

22.1kW DC Solar Ground Mount System

Performance & Financial Analysis

June 15th, 2017

for

Lee's Summit Animal Shelter
1991 SE Hamblen Road
Lee's Summit, MO 64082

Presented by:

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Executive Summary

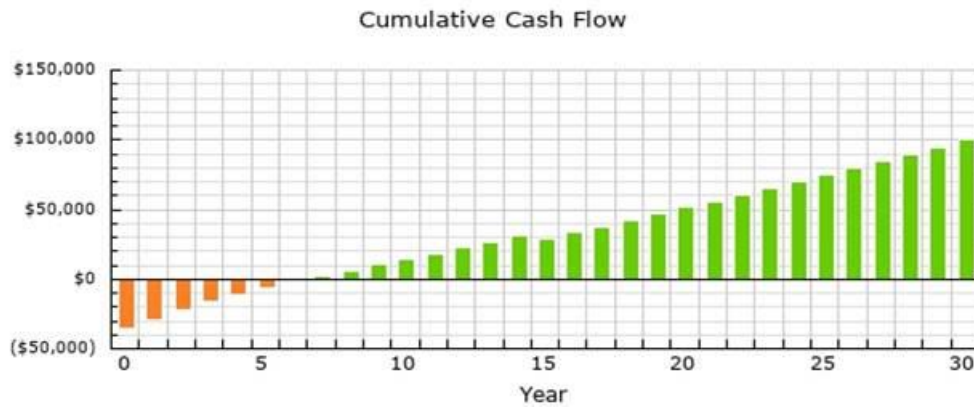
Electric Utility Savings: Anticipate a savings of approximately \$3,518 in electric bills (10%) at current utility rates in the first year. Savings will grow as electric utility rates are expected to rise 2.00% a year. The purchase of electric energy (kWh) from your utility is expected to be reduced by 10%.

Over 30 years, annual utility savings are anticipated to average \$4,331, for a total utility savings of \$129,918.

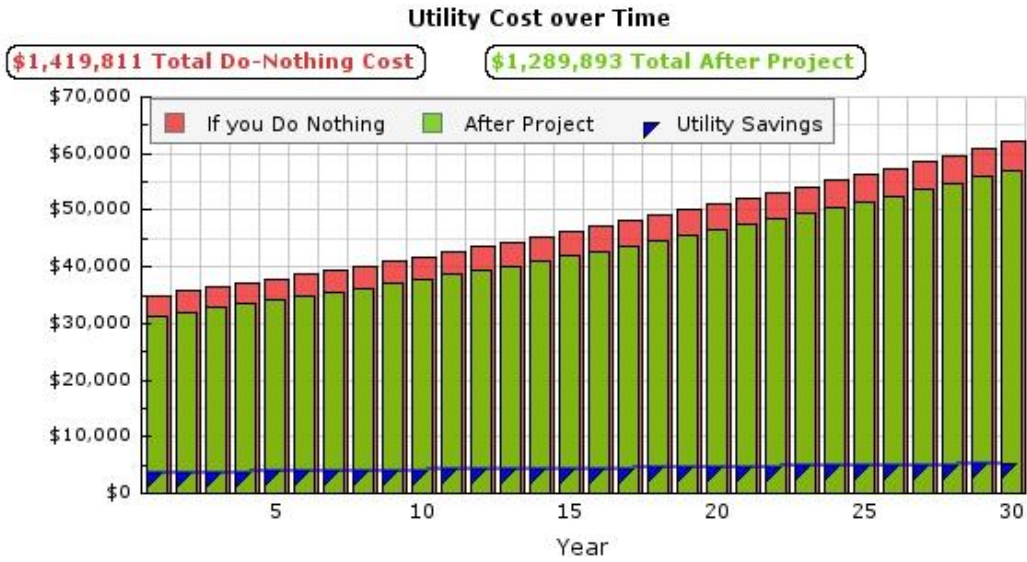
Performance Summary

Solar Electric (PV) System: 22.1 kW DC (17.25 kW AC) producing 31,982 kWh/Year.

6 Strings of 11- 335 Watt Solar Panels

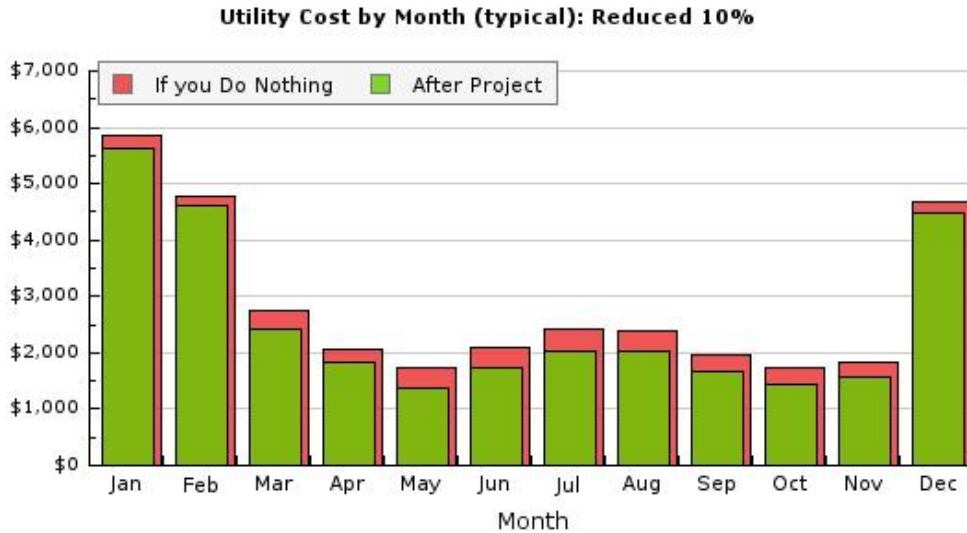


The Cost of Doing Nothing



Your Hedge Against Utility Inflation: Your investment in this project will protect you from utility rate inflation.

