Electrical Grounding Safety & Energy Efficiency Potential for Irrigation

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Michigan Center Pivot Irrigation Systems
High-Pressure Sprinklers
Low-Pressure Sprinklers
Electric Power to Operate Irrigation Motors
All about proper grounding & having certified electricians install your system
Irrigation motors or systems **not** connected to the service panel ground rods can result in a shocking experience. Be sure that the service panel is adequately grounded.
Irrigation motors or systems connected to the service panel ground rods prevents a person from receiving a shock.

When a motor is powered-up always check to make sure it is safe to touch.
Safety at the Center Pivot

When a pivot is powered-up always check to make sure it is safe to touch.

Grounding rods must be connected to the irrigation System electrical system.

Recommend 3-4 8 feet connected ground rods 10 feet apart.
Equipment grounding wire must be run with circuit wires to all electrical loads.

Equipment grounding wire must be either bare or with green insulation or green covering.
480 volt 3-phase service disconnect either remote or at pivot point

Utility Transformer

Install surge protective device as close to irrigation machine ground as practical

Lightning Surge Protection (SPD type 1)
Energy Efficiency in Irrigation
Energy Efficiency in Center Pivot Irrigation Systems

Number of Farm Operations: 20
Potential Annual Average Savings: $21,737
Potential Annual Energy Savings: 238,866 kWh
Average Electrical Rate: $0.11 per kWh
Average Implementation Cost: $82,184
Average % Energy Savings: 53%
Average Payback on Investment: 3.8 years
Average Internal Rate of Return (15 years): 25.6%
For an energy audit, contact:
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