



TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.

U.S. Army Research, Development and Engineering Command

# U.S. Army Research Laboratory

## *Power & Energy Technology Areas of Interest*

**Objective:** To provide advance planning information regarding ARL Technology areas of interest. Note: The information provided is not a solicitation, a request for proposal or quotation, an invitation for bids or a broad agency announcement.

**Requested Innovation:** Ruggedized fuel cells for Soldiers

**Description:** The need for higher energy density (kWh/kg) fuel cells that can be safely operated while attached to Soldiers.

### **Technology Areas of Interest:**

- Scalable from 5W to 1 MW
- Fuel cells to operate on logistics fuels
- Fuel cell systems need produce nearly no sound
- Fuel cells need to be ruggedized and reliably operate after three foot drops
- Needs to have significantly higher energy density (kWh/kg) than is found in current Li-Ion batteries. Weight and volume needs to include the weight and volume of fuel
- Each fuel cell needs to operate reliability for 800 hours.

It is also desirable for the fuel cells to be conformal and available at low cost.

## **EDGE Call for Innovation (CFI)**

### **“CFI ARL-Ruggedized Fuel Cells-007”**