

**Project:** Advanced Portable Power Institute – Phase 5

**Amount requested:** \$4,000,000

**Recipient:** Tennessee Tech University

**Address:** Box 5111, Cookeville, TN 38505

**Project description:**

In final phase of the APPI, the concentration will be focused on applying breakthrough materials to extend the life and durability of the squad-level portable battery charger for extending the mission duration and extended life flights for Unmanned Aerial Vehicles (UAV).

The prototype system will meet the tactical power requirements for the warfighter through the use of a smart fuel cell that use readily available combustible fuels, that respond to power demand, are more efficient than existing power sources, are developed to be rugged and economical, and incorporates new direct energy conversion devices that make use of the waste heat to generate electricity. Portable power in the advanced technology sense that is the purpose of this program will have extensive military and civilian applications.