- Low and no VOC products
- Job-site recycling

True net-zero upgrade package includes:

- Roof-mounted photovoltaic power system (4.2 to 7.0 kWh)
- Solar thermal hot water heating