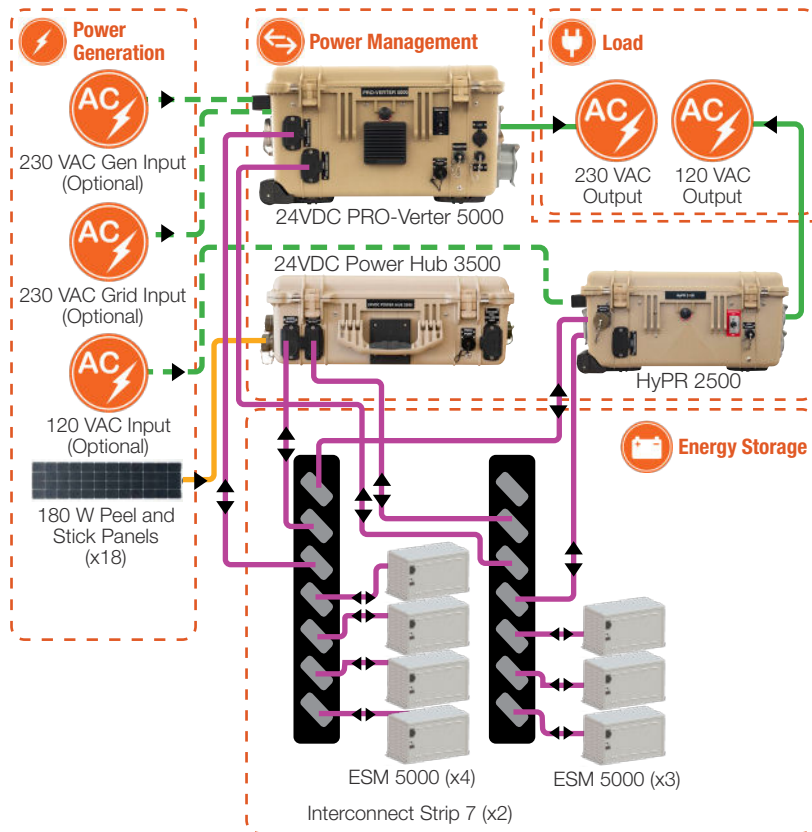




Trailerized Hybrid Power System System Diagram

SOLAR STIK®



Legend	
	DC Solar Circuit
	DC Interconnect Circuit
	AC Circuit
	Optional
	Direction of flow
	Component types



Inputs and Outputs

- Inputs**
 - 230 VAC Power (PRO-Verter)
 - 120 VAC Power (HyPR)
 - Solar Power
- Outputs**
 - 230 VAC Power (PRO-Verter: 4,000 W Continuous, 6,000 W Surge)
 - 120VAC Power (HyPR: 1,100 W Continuous, 2,200 W Surge)

Features

- Turn key, trailer mounted "borrow proof" power solution
- 35 kWh of Lead Acid AGM energy storage (800 cycle life)
- 3,240 kW of "Peel and Stick" Solar Arrays
- Ability to accept and process AC grid and AC generator
- Ability to act as Uninterrupted Power System (UPS)
- Ability to provide reliable, pure sine wave 230 VAC power to 2.5 kW AC unit
- Ability to provide reliable, pure sine wave 120 VAC to ventilator (840 W)
- Ability to provide over 24 hours of backup power from batteries alone (assuming AC unit runs 1/4th of time and ventilator runs 1/8th of time)
- Ability to recharge from 230 VAC and 120 VAC power or full daily Solar Recharge for 24/7 runtime (assuming 6 hours of daily sun)
- Transportable by land, sea, and air (passenger or cargo)
- Built and designed to MIL-STD-810H
- Modular system architecture
- Scalable system architecture (components can be added or subtracted in real time as requirements change)
- Operates in extreme conditions (rain, snow, sleet, hail, etc)

Solar Panel Features

- Eliminates racking hardware and associated costs
- Reduces labor time to install exponentially and therefore direct labor cost
- (2 persons can install 6-10kW per hour)
- Reduced labor time on roof, which mitigates a significant OSHA liability
- Avoids structural capacity limitations and unknowns - it is unknown if the shelters can handle racking and glass panels and that would incur engineering time and costs to confirm, adding to the installed cost.
- Non-reflective design: lowest measured reflectivity, at all solar angles of incidence, in the Sandia National Lab Solar Glare Hazard Analysis Tool (SGHAT) database vs. all other panels and glare mitigation methods
- Enables use in glint-/glare-sensitive locations and a measurable increase in daily energy harvest due to improved performance during hours when the sun is not aligned on-axis to the panel
- Lightweight (about 1/3 the weight of glass-aluminum frame panels)
- Dramatically reduces static load on the roof / structure avoiding structural issues
- Single person lift capable (OSHA standard is 50 lbs)
- Bonds directly to the roof surface using a very strong roofing butyl adhesive backing
- Developed in conjunction with roofing supplier CertainTeed and wind tunnel tested to available tunnel limit of 155 mph
- Eliminates lifting force / load on the roof; thus avoiding structural issues
- Metal roof anchoring and racking systems are tedious to install and could introduce unknown maintenance and durability risks
- No shelter roof penetration, avoiding pathways for leaks and corrosion
- No special tools required

