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Solar kits reduce power bill, bring rebate

Structures can be used to charge electric cars

By Mark Maynard

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Electric-vehicle owners have long known the benefits of using photovoltaic cells on their houses to tap the sun's free energy and use it to recharge their vehicles and supplement home power.

Even those who are not planning to recharge a plug-in hybrid or electric vehicle can use build-it-yourself kits by La Jolla-based Envision Solar to create a self-powered backyard cabana, a home office, a workshop or garage.

Once assembly is completed, the kits – a carport and a smaller structure – can be connected to the utility grid, and surplus power can be sold to the utility company, said Mark Colby, president of LifeSystems group at Envision Solar.

A homeowner can assemble the basic structure in a couple of hours. Each piece weighs no more than 100 pounds, but it may require ingenuity to get the roof pieces in place.

Both structures are certified for use in every state.

The LifePort is a 23-foot-by-23-foot structure that can be fitted with enough photovoltaic cells to charge an electric vehicle or power a home. The cost ranges from \$31,500 to \$51,500 with solar panels. The panels have a warranty of 25 years and could last 40 years, Colby said.

The 10-foot-by-12-foot LifePod solar structure can be transformed into a pool house, home office, storage shed or play house. The LifePod costs \$17,500 for 1.8 kilowatts of cells, which could cover 25 percent to 30 percent of the electric bill, Colby said.

Both structures can be modified for specific needs.

Modular sections with doors or windows can be added for \$250 per section. The company also offers siding products that resemble stone, brick,

shale and more.

Pricing does not include installation, the concrete foundation or the electrician's role in connecting the panels to the utility grid.

The LifePort system is designed to grow with the residence, Colby said. For example, the electric needs of a single person in a 2,000-square-foot house would require eight to 12 panels.

"Get married and you'd want to have 16 panels. Then, children come along and you add another eight panels. Add an electric vehicle and buy eight more panels," he said. "They all plug into the same inverter."

Rebates and incentives can reduce some of the setup cost.

The federal government allows up to a \$2,000 tax rebate for residential customers. The incentives are even better for businesses.

A rebate offered through California's Solar Initiative program can amount to \$10,000 or more. The one-time payment is to help offset the cost of installation, said John Supp, program manager at the Center for Sustainable Energy in California. The Clairemont-based nonprofit administers the solar rebates in territory serviced by San Diego Gas & Electric Co.

"The rebate is a check, not a tax credit," Supp said.

Based on a cost of \$2.20 per watt, an average system of 4,000 watts will have a rebate of \$9,000 to \$10,000, Supp said.

"Your (monthly electric) bill should drop to almost nothing," he said.

Other incentives for homeowners to go solar include a solar property tax exemption.

"A \$35,000 to \$50,000 home improvement will not raise property taxes, but it will add value to the home," Supp said. In addition, net energy metering calculates surplus power and shows it as a credit on the homeowner's utility bill.

"You can store that extra \$100 generated in the summer and apply it to a winter bill," he said.