



THE UNIT

Mobile Solar Array

How Does The Unit Work?

The Unit can provide about 40,000 kWh per year using an 81-panel, 26 kW solar array. The panels are affixed to a platform that can be moved to different sites and fields using a tractor or full-size truck.

The Unit provides mobile solar energy in two various aspects. You can move it from site to site, as you've seen. But you can also adjust the panels themselves.

Once the platform is in place, three rows of solar panels unfold using a battery-operated cable winch. Depending on where the sun is positioned at that time, the user would orient The Unit to maximize the amount of generated solar power.

The panel angles are completely customizable.

The Unit also ties into the grid, which means any excess power you produce can be sold back to the utility – assuming yours allows net metering. And with The Unit's power correction factor, the power consumption of sprinkler pivot motors, for example, will also decrease by up to 30%.

With battery storage as an optional add-on, or a generator backup, The Unit can completely liberate you from the worry of brownouts and blackouts affecting your electricity-dependent farm systems.



**FARM &
AGRICULTURE
POWER USES**

**OFFSET LOADS
DURING SUNLIGHT
HOURS**

**REDUCE
ELECTRICITY COSTS**

**MAXIMIZE
GENERATED SOLAR
POWER**

**OPTIONAL ADD ONS
BATTERY STORAGE
GENERATOR**

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POWER, LLC**

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Beta Testing

This prototype is built specifically for pivot irrigation testing at Vonglahn Farm in Camilla, Georgia.

What Are the Components?

The Unit is constructed on a 67' steel frame that has two tandem axles for an estimated total weight of 25,000 lbs. The transport width is 11' 6", however it expands a total of 30'. It sits 16'2" tall, but during transport it is only 12'4". The solar panels are Canadian Solar 325 watt panels that have Solar Edge 700W optimizers. Each module is mechanically attached to Iron Ridge XR1000 aluminum rails. There is a total of 9 arrays, which consists of 3 rows of 3 panels. Once the platform is in place, three rows of solar panels unfold using 6 battery-operated cable winches. There is a 3-Ph 33.3kw 480VAC 60Hz 1000VDC Solar Edge Inverter that converts the DC electricity to AC.

What is the electrical output?

This design is a grid-tied system, which means it is contingent on the power grid for it to operate. It is projected, that The Unit will produce over 42,000 kWh annually. This is enough electricity to power almost 4 homes a year. We connect the 3 phase 277/480V inverter to a 50 Amp breaker panel with a separate AC disconnect. Integrated arc fault protection for NEC 2001 690.11 and rapid shutdown for NEC 2014 690.12 Meets Grid Connection Standards IEEE1547. Reverse-Polarity and Islanding Protection.

Optional Equipment

Back up batteries and a 30kW generator can be added to provide an off- grid solution.

The Unit can be run in parallel up to 200kW.

