Goes Green!

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Volcano Telecommunications Group has gone green, one of the first in the country to charge their communications center with solar panels. The move to power all of Volcano Telecommunications Group's facilities with solar power is an attempt at protecting the customer and the company from rising costs, already saving VTG thousands of dollars a month in electric bills.

VTG's emergence as a solar-powered company started with the addition of 96 solar panels on the roof of the Diamond Building. Located just across Ridge Road from Mike Clark Field, the Diamond Building is generating more power than the facility uses. The excess energy is routed back into the Pacific Gas & Electric grid through a net meter that runs the meter backwards, keeping track of the power routed back into the grid and decreasing the overall electric bill.

Following installation at the Diamond Building, SunnyCal Solar installed solar panels at VTG's maintenance yard, mechanic shop, cell tower, in Pioneer, and the office buildings in Pine Grove. As power is generated by the solar panels and routed into the buildings, it passes through three large Fronius inverters. The inverters convert the DC energy into AC, to power the building. Each inverter contains three modules that cycle through at different times to increase the longevity of the equipment. The modules have 10-year warranties.

The rising cost of power, in combination with California mandates to provide 33 percent of Californians with renewable energy by 2020, has given rise to a solar boom in the Sunshine State. California is the first state to install more than a gigawatt — 1,000 megawatts — of customer solar energy, 311 megawatts of which were installed in the investor-owned utility areas in 2011. "Either you're taking advantage of solar or you're paying for someone else to," said CEO Steve Dollens, of SunnyCal Solar.

New homes will have to be energy neutral by 2020 and all businesses will have

to be energy neutral by 2030, meaning they will have to be producing the same amount of energy as they use. Recently, businesses have been switched over to Time of Use pricing, meaning the cost per kilowatt hour is different throughout the day. During the summer, peak usage, between noon and 6 p.m., rises to $0.228 per kWh. From midnight to 8:30 a.m., rates are $0.197 per kWh and from 8:30 a.m. to noon, rates are $0.220.

On average, the cost to install a solar system on a residence is approximately $25,000. While expensive, a solar system tends to add to the value of the customer's home. PG&E rates have increased consistently from $86.23 per 550 kWh in 2011, to $89.31 per 550 kWh in 2012 and, finally, $91.60 per 550 kWh in January, 2013. Paying the same amount per month on a solar system that neutralizes the electric bill saves money, as PG&E rates continue to increase. "Solar is cheaper after your bill goes above $120 a month," Dollens said. "If it's below that, solar costs a little more."

Customers can also lease a solar system, which is less expensive up front, while still reaping the benefits of lower power bills. Leased systems usually come with system monitoring. However, in the scheme of things, leasing a solar system saves less money than buying the system outright. The lease generally includes an annual escalation rate, meaning the payments will go up every year. As a lessee, the customer also doesn't get the tax credits for the system; the system doesn't usually get installed for about six months following the contract agreement; and, after 20 years, the system has to be bought out or it's removed.

Buying the system, instead of leasing it, provides the customer with a number of benefits. The payments are fixed, while PG&E rates continue to rise; the system adds value to the home; tax credits go to the buyer; and, there is no buy-out requirement after 20 years.

Many businesses in Amador County, including Vino Noceto Winery, Karmere Winery, Jeff Runquist Wines, Wellness by Choice and Pine Grove Veterinary Clinic, as well as many residences, ranches and farms, have already made the move toward a green future with SunnyCal Solar.