

# POWER TOOLS

**Stockton  
company  
makes  
a splash in  
energy  
efficiency**

**By Joanna  
Corman**

A few years ago, Premier Homes set out to build an energy-efficient subdivision in Sacramento. Placing photovoltaic panels on all 95 roofs was too much of a financial risk, so the builder planned to make a solar option for homebuyers.

But with the advice of ConSol, a Stockton-based energy consulting firm, GE Energy and the Sacramento Municipal Utility District, Premier Homes made solar panels a standard feature.

ConSol persuaded the developer to take another risk — make the homes even more energy efficient than its original plans. This came after seeing one of ConSol's other projects — a super energy-efficient, all solar-powered subdivision in Watsonville by Clarum Homes.

"That project [in Sacramento] exceeded all of our expectations in terms of its pace of sales and revenue," says John Ralston, who was vice president of sales and marketing at the Roseville-based Premier Homes until he left to work for another builder in July 2007.

The subdivision was part of Building America, a U.S. Department of Energy program. Participation gave the builder credibility, Ralston says. ConSol also provided the technical expertise needed to make the homes even more energy efficient than originally planned.

Since 1981, ConSol has been pushing builders to become energy efficient. The company does this in part by persuading builders and other industry players to take risks. The firm's employees also work on a policy level, helping develop state and national green-building programs.

In 2003, ConSol won a federal contract to lead a team of building industry professionals to build Zero Energy Homes. These homes combine energy-efficient features and solar panels to use at least 50 percent less energy than a home built to code. Ultimately, the program's homes would produce 100 percent of their own energy and be available nationwide by 2020. ConSol is one of six coalitions of construction industry professionals nationwide building Zero Energy Homes, according to the U.S. Department of Energy. In fall 2007, the government renewed ConSol's five-year contract.

In 2001, ConSol was part of the country's first super energy-efficient solar subdivision, which Shea Homes built in San Diego. This project helped change the way homes are built, says Lew Pratsch, Zero Energy Homes project manager for the U.S. Department of Energy. "Due to ConSol's leadership, we have seen today's Zero Energy Homes really get established in California, and that has led the nation," he says.

One project's market and media success encourages other builders to follow, Pratsch says. After Shea Homes, Bay Area-based Clarum Homes began working with ConSol. Later, Premier Homes and Treasure Homes built energy-efficient, solar neighborhoods with ConSol's Building America team. Other builders in California also have built energy-saving solar neighborhoods, including the Grupe Co. and Lennar Corp. Most of ConSol's Building America homes are in California and Nevada, but the coalition is adding states across the West. The building industry



ConSol executives from left: Mike Hodgson, principal; Bruce Bacceti, director of the Building Industry Research Alliance; and Rob Hammon, principal

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is “famously slow,” says Bruce Bacceti, ConSol’s director of the Building Industry Research Alliance, the firm’s Building America team. “None of us make changes, unless we can see a benefit from it.”

The alliance’s goal is to increase the energy efficiency of new homes — with or without solar. “What BIRA has done is not produce large volumes of homes, but, more importantly, has continued to increase the level of efficiency in homes while maintaining cost effectiveness and marketability,” says Rob Hammon, a ConSol principal and BIRA team leader.

The work ConSol does to help builders design and sell energy-efficient

homes has influenced policy changes. At Premier Gardens, SMUD found the homes were 60 percent more energy efficient than homes built to code. The homes were acting as their own power plants, generating excess electricity for neighboring buildings and reducing peak demand in summer.

Data collected from the project helped shape the state’s \$400 million, 10-year solar power initiative for new homes, called the New Solar Homes Partnership. In 2006, the California Energy Commission appointed Hammon as co-chair of the program’s advisory committee. The program provides builders

with incentives to build solar-powered homes above Title 24, which delineates energy standards in the state’s building code. From the program’s start in January 2007 to mid-January 2008, it received 1,530 applications to build solar-powered, energy-efficient single-family homes, says Amy Morgan, CEC spokeswoman.

“If it wasn’t for ConSol’s leadership, it’s quite possible that your solar program in California would have had that much more difficult time getting established because they were able to show these homes really worked,” the DOE’s Pratsch says. ■