



To achieve the maximum benefit from the Time of Use (TOU) rate offered by their electric utility, the Ellis family installed a solar PV array sized to completely offset their electric consumption during high-cost, peak periods. In addition to monthly net metering of peak and off-peak periods, the TOU rate offers substantially lower electricity prices during off-peak hours. The solar and TOU combination complements their current all-electric geothermal heat pump system, which provides heating, cooling, and hot water for their home and workshop along with heating for their pool.

INSTALLATION DETAILS

This project features a whole home, retrofitted solution toward achieving energy independence. Prior to solar, Comfortworks installed a high-efficiency geothermal heat pump in the home and workshop, with spray foam insulation in the workshop. A large pool with a waterfall was added, with geothermal heating the pool water. Geothermal helped lower the home's energy consumption allowing the solar array to meet peak electricity demands. Microinverters help minimize occasional tree shading. For additional savings, a special heat exchanger provides free pool heating anytime the geothermal system is cooling the home.



Edmond Solar Estates

PROJECT DETAILS

Building Size:	4900 sq. ft. residence, 2,300 sq. ft. workshop roof size
Solar Equipment:	Q-Cells 320 W Modules APSystems YC600 IronRidge Racking
Contractor / Installer:	Comfortworks
Utility Company:	OG&E
Savings:	Utility bill before solar: \$3,600 Utility bill after solar: \$2,600 Total Savings: 33% savings Estimated savings: \$120 per month Energy Offset: 133% of peak kWh use and 25% of overall kWh use Estimated Production: 15,400 kWh/year



CONSTRUCTION TYPE
Retrofit



SOLAR PANELS
36 Roof Mount



INVERTERS
Micro and String Inverters



ESTIMATED ANNUAL
POWER PRODUCTION
15,400 kWh

