

The Houchin Family Alpaca Farm

Heyworth, IL



The Houchin Family (and their alpacas) were looking for a way to lower their monthly utility bills and reduce their overall energy usage. Since they live on a working alpaca farm, they have a high energy load, resulting from the heated buckets in the winter, the fans in the summer, and the lighting for their barns. In 2009, the home was converted to be 100% electric through the installation of a geothermal heat pump. In the spring of 2019, they decided to add on a solar array. By adding solar, they will be able to make over 80% of their annual energy usage. See their family farm at www.HouchinFamilyAlpacas.com

INSTALLATION DETAILS

The Houchin Family wanted to produce the energy needed to heat, cool, and meet their home and farming needs through sustainable technology. Since they have taken the proper steps and started consciously looking for ways to reduce their energy load (installing a geothermal heat pump and switching to LED lightbulbs), they have lowered their utility bills even more. Their hope is to reach net-zero with the addition of the solar array. To them, installing solar was a natural progression that only made sense. The geothermal reduces utility costs, while the solar array produces the energy needed to operate the geothermal system and other electric appliances on a net-zero basis.



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PROJECT DETAILS

Roof Size: 21'x 48'

Solar Equipment: Q-Cells 390W Modules

AP Systems YC500i Micro Inverter

DPW Racking

Contractor / Installer: Bracher Heating and A/C, 2010 Fort Jesse Road, Normal, IL 61761

Savings:

Annual Utility Bills for Farm and Home - \$3,000

Projected Annual Utility Bills with Geothermal + Solar - \$750

Energy Reduction with Geothermal, Solar, and LED Lights – 90% energy reduction



CONSTRUCTION TYPE
Retrofit



SOLAR PANELS
38 Roof Mount



INVERTERS
17



POWER PRODUCTION
10 kW

