AMMPS AUTOMATIC TRANSFER SWITCH (AMATS)

RUGGEDIZED AUTOMATIC CRITICAL POWER TRANSFER SWITCH

National Defense Center for Energy and Environment

PROJECT OVERVIEW

This effort will provide a system with the capability to monitor an existing power generation source (military generator, microgrid, host nation power grid, or commercial generator) and when sensing a loss of power, command a military standard Advanced Mobile Medium Power Source (AMMPS) generator set to automatically start and provide power to critical loads within 10 seconds. An Automatic Transfer Switch (ATS) provides this functionality and the AMMPS ATS (AMATS) system will take existing COTS products and ruggedize the components into a system that meets all military specifications for connectors and environments. The addition of energy storage input will provide the capability to have a zero loss of power on a primary source failure.

BENEFITS

- Increase the readiness of the warfighter across all the services. System will provide the capability of seamless back-up power and provide an increase in power reliability and availability to critical loads
- Enable commanders to have the confidence that they won't loss access to their mission critical hardware during an active engagement or operation
- Provide flexibility as it is primary source agnostic while ensuring there is a mil-std power source providing the necessary back-up power
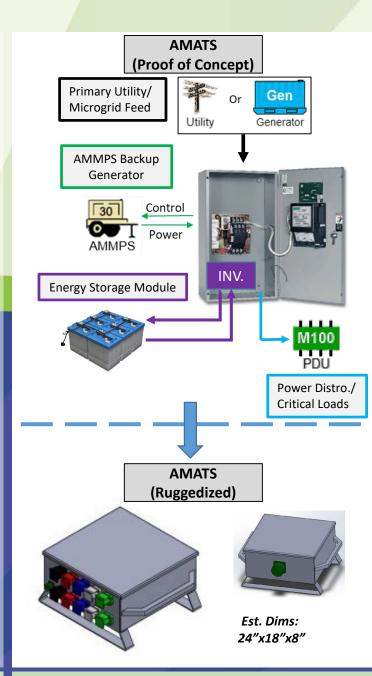
PATH FORWARD

Completion of this project will result in a transition of Hardware, a Tech Data Package, and/or Purchase Description to Project Manager – Expeditionary Energy & Sustainment Systems. PM-E2S2 holds the DoD charter for power generation and distribution. Upcoming major activities include demonstrations, field evaluations, soldier touch points, and mil-spec testing.

AMATS (Proof of Concept)

Primary Utility/ Microgrid Feed

Utility — Or — Gen Generator

AMMPS Backup Generator

30 AMMPS — Control / Power

Energy Storage Module

INV.

M100 PDU

Power Distro./ Critical Loads

AMATS (Ruggedized)

Est. Dims: 24"x18"x8"

FOR FURTHER INFORMATION

National Defense Center for Energy and Environment
http://www.denix.osd.mil/ndcee/home

U.S. Army - C5ISR (Command, Control, Computers, Communications, Cyber, Intelligence, Surveillance and Reconnaissance) Center
https://c5isr.ccdc.army.mil/