



# Energy Self Assessment

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## Center Pivot / Linear-Move Analysis

The information below will help aid you in determining potential options for reducing irrigation costs.

The first section provides baseline estimates of energy use. The following sections show energy savings estimates if the system pressure can be reduced, if irrigation scheduling would reduce one irrigation event per year, if the pumping efficiency could be increased, or the potential cost savings if a different fuel/energy type was used.

The Alternative Energy Option section will allow you to determine if you are using the lowest cost fuel available today.

### Baseline Estimates and energy use

Total System length, ft	4	feet
Estimated Acres Irrigated	0	acres
<b>Pumping</b>		
Total Dynamic Head	181	feet
Total Engine/Motor Brake Horsepower	55	hp
Total CP horsepower*	64	hp
Estimated Hours operated per year	0	hours
<b>Annual Estimated Energy Usage</b>		
Well Pump Power Unit	15	kilowatt-hr
Tower and Booster motors	2	kilowatt-hr
Annual Irrigation Cost per Acre	16	\$ / Acre
Annual Fuel Cost	\$ 2	\$ / year
Btu Energy Equivalent	58021	Btu / yr
<a href="#">Greenhouse Gas Emissions</a>	29	lbs CO2 / year

\* - includes booster and tower motors

### System Pressure Reduction Potential\*

Current Pressure at Center Pivot / linear drive unit	35	psi
Current estimated pressure at end of lateral	-5	psi
Low pressure sprinklers pressure requirement	30	psi
Potential Horsepower Reduction	0	hp
Energy Savings	0	kilowatt-hr
Cost Savings	\$ 0	\$ / year

Btu Energy Equivalent	0	Btu / yr
Greenhouse gas emission reduction / (increase)	0	lbs CO2 / year
<i>'*' - Potential Savings by reducing system pressure to 30 psi at end of system.</i>		

**Potential Savings from Irrigation Scheduling\***

Electricity	0	kilowatt-hr
Electricity	0	kWh
Cost Savings	\$ 0	\$ / year
Btu Energy Equivalent	0	Btu / yr
Greenhouse gas emission reduction / (increase)	0	lbs CO2 / year
<i>'*' - Energy Savings assuming one less irrigation event per year</i>		

**Pumping Efficiency Increase\***

Potential increase in pumping efficiency	5 %	
Potential Energy Savings with 5% increase in pumping efficiency	1	kilowatt-hr
Cost Savings	\$ 0	\$ / year
Btu Energy Equivalent	3413	Btu / yr
Greenhouse gas emission reduction / (increase)	2	lbs CO2 / year
<i>'*' - Potential if pumping efficiency is increased</i>		

**Alternative Energy Options**

*Use this tool to evaluate the economics of fuel switching*

Current Energy Source	Electricity	
Current Unit Energy Cost	0.10	/ kilowatt - hr

**Alternate Equivalent Unit Energy Costs**

If you can purchase energy for less than the stated costs below you will save energy costs

Diesel	1.41	\$ / gallon
Electricity	---	\$ / kWh
Natural Gas	0.75	\$ / Therm or CCF
LP Gas / Propane	0.78	\$ / gallon
Gasoline	0.98	\$ / gallon

<b>Alternate energy source</b>		
Consider an alternate energy source	Electricity	▼
Enter unit energy cost	.1	\$/kWh