

### Arrow Energy Centrahoma Site Lease

Location:  
Centrahoma, OK

Background:  
The utility provider for this site is a Co-Op, Peoples Electric Co-Op, which charges Power Factor and Peak Demand penalties.



Original System	System after Solar Jack Installation
<p>Average Power Bill: \$1,800 per month</p> <ul style="list-style-type: none"> <li>• 40 hp, 705 rpm, 81 amp motor</li> <li>• Standard motor starter or across-the-line starter (violent starts and stops)</li> <li>• Pump pulled every 60-90 days on average for down-hole maintenance</li> <li>• 23% of the power bill was Power Factor penalties (motor inefficiencies and excess regenerated dirty power pushed back to the utility)</li> <li>• 7% of the power bill was Peak Demand charge (based on usage between the hours of 4 and 7 for up to 13 days per year max)</li> </ul>	<p>Average Power Bill: \$1,100 per month</p> <ul style="list-style-type: none"> <li>• 40 hp, 705 rpm, 81 amp motor</li> <li>• Qualifies system for “Net Metering” (to sell clean regenerated power and solar power back to the utility), a 30% Federal tax credit, and 50% bonus depreciation for the first year</li> <li>• Solar Jack controller (soft starts and stops)</li> <li>• Eliminated 95% of the Power Factor penalties (with the reduction of the oversized motor on this well, this penalty would be eliminated)</li> <li>• With the Solar Jack system, this well is protected from any future Power Factor penalty rate hikes; without the system this well would have see a Power Factor penalty increase of 43% after the cap is removed – equating to another \$300 to \$400 per month</li> <li>• In the 12 months following the installation of our system the well was down one time, not due to breakdown but to add a higher volume pump</li> <li>• Reduced strokes-per-minute by 2.2 strokes while maintaining the same oil production</li> </ul>

To have the same power offset from a traditional solar system on this particular pump, it would require a 75 kw solar system at a typical cost of \$3.00 per watt or \$225,000.