

Borrego Springs, CA



Zero Energy Demonstration Homes

Clarum Homes

Clarum Homes, in partnership with the U.S. Department of Energy's Building America Program, ConSol, and Davis Energy Group, is building four Zero Energy demonstration homes in Borrego Springs, California.

Located 85 miles northeast of San Diego in the Sonoran Desert, Borrego Springs is a hot, dry desert area with average summer temperatures ranging from 100 to 107 degrees.

These four homes employ three different wall systems and three advanced cooling systems. All four homes will also utilize tankless water heaters and photovoltaic systems. The cooling systems include the OASys 2 stage evaporative cooler, the Reus water cooled condenser and Lennox's 20.5 SEER air conditioner. The Building Industry Research Alliance (BIRA), the Davis Energy Group (DEG) and the National Renewable Energy Laboratory (NREL) are working closely with Clarum to monitor the performance of these homes to identify the most cost effective energy features. Clarum will turn this research into usable, real-world building methodology in several future developments across the hot southwest.

Project Goals

- 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, energy efficiency, product lifecycles, and quantified energy savings
- Study data to determine cost effectiveness of sustainable technology applications
- Run tests prior to occupancy to evaluate energy efficiency
- Run tests 12 months after move-in to evaluate energy efficiency



Project Partners



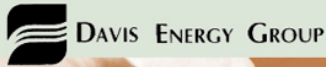
The Building Industry Research Alliance (BIRA), the newest coalition in the Building America Program, is a diverse group comprised of 31 industry partners. Led by ConSol, BIRA uses a systems engineering approach to produce homes on a community scale that use 40-70% less energy, reduce construction time and waste, improve productivity, and implement energy and material-saving technologies.



The U.S. Department of Energy (DOE) Building America™ Program is a research, development, and technology implementation process, cost-shared, in cooperation with the home construction industry. Building America develops systems engineered, sustainable, innovative building methods and integrated, cost-effective, advanced technologies. Zero Energy Homes is one of their projects.



ConSol is the leading developer of energy efficiency solutions in new home construction, offering services in engineering design and code compliance. With 25 years of experience, ConSol delivers custom-tailored insights and direction to builders who pride themselves on market differentiation through resource efficiency.



Davis Energy Group has built a reputation for leading innovation in cooling and heating technology for residential, commercial, and institutional applications. Founded in 1981, the company is located in Davis, California.



Project Information

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Project Builder

CLARUM HOMES

Our Name Means Quality.

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 the company began installing solar electric systems as standard equipment. Clarum Homes is now recognized nationwide as a leader in green building.