



WSTIAC Success Story

WSTIAC Reduces the Warfighter's Energy Footprint in Theater

[<http://wstiac.alionscience.com>]

Customer:	U.S. Army Rapid Equipping Force, Fort Belvoir, Virginia
Challenge:	U.S. military forces in Afghanistan and Northern Pakistan rely upon a very long and expensive supply chain that is difficult to sustain. In addition, fuel convoys expose troops to attacks from hostile forces and IEDs. Transitioning U.S. Ground Forces maximally to local energy delivery systems will result in fuel and operating savings, reduce convoy hazards inherent to the present supply chain paradigm, and minimize the logistics footprint.
Approach:	WSTIAC provided technical expertise to the U.S. Army Rapid Equipping Force's (REF) "Energy to the Edge" (E2E) initiative to evaluate alternative energy systems to reduce installations' dependence on fossil fuels. WSTIAC subject matter experts (SMEs) evaluated integrated series of hybrid power fixed/mobile electric power generators in CONUS and OCONUS locations. WSTIAC SMEs visited these sites, assessed opportunities for efficiencies, and introduced one or more alternative energy systems (batteries combined with solar, fuel cells, portable generators or wind) to provide real-time power with minimal waste; and then documented the fuel savings.
Value:	Results from participating installations in Afghanistan have been highly encouraging; having partially or completely replaced fleets of inefficient and wasteful fossil fuel generators with "smart," efficient hybrid energy delivery

	<p>systems. Several examples of savings realized to date:</p> <ul style="list-style-type: none">• Forward Operating Bases and Combat Outposts (FOBs and COPs) reduced their fuel consumption by 20 to 80 gallons per day, (depending on base size) eliminating a number of air shipments per month, or several fuel trucks over a year.• Mobile kitchen trailers (MKT), aid stations, and other structures are powered by solar systems with 100% reliability.• Common remotely operated weapon stations (CROWS) powered by portable solar, consuming no fuel from vehicles.• Intelligence, surveillance, and reconnaissance (ISR) towers at FOB/COPs use hybrid systems to provide power surety to operate 24/7 with no maintenance down time, and also maintain a secure perimeter for installations.
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