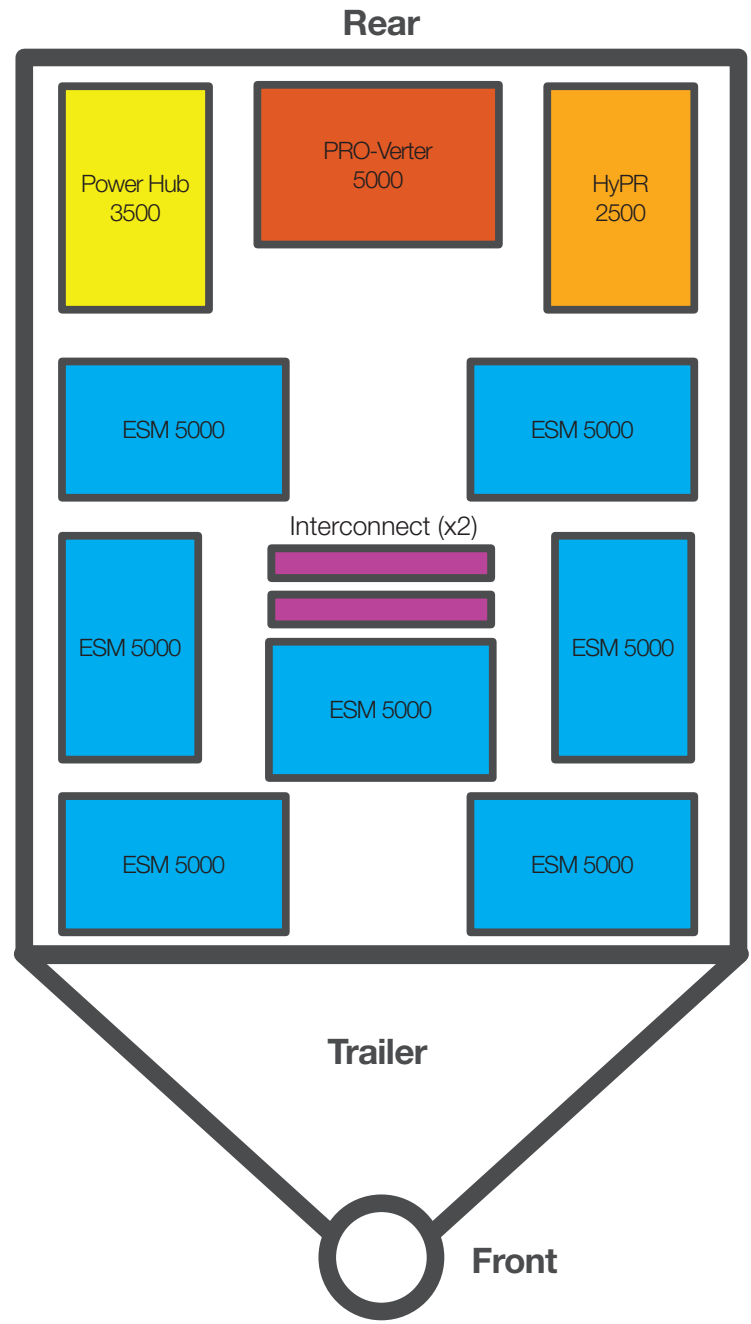
Item #	Product Name	QTY
TBD	Trailer	1
21-0102220	24VDC ESM 5000 X-2220	7
13-1000160	24VDC INTERCONNECT STRIP 7	2
20-0104033	24VDC PRO-VERTER 5000-220 AFF1	1
20-0104050	24VDC HyPR 2500-120 X-4050	1
20-0302206	24VDC POWER HUB 3500	1
11-1000084	SOLAR PANEL, ENDURANCE 180W, WHITE ADHESIVE BACKED	18
16-0800102	CABLE, 3 SERIES CONNECTION, SOLAR, MC4/BAYONET, 24VDC, 30', 6AWG	6
13-0000032	CABLE, POWER, INTER-CONNECT, 24VDC, 5', 2AWG	13
13-1000316	CABLE, POWER, L6-30P/L6-30R, 250VAC, 25', 8AWG	1
13-1000418	CABLE, POWER, L5-15P/L5-15R, 120VAC, 25', 10AWG	1





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Trailerized Hybrid Power System System Diagram



Legend	
	PRO-Verter
	Power Hub
	HyPR
	Energy Storage
	Interconnect

Top View

