Fully Burdened Cost of Fuel
Responsible for Research, Development and Engineering Support to 2,800 Army systems and many of the Army’s and DOD’s Top Joint Warfighter Development Programs

TARDEC is the Ground Systems Integrator for the DOD
TARDEC invests in targeted Ground Vehicle energy solutions

Prime & Non-Primary Power
- Diesel Engines
- Rotary Engines
- JP-8 Fuel Cells
- Integrated Starter Generator
- Turbine Engines
- Alternators
- Drivelines
- Track Systems
- Transmissions
- Traction Motors
- Integrated Starter Generator
- Alternators
- Drivelines
- Track Systems

Energy Storage
- Li-Ion / Ultracap Hybrid Energy Storage
- Capacitors
- Advanced Batteries
- Fuels

Thermal Management
- Radiators
- Heat Recovery
- Phase Change Cooling
- Advanced Electronics Cooling
- Thermal Architectures
- Thermal Interface Materials

Power Management
- Power Controllers for Power Management
- Power Converters/Inverters
- Wide Band Gap Materials (SiC)
- High Temperature SiC Modules
- Pulse Power Switching
- High Temperature Capacitors
- High Temp Inductors
Each vehicle exists as a system and operates within a system of systems
We must manage the Army’s fleet as a system

A system of systems approach optimizes scarce energy resources
TARDEC is Connected to key Energy Partners

Government Agencies

DOD Installation Partners

US Army Corps of Engineers

Industry

SAIC, AVL, Eaton, Ballard, ALCOA, PPG, Delphi, FEV, Rexroth, Bosch Group, 3M, Roush, Ricardo, A123 Systems

Professional Organizations

ATA, OESA, SAE, USCAR, Automotive Resources Institute, HTUF, ARI, ESD

Defense Industry

Volvo, Freightliner, Mack, Oshkosh, PACCAR, BAE Systems, General Dynamics Land Systems

Non Profit Org

Automation Alley, US Auto Parts, Next Energy, CAR, Calstart

Automotive Industry

Chrysler, Ford, GM

Academia

Wayne State University, Virginia Tech, Michigan State University, CMU, Lawrence Technological University, Western Michigan University, Inlet, employs the Future
Dual-use Technology Solutions and a Systems Approach is the path forward.

Game Changing Technology Activity

Silicon Carbide (SiC) Power Electronics

Power Management: AOPET

Advanced Lead Acid and Advanced Lithium Ion Batteries

Hybrid Electric Reconfigurable Movable Integration Testbed (HERMIT)

Advanced Automotive Battery Initiative

Power and Energy Innovation Workshop White Paper

Advanced Vehicle and Power Initiative

TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.
But the goal remains delivering solutions for the Warfighter.

“Power and energy is not only the greatest enabler of the Warfighter, it is also the most significant limitation.”

TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.