Utility Cost by Month



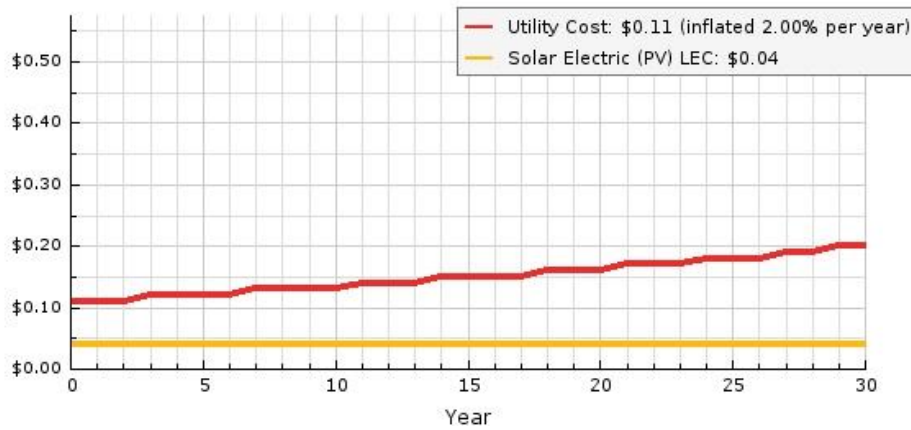
Includes monthly Net-Metering "True-Up" to reconcile any net-meter credits accumulated in prior month(s).

Levelized Energy Cost (LEC)

Your Hedge Against Utility Inflation: Your investment in this project will protect you from utility rate inflation. Levelized Energy Cost (LEC) analysis provides us with a "hurdle rate" (the levelized energy cost) which can be compared to the expected change in utility rates (by way of utility rate inflation). LEC is the average lifetime cost of energy produced by a particular system. We can compare the LEC to the current utility rate and its expected change in price as time goes on. In this manner one can judge the investment as a "better bet" than utility rates to contain energy costs. Represented below is the average cost of utility energy versus the cost of energy produced (LEC) by your system over time.

Electric: Levelized Energy Cost (LEC)

\$/kWh: Utility vs. System Levelized Energy Cost (LEC)



Carbon Footprint

Your carbon footprint will be reduced. Over the life of your system 787 tons of carbon dioxide (CO₂) will be eliminated from your footprint. Equivalent to:



Planting 18,337 trees.



Driving reduced by 1,574,000 auto miles, or 80,274 gallons of gasoline.



Recycling 2,487 tons of waste instead of sending it to landfill.



Displacing CO₂ emissions from the annual electric use of 89 homes.

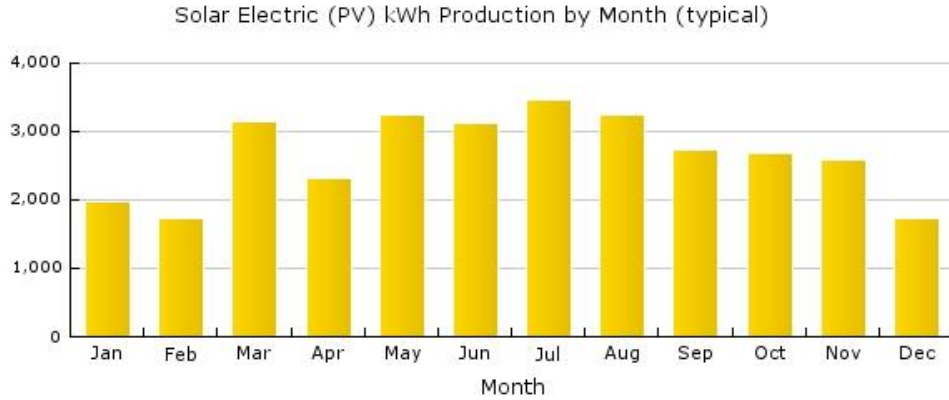


766,870 pounds (383.4 tons) of coal burned.



and you will help avoid the use of up to 19,189,200 gallons of water by Thermoelectric Powerplants.

Solar Electric (PV) System Summary



Tilt: 25° Azimuth: 180°
Rack/Gnd/Pole Mount
Shade reduces production: 0%

PV Panels: 66 - 335 Watt Panels

Inverters: 3 x HiQ Solar, Model: TS208-5k75

Total Panel Area: 1,252 sq-ft

System Peak Power: 22.1 kW DC (17.25 kW AC)

Annual Production: 31,982 kWh. Supplying 10% of annual electric use