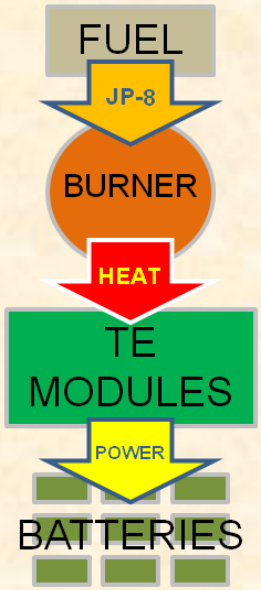

Key Technologies

Compact Combustion

- High efficiency (>90%)
- Fast start-up time (~5 mins)
- Burn rate ~0.25 gal/hr
- Potential future multi-fuel mod

Thermoelectric Modules

- High performance thermoelectric materials convert thermal energy to usable electricity

Micro-technology Heat Exchangers

- Lightweight, compact TEG system package

Stakeholders

Deputy Chief of Staff, G-4, United States Army

Pacific Northwest National Laboratory

NASA

JPL

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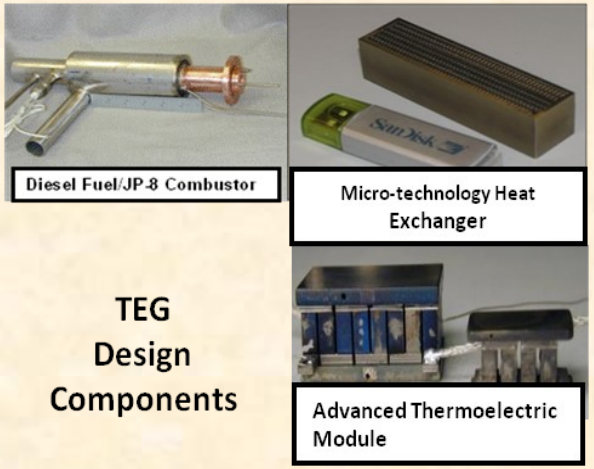
Advanced Thermoelectric Generator Power Source (TEG)



US Army LOGISTICS INNOVATION AGENCY

Vision

A lightweight, modular thermo-electric power generation capability to rapidly recharge batteries in the field while lowering Army energy costs and reducing Soldier load.

Objective

Deliver a prototype TEG system for evaluation and fielding as a portable power solution for the most austere environments. Estimated delivery 2012

Success Defined

In partnership with our customer and transition partner (PM Soldier Warrior), deliver a TEG system which can be rapidly transitioned to the field to meet power needs and enable rechargeable battery solutions for dismounted forces.

LIA is partnered with the DOE's Pacific Northwest National Laboratory (PNNL) and NASA's Jet Propulsion Laboratory (JPL) on this cutting-edge technology.

Features

Modular design

- Spread system volume/weight across multiple packs for greater mobility
- Reassemble to meet power needs in the field

Heat to power

- TEG burns fuel and converts heat to usable electricity
- Operates at low volume—no engine

Reduced logistics burden

- Supports resupply efforts in rugged terrain by minimizing logistics package weight and volume
- Promotes additional solutions using rechargeable batteries

Benefits

To the Warfighter

- Lessens Soldier-carried battery loads for multi-day missions
- Moves battery charging closer to the point of need
- Operates with minimal noise signature

To the Army

- Reduces Warfighting costs by enabling and encouraging use of rechargeable batteries in high-demand missions
- Reduces cost and environmental impact of storing and disposing of used batteries
- Army-owned design and data rights permit competitive sourcing and modification

To Logistics

- Rechargeable batteries significantly reduce costs for battery procurement, storage, and transportation
- Reduces need for large-volume battery exchange actions in remote areas