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Testing affordable energy-efficient homes in Calif

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By Bernie Woodall

LOS ANGELES (Reuters) - Test houses being cooled this summer in the California desert using innovative technology and old-fashioned wisdom may go a long way toward making "zero energy homes" a viable option for Americans.

That's the assessment of federal and state government energy agencies, the National Association of Home Builders, and the project's contractor, John Suppes of Clarum Homes of Palo Alto, California.

The four test homes are in Borrego Springs, about 150 miles southeast of Los Angeles, where summertime temperatures often reach 110 degrees (Fahrenheit). The homes have different cooling systems and construction materials as Clarum and engineers from ConSol try to determine how each performs.

"Zero energy" is just a name for homes that are highly energy efficient. The tests in Borrego Springs began in May and have a goal of cutting energy consumption -- and utility bills -- to cool houses by 75 percent.

So far, so good, said Suppes.

"It was 102 degrees the other day when we had to shut down the mechanical system to work on the house and it never got above 72 degrees," said Suppes.

For now, homes like the four in Borrego Springs and others across the United States are demonstration homes, but soon it's likely you'll know someone with a "zero-energy" home, said Emily English of the National Association of Home Builders.

The NAHB recently issued a report that said by 2012, U.S. homes that consume markedly less energy will be a viable option in most of the United States.

The homes, which have innovative but simple designs, use photovoltaic solar panels to create power for high-efficiency air-conditioning and heating systems.

The Clarum test homes have tubing in the foundation where cold or hot water can pass depending on the season. Simple design choices include facing bigger windows north and shading the homes with trees.

While such homes will be an option for many by 2012, it won't be until 2050 that they become more mainstream, said English, adding that the costs of what is now innovative technologies will drop as utility bills continue to rise.

English said utility companies and state and federal government are offering financial incentives to construct low-energy homes. Utility companies don't have to build more power plants and transmission lines if they can convince consumers to consume less.

Up-front costs of putting in solar power is offset by these incentives as well as the monthly savings, which will only go up along with prices for conventional power, said Adam Gottlieb, spokesman for the California Energy

Commission.

"Money you spend on solar panels might be the same as a granite countertop but it will pay for itself," Gottlieb said.

Clarum has projects planned for Desert Hot Springs and Blythe, both near the Joshua Tree National Park, a desert area east of Los Angeles, and Tucson and Prescott in Arizona.

The one in Desert Hot Springs, near Palm Springs, calls for 500 "zero energy" homes and what will be the largest all-solar-power community in the state, Suppes said.

Construction will start there this year and the first 50 houses built there will be equipped with garages with plug-in energy sources for hybrid cars.

The test homes will cost about \$500,000 each. The houses in the Two Bunch Resort at Desert Palm Springs will cost \$300,000 to about \$400,000, Suppes said.

"Our goal is to put these houses in (high) production for entry-level buyers, or maybe one move up from entry level," said Suppes.

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