



Ameristar Solar LLC

for

Portable Water Treatment Systems

Trailer and Individual Transporting Platforms

PROBLEMS: Clean Water and Power Before and After Disasters



Storms: Lost power for **Days**



Earthquakes: Lost power for **Weeks**



Floods: Water Polluted for **Months**



Tsunamis: Clean Water and Power for **Years**

ONE SOLUTION:



Ameristar Solar LLC, 1-5 KW Fixed Solar Panel Battery Charging Station
U.S. Fish and Wildlife Service, Malheur National Wildlife Refuge

POOR SOLUTION: Diesel Generators



**Advanced Medium
Mobile Power Sources (AMMPS)**
The Future of Power in the Field

Based on Run Time: 12 hrs Each, DOD Report: Cost, \$400/gallon*
2 units x .34 g/h x 12h x \$400=\$3264/day x 365=\$1,191,260/year in fuel costs
Cost: \$20,000 (2- AMMPS 5K Generators)
Fuel: \$1,191,260/yr.
Maint: \$1,500/yr.
LC: 6 years
First year OPEX= \$1,292,760
Six year OPEX= \$7,756,560
30 years = \$35,882,800
LC Analysis: 30 year Operational Expenses = **\$35,882,000**
LCOE: \$35,882,000 LC/262,800 kW Energy Produced = \$136.54/kWh

* DOD, Asst. Secretary of Defense For Operational Energy Plans & Programs
(FBCF: Fully Burdened Cost of Fuel)

BEST SOLUTION: Solar Portable Power Stations



SolarStream™ Silent and Clean
The Future of OFF-GRID Power in the Field

Based on One 4kW Ameristar Solarstream™ Solar Platform, 3 day battery backup
Cost: \$59,000 (Platform)
Panels; \$ 4,000 @ \$1.00/watt
Fuel: \$ 0
Maint: \$ 150/yr.
LC: 30 years
Batteries \$ 2,200 (Eight, 8D-AGM 6.0V)(2 year life)
First year OPEX = \$ 65,350
Six year OPEX = \$ 70,500
30 years OPEX= \$101K
LC Analysis: 30 year Operational Expenses = **\$100,500**
LCOE: \$100,500 LC/262,800 kW Energy Produced = \$0.38/kWh

SolarStream™ Simple Payback = 20 Days

\$63,350/\$3264/day in Fuel = 19.41 days
LCOE: Levelized Cost of Energy = \$0.38/kWh

Scalable Ameristar PWTS (Portable Water Treatment Systems)



Solar Panels with UV Window

Rugged Trailer Mounted PWTS
500-1500 gallons/day



Solar Panels with UV Window

Individual Transportable PWTS
(30-50 gallons/per trip
to water source)

Capacity Building

WATER AND POWER FOR EQUALITY OF DISTRIBUTION

- Individual power & water for 1-3 families (smaller SPPS, solar portable power stations, prevents water & power conflicts among larger groups especially for women and children)
- Clean Water for drinking and sanitation
- Power for lights, tools and livelihoods
- Agricultural water pumping for crops and livestock
- Delivers **500 g/d.** of ultra-pure drinking water and **1500 g/d.** of NSF P231/P248 microbiological filtered water

10'-20' Cargo Container Deployed Usable Before, During and After Disasters



Solarstream® Model 2-4KW

Meet The Team



Bill Boyk
Director/Founder

"After thirty years of solar construction experience, field training in mobile military tactical systems and graduating from Portland State University, it became obvious to me that lightweight, mobile, expandable portable power stations like the Ameristar Solarstream® is a real solution to the worldwide pain of unreliable grid systems and the burning of unsustainable fossil fuels."



Trey Taylor
Renewable Energy Advisor/Consultant

"Trey co-founded Verdant Power, a marine and hydrokinetic power company, in 2000 and has since created subsidiaries in Canada, Hong Kong, and the UK. Prior, he was the Founder/President of the Interactive Marketing Institute. Consulted with Baltimore Gas & Electric and Price Waterhouse World Utilities Group. " Currently, Trey is also working with Anchor Coalition securing water and..."



Chandra Brown
USA & International Trade Advisor/Consultant

"Highly experienced executive with over 20 years of manufacturing leadership from the private sector to the U.S. government. Strong business development professional skilled in negotiations, marketing, public speaking, sales and team building." Current CEO/Fonder of Brown Executive Strategies and Former Deputy Assistant Secretary for Manufacturing under the Obama Administration



Terry Billideaux
Business Development Consultant

"I am a results-driven professional and entrepreneurial leader. During my tenure as President/CEO at Armor Systems International, Inc. , I was awarded military contracts vital to our country's national defense during the Iraqi war. We provided defense products to the US Army, Marines and Home Land Security. I create new distribution channels that enable companies to enter into new markets".



Matt Boyk
CTO Mechanical Engineering & Design

"As a robotic assembly line supervisor for EPSON North America for 17 years and MachineTechnician & SolidWorks CAD Too Designer for Leupold Stevens for 8 years, I bring knowledge of building assemblies for new expandable hardware systems and real world experience how to design rock solid dependable systems for the 21st generation of OFF-GRID portable solar power platforms".



Jonathan D. Long, LTC US Army (retired)
Innovation/Product Development

JD brings 25+ years of defense related business experience. His professional focus is on innovation, technology transfer and product development. He has served as the Branch Chief, US Army Contracting Command, Alexandria, Virginia. He traveled to Afghanistan, Kuwait and the US Army (Pentagon) to develop programs for the Afghanistan Ministry of Defense (Army services training program.

E2 ENVIRONMENTAL ENTREPRENEURS

The Independent Business Voice for the Environment

WASHINGTON DC 2013 Delegation

Nicole Lederer, Co-Founder E2

Bill Boyk, CEO, Ameristar Solar LLC

Brenden Millstein, CEO, Carbon Lighthouse

Bill Lemon, SVP Source Capital Group

Steve Cowell, Chairman/CEO Conservation Services Group



2014 PNDC, Pacific NW Defense Coalition Event

Manufacturer Visit to KAWAK Aviation

Technologies

Bend, Oregon

Senator Ron Wyden



Questions