



ENERGIA

POWER SOLUTIONS

# Energia Solar PowerVault Trailer

*"Rapidly Deployable, Off-Grid Mobile  
Solar PV and Battery Storage Unit"*

The Energia Solar PowerVault Trailer  
is a core product of our off-grid,  
integrated mobile power solutions.



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The PowerVault is designed as an off-grid independent power solution for usage without the need for external power or diesel generators. It is a plug and play system that can generate and store energy instantly, producing up to 45kWp\* per day which can be significantly increased with the addition of our "plug-in" Solar PowerFold™ Array modules.

### **It's ideal for:**

- Disaster and Emergency Power Solutions
- Integrated Off Grid Water Purification Solutions
- Construction power and charging applications
- Commercial applications in high use diesel/gas applications
- Off grid or remote locations where fuel isn't readily available or cost prohibitive

### **PowerVault - Design Specifications:**

- Designed to be towed, stabilized & operated, by one semi-skilled individual. This includes the manual opening & hydraulic tilting mechanisms for the powerful roof top-solar array.
- The components and mechanisms used are manually operated, ensuring that in the event that repairs or maintenance are required on location, they can be undertaken by semi-skilled personnel.
- 450 cubic feet of storage allows the integration and transportation of multiple components integral to our solution.
- A range of Lithium and Carbon Lead battery storage options.
- Ability to be towed using a large standard pick-up truck.
- Designed to fit within an ISO 20' shipping container, commonly used worldwide, allowing ease of deployment and transportation by sea, road & air.
- On & Off-Road Capability
- Fold-able Tow Hitch with Electric Braking System
- Simple access through full height side doors and large rear ramp.
- Fully Accessible large front compartment housing all battery and electrical components, completely segregated from internal equipment space.

\*Depending on Solar Irradiance at location



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## PowerVault - Power Production Specifications:

Top Mounted Solar Array designed to include six identical large customized glass-less solar pv modules manually opened and tilted with the assistance of three electrically operated hydraulic rams.

- Solar PV modules are designed for extreme environments and able to withstand hurricane force winds.
- Solar PV modules are more than 40% lighter in weight than traditional glass modules.
- Each Solar PV module consists of 192 Mono crystalline silicon cells, each module capable of producing up to **1.15kWp**
- The complete Top Mounted Solar Array which includes 6 of the our PV modules is able to produce up to **7kWp** per hour alone.
- Additional Solar Power production is available with our Mobile Solar PowerFold™ units, which can produce up to 2.2kW per hour. With the MSPV and MSPF systems combined, the amount of Solar Power Production is almost limitless.
- For large power application requirements, the MSPV also includes a power input for external generators.





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For more information, please contact  
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## PowerVault - Power Storage Options:

Our PowerVault's are designed to incorporate significant amounts of power storage inside the separate front compartment. We are able to design this area to accommodate various types of battery and amounts of power.

### Lead Carbon Battery:

- Max storage capabilities 28 Full Lead Carbon batteries, each capable of storing 2.4kWh. Total storage capabilities 67.2kWh.
- Max discharge of 70%, providing 47 kWh of available power
- Remote monitoring system with GPS, power production and consumption tracking
- 2.5 hour from empty to full charging capability with a 1,500+ battery life cycle
- Robust option, able to withstand more extreme environments.

### Lithium Ferrous Phosphate Battery:

- LFP is the safest, most environmentally benign Lithium Ion chemistry available—no risk of thermal runaway or fire
- No AC or toxic liquid cooling - negligible parasitic drain - long cycle life
- Non-toxic and non-hazardous recyclable materials
- Built-in accessible 80 Amp DC breaker On/Off switch - increases safety 24V and 48V LFP batteries with proprietary architecture and Battery Management System (BMS)—do not require ventilation, cooling or thermal regulation.
- Max storage capabilities 38 Lithium Ferrous Phosphate batteries, each capable of storing 3.8kWh. Total storage capability of over 130kWh.
- Max discharge of 90%, providing 119 kWh of available power
- Remote monitoring system with GPS, power production and consumption tracking
- 1.5 hour from empty to full charging capability with a 10,000+ battery life cycle

