



*Environmental Innovations in Homebuilding*

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**CLARUM AND CONSOL LAUNCH DATA COLLECTION PHASE OF  
INDUSTRY-FIRST ZERO ENERGY DEMONSTRATION HOME PROJECT**

*Twelve Month Effort to Yield Critical Data for Use in Municipal Energy Planning  
Industry-wide Energy Efficiency Efforts*

**PALO ALTO, CA, April 17, 2006** – Clarum Homes, California's largest Zero Energy Home developer, announced today the launch of the year-long data collection phase of its Borrego Springs Zero Energy Demonstration Project. The project, which is a study on energy efficiency in an extreme desert climate, was developed by Clarum in partnership with the U.S. Department of Energy's Building America Program, ConSol, and Davis Energy Group. The project's four demonstration homes, which are available for sale, were designed with a goal of 90% energy reduction and built with the latest zero energy technologies; including state-of-the-art wall, cooling and solar electric systems. The homes will be tested for energy efficiency continuously over the next twelve months, the results of which will be shared with municipalities, manufacturers and builders throughout the United States.

"The data that will be generated from these demonstration homes will be a critical resource to municipalities interested in distributed generation, sustainability and forward planning," said John Suppes, founder and president of Clarum Homes. "It is very conceivable that in the not too distant future that the materials utilized in this project will be used in building housing subdivisions that could produce enough energy to reduce peak energy consumption along the power grid."

"Zero Energy Homes" refers to housing that is constructed with sustainable building products, generate their own electricity with photovoltaic systems, and reduce energy consumption by up to 90% with other energy efficient features such as on-demand hot water heaters, radiant roof barriers, high-efficiency furnaces and appliances, tightly sealed ducts, extra insulation and low-e windows.

For the Borrego Springs Zero Energy Demonstration Project, the Zero Energy Homes utilized a number of new and innovative energy efficient products; in particular, the demonstration homes were built with three different types of wall systems – Styrofoam T-MASS, Structural Insulated Panels (SIPS) and High Efficiency 24" o.c. Optimum Value Engineered (OVE) Wood Framing. In addition to the three wall systems, the homes, which share the same floor plan, were equipped with three different cutting edge cooling systems: two of the homes feature Speakman 2 stage evaporate coolers; the third home has a Freus water cooled condenser and AC; and the fourth home features a Lennox 20.5 SEER AC. All of the homes feature 3.2 kW Kyocera photovoltaic solar systems and exterior shade screens.

"We fully expect that the collected data will validate not only our projections but also the effectiveness and affordability of the many innovative products utilized in the construction of these demonstration homes," stated Rob Hammon, PhD, project energy consultant and principal of ConSol. "The test data will be of benefit not only for Zero Energy Home development in extreme desert temperatures like Borrego Springs, but also in more moderate climates around the United States."

Borrego Springs, California is located 85 miles northeast of San Diego in the Sonoran Desert. The average summer temperature ranges from 100 to 107 degrees.

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Project goals for the demonstration homes include:

- Design and build highly energy efficient sustainable production housing for entry level buyers
- Achieve up to 90% energy reduction in cooling
- Build energy efficient homes with highly sustainable characteristics while meeting Zone 4 structural requirements
- Collect data on cost, construction schedule, production feasibility, lifecycles and quantified energy savings
- Study date to determine cost effectiveness of sustainable technology applications
- Run tests prior to occupancy and for 12 months after move-in to evaluate energy efficiency for the National Renewable Energy Laboratory (NREL)
- Publish updated evaluations and efficiency data at [www.clarumzeroenergy.com](http://www.clarumzeroenergy.com) for builders, manufacturers and municipalities.

The Building Industry Research Alliance (BIRA), the Davis Energy Group (DEG) and the National Renewable Energy Laboratory (NREL) will work closely with Clarum and ConSol to evaluate the performance of each of the homes to identify the most cost effective energy features.

A special preview tour of the project site for local and regional officials, as well as, media, will take place on Tuesday, April 25, 2006, in Borrego Springs. For more information on the preview event or the project, please visit [www.clarumzeroenergy.com](http://www.clarumzeroenergy.com).

#### **About Clarum**

Clarum Homes is a family-owned development company devoted to building exceptional new home communities and apartments in California. Clarum's mission of building sustainable communities began in 1999 when they began installing solar electric systems in their homes as standard equipment. Clarum Homes is now recognized nationwide as a leader in green building. In 2002, Clarum introduced the Enviro-Home™, its own Zero Energy Home prototype. A perfectly designed blend of innovative construction technologies, unsurpassed energy efficiency and the use of sustainable materials, this home was a breakthrough for Clarum Homes, and for the entire homebuilding industry. The Enviro-Home™ minimizes the use of resources, reduces harmful effects on the environment, creates healthier and more comfortable living spaces, and provides savings on utility bills. The overwhelming response to the Enviro-Home™, and Clarum's strong commitment to the environment, have prompted Clarum to continue building the Enviro-Home™ in all of its communities. The Clarum Homes family and management team are a dedicated group of professionals with an in-depth understanding of green building and decades of combined homebuilding experience. Clarum uses this experience to design the most attractive communities possible, to build the highest quality and most innovative product, and to provide impeccable customer service. For more information on Clarum, visit [www.clarum.com](http://www.clarum.com).

#### **About ConSol**

ConSol is celebrating 25 years as the leading developer of energy solutions for production builders. Its services include mechanical engineering, energy code compliance, ComfortWise® products, and energy consulting. ConSol's highly-skilled experts work with builders, supplying research and in-depth knowledge on the best construction practices for energy and resource efficiency. ConSol leadership has provided strong analytical and technical knowledge in support of builder needs while helping to promote practical energy policy at the local, state and federal levels. ConSol serves as the team leader of the Building Industry Research Alliance (BIRA) for the Department of Energy's Building America program. BIRA, one of six Building America teams in the nation, is a diverse group of over thirty companies involved in this private/public partnership that provides energy solutions to build production housing over 40% more efficient than other new homes.

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