

High-Performance Builder Spotlight

Pulte Phoenix Cabrillo Point



Attention to Detail Gets the Seal of Approval

Attention to detail is helping Pulte Phoenix meet the U.S. Department of Energy's Builders Challenge in 69 new homes under construction at Cabrillo Point in the Phoenix suburb of Glendale, Arizona.

“ One benefit of our participation in Builders Challenge has been the free publicity. The local paper has done several articles mentioning Cabrillo Point, and Home Depot invited us to participate in a green products event they hosted. It has definitely generated a lot of interest. ”

CHRIS KELLY, Vice President of Operations for Pulte Phoenix Division

The builder is achieving HERS index scores of 68 and 69 on the homes, thanks to an extra snug building envelope which includes blown cellulose wall and ceiling insulation plus an additional exterior sheathing of rigid foam insulation under the stucco exterior. Other air sealing details include foam caulking of all wall, floor, and ceiling penetrations for wiring and pipes; mastic sealing the ducts; putting in air barriers around duct chases, behind tub and shower surrounds, and around fireplace inserts; air sealing between the garage and house; and caulking the top plate and sill plate. Jump ducts are used between rooms to balance pressure and temperatures from room to room, reducing

drafts and hot or cold spots. To meet Builders Challenge requirements, every home is frame inspected, insulation inspected, and duct blaster and blower door tested for air leakage. Thorough visual inspections are conducted by both the HERS rater and Pulte's on-site supervisor to ensure that all specified equipment is installed and insulation and air sealing are correctly applied.

Chris Kelly, Vice President of Operations for Pulte Phoenix Division, notes that the energy-efficient equipment and measures alone won't ensure energy savings—the key is how they are applied. “You really have to make sure your own employees and your framing and installation contractors understand how this needs to be done.” Pulte conducts subcontractor training at the job site throughout the year.

Dollars and Sense

Pulte Phoenix estimates it spends about \$3,000 to \$4,000 per house over a standard construction Pulte Home (which is built to an Environments for Living Gold level and meets ENERGY STAR) to meet the Builders Challenge and Environments for Living Green standards. Part of this additional cost is the high-efficiency clothes washer, clothes dryers, refrigerators, ranges, and dishwashers that Pulte includes to make sure the homes meet the water and energy saving requirements of the *Environments for Living* Green program.

Pulte has in the past been able to command a premium for its high-performance homes. Sales of all homes in Phoenix are down 45% from 2007; however, Kelly notes that “Cabrillo Point is definitely seeing higher-than-average traffic because it is meeting the Builders Challenge.”

BUILDER PROFILE

Pulte Phoenix West Division
www.pulte.com

Founded: Pulte Phoenix West Division formed in 2003. Pulte Phoenix Division formed over 20 years ago. Pulte U.S. was founded in 1950 in Michigan.

Employees: 160 in Pulte Phoenix West Division not counting subs

Development:
Cabrillo Point, Glendale, Arizona

Size: 69 single-family homes
(1,479 - 2,436 sq. ft.)

Price range: \$240-\$336,000

Number of homes built by the division:
Over 1,200 annually

Energy efficiency commitment: All homes built by division *Environments for Living* Certified Gold level or higher since 2007



U.S. DEPARTMENT OF
ENERGY

Energy Efficiency &
Renewable Energy

KEY FEATURES

HERS index score of 69

Third party inspection of every home – duct blaster, blower door, visual inspection of framing, equipment and insulation installation

Environments for Living
Green level energy use guarantee

Blown cellulose wall insulation to R-13,
Ceiling insulation to R-30

Panelized framing at Pulte's offsite facility

Exterior R-4 foam board insulation under exterior stucco layer with a #15 felt for drainage plane to the inside of the foam board.

High-performance low-emissivity, dual-pane, vinyl-framed windows

Jump ducts for pressure balancing

Air sealing of building envelope

SEER 14 air conditioning and sealed combustion gas furnace with mastic sealed ducts

Filtered, fresh air intake ducted to air handler

ENERGY STAR appliances

Hard wired carbon monoxide detectors

Compact fluorescent lighting

Low-flow showerheads and faucets, dual-flush toilets

Low VOC paints, finishes, and adhesives

Kelly recommends builders investigate federal and local rebates and incentives, which can offset costs for the builder as well as the buyer. Many municipalities also offer waived fees and expediting of plans approval for green and energy-efficient projects.

Pulte buyers know they are getting more in a Builders Challenge home the minute they step into the Cabrillo Pointe sales office. “We’ve got big displays with the Environments for Living guarantee and the Builders Challenge HERS scale to show buyers how our homes compare to typical construction.” Pulte’s sales staff go through frequent trainings to make sure they understand the homes’ energy-efficient features. Pulte conducts radio and TV advertising that focuses on energy savings and has received free advertising in the form of articles by the local newspaper describing its energy-saving

efforts. Pulte offers Cabrillo Pointe homeowners a heating and cooling use guarantee.

The Bottom Line

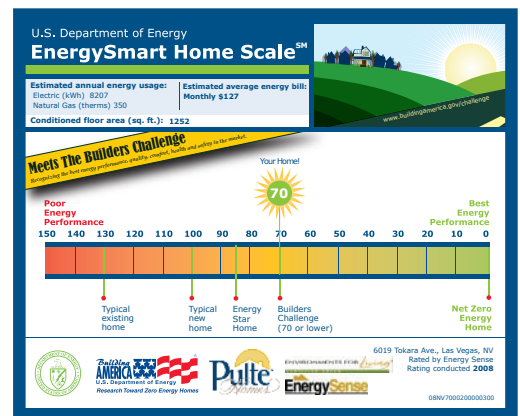
Kelly sees DOE’s Builders Challenge program with its easy-to-understand HERS index score as a way to unify builders’ energy-efficiency efforts and simplify things for buyers. “Many builders have their own energy-efficiency programs and each one is called something different. I think it will help the whole industry if everyone is talking the same language. The U.S. Department of Energy is known and respected. It lends credibility if you can say you are meeting the DOE’s Builders Challenge standard, as opposed to meeting a program criteria you came up with yourself,” said Kelly.

U.S. Department of Energy Builders Challenge

DOE has posed a challenge to the homebuilding industry—to build a new generation of high-performance homes using proven innovations and to work toward the ultimate goal of providing cost-neutral, net-zero energy homes by 2030. Homes that qualify for this Builders Challenge must meet a 70 or better on the EnergySmart Home Scale (E-Scale). The E-scale allows homebuyers to understand—at a glance—how the energy performance of a particular home compares with others. Through the Builders Challenge, participating homebuilders will have an easy way to differentiate their best energy-performing homes from other products in the marketplace, and to make the benefits clear to buyers.

The figure to the right shows a sample E-Scale for Pulte Homes. The E-scale is based on the well-established Home Energy Rating System (HERS) index, developed by the Residential Energy Services Network. To learn more about the index and HERS Raters visit www.natresnet.org.

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



The Building America Program

Building America is a private/public partnership sponsored by DOE that conducts systems research to improve overall housing performance, increase housing durability and comfort, reduce energy use, and increase energy security for America’s homeowners. Building America teams construct test houses and community-scale projects that incorporate systems innovations. The teams design houses from the ground up, considering the interaction between the site, building envelope, mechanical systems, and other factors, and recognizing that features of one component in the house can greatly affect others. More than 40,000 energy-efficient houses have been built by the seven teams to date.

For more information visit www.buildingamerica.gov. The website contains expanded case studies, technical reports, and best practices descriptions.