

# Ground Renewable Expeditionary Energy Network System (GREENS)



- SOLAR POWER COLLECTION**
- HYBRID POWER GENERATION**
- HIGH DENSITY ENERGY STORAGE**
- RAPID ROI >> FUEL, MAINTENANCE AND LOGISTICS**
- RELIABLE AND COMBAT PROVEN**

- ▶ **Combat Proven**
- ▶ **Man Transportable**
- ▶ **Requires No Fuel**
- ▶ **Operates Silently**
- ▶ **Rugged**
- ▶ **Reliable**
- ▶ **No Maintenance**
- ▶ **Deploys in < 20 minutes**
- ▶ **Return on Investment = Months**
- ▶ **No Special Handling for Shipping (UN/DOT Class 9 Tested)**
- ▶ **Modular and Scalable (1 to 5 KW)**
- ▶ **Customized as Needed**

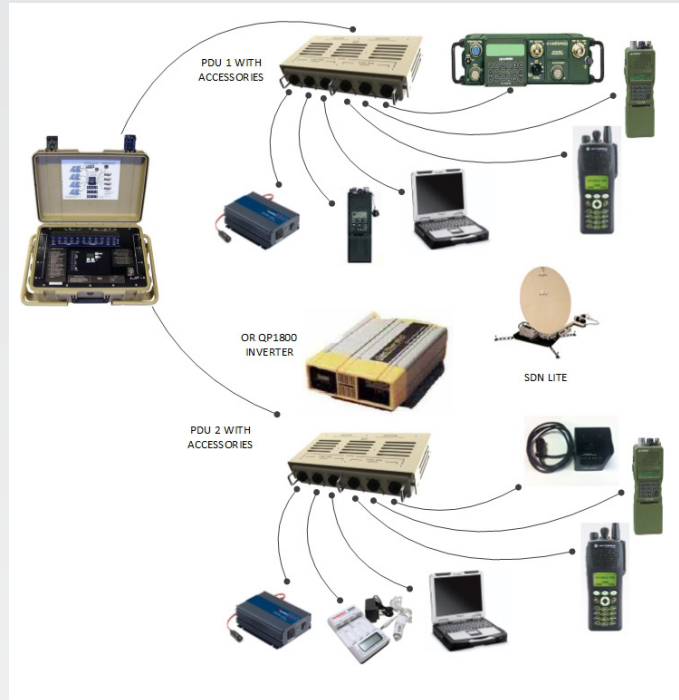


GREENS saves fuel, money, and reduces the frequency of resupply missions. GREENS is the first viable solution to replace traditional fuel-fired generators. GREENS was developed as a USMC Program of Record, but has applicability to both civilian and military customers. The system collects solar energy and converts it into useable power. Excess solar energy is stored in the array of high energy density battery systems (HEDBS) for use when solar energy is insufficient. The system is light-weight and man portable. The GREENS HEDBS is safe, and has been approved as UN/DOT Class 9 tested for commercial shipment.



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One GREENS will provide up to 1kW of power, and up to five systems can be paralleled together to provide 5 kW of power. No formal operator training is required. System deployment time is quick – 20 Minutes by an untrained user. The system can be used as a completely renewable solution, or can be used in a hybrid configuration with a generator. If used as a hybrid solution, the GREENS controller will auto-start the generator if necessary to recharge the batteries, and will run the generator at peak efficiency.



Power Applications for Generated Power

## Standard Configuration

Quantity	Description	Part Number	Dimensions	Weight
1	Controller	0754A08	21.2" x 16.0" x 8.3"	51 lbs
4	Battery (HEDBS)	0754A12	16.5" x 14.0" x 7.0"	40 lbs
1	External Cable Kit (1 of 2)	0754A09	24.8" x 19.4" x 13.9"	77 lbs
	External Cable Kit (2 of 2)	0754A09	24.8" x 19.4" x 13.9"	50 lbs
1	Power Distribution Kit	0754A11	24.8" x 19.4" x 13.9"	52 lbs
<b>Options</b>	Autostart	0920A01	19.8" x 15.8" x 7.4"	38 lbs
	Output Parallel Adapter	0754A07	16.0" x 13.0" x 6.9"	17 lbs
	Lead Acid Battery (LATBS)	0754A06	20.9" x 12.7" x 12.8"	110 lbs



## General Specifications

Power – 1000W Continuous	Efficiency – Renewable Energy (MPPT) 92-97%
Inputs – 4x 36-72VDC, 500W Renewable Energy	– AC Input 85-90%
1x 85-265 VAC, 47-63 Hz, 1200W AC	– DC Input 96-98%
1x 18-32 VDC, 1000W DC	Environmental – Temp Range -4°F to 131°F (-20°C to 55°C)
Outputs – 2x 22-30 VDC, 1000W, MIL-STD-1275	Corrosion Resistance, MIL-STD-810F, Method 509.4
Storage – 4x 28 VDC Nominal, 50A Input, 500W Output (Charge)	Sand and Dust, MIL-STD-810F, Method 510.4
Battery Options –	Shock Resistance, MIL-STD-810F, Method 516.5, Proc IV
High Energy Lithium (HEDBS) 51A-h (1300W-hr)	Immersion, MIL-STD-810F, Method 512.4
Sealed Lead Acid (LATBS) 55A-hr	Rain Resistance, MIL-STD-810F, Method 506.4