SOLAR INSTALLATION
Spotlight

Solar Barn Installation

Jones, OK

The Ellis family constructed a multi-functional pole building in 2012 to provide a second home and space for an antique car and truck collection. To keep utility costs as low as possible, Comfortworks recommended spray foam insulation and installed a geothermal heat pump system that provides heating, cooling and water heating. Having an interest in long term energy independence, they recently had Comfortworks install a large solar PV array sized for a goal of zero net-energy consumption.

INSTALLATION DETAILS

The solar PV array includes 30 Q-Cell 400 watt panels with a 10 kW SolarEdge inverter and power optimizers that also provide code-required rapid shutdown protection. The 12 kW DC array was installed on the south-facing 5/12 barn roof, which provided an optimal angle for power production and zero shading. The building itself is a Morton pole building with Thermax Sheathing and spray foam insulation.

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Solar Barn Installation

PROJECT DETAILS

Building Size:	2300 sq. ft. residence, 32 sq. ft. garage roof size
Solar Equipment:	Q-Cells 400 W Modules
	SolarEdge Single Inverter with Optimizers
	IronRidge Racking
Installer:	Comfort Works
Utility Company:	OG&E
Savings:	Utility bill before solar: $1450
	Utility bill after solar: $51
	Total savings: 97% savings
	Estimated savings: $120 per month
	Energy offset: 344% of peak kWh use and 94% of overall kWh use
	Estimated production: 19,200 kWh/year

CONSTRUCTION TYPE
New Construction

SOLAR PANELS
30 Roof Mount

INVERTERS
String Inverters

POWER PRODUCTION
12kW

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