Applicant	Location	Description	Federal Cost Share[1]
Development of Low-cost, High Strength Automotive Aluminum Sheet (Area of Interest 1)			
Alcoa Inc.	Alcoa Center, PA	This project will develop a high strength aluminum alloy with a recycle-friendly composition and more energy-efficient thermomechanical processes during casting and rolling.	$2,391,770
Xtalic Corporation	Marlorough, MA	This project will develop an electroformed nanostructured aluminum sheet material, including the build and test of a vehicle component.	$2,500,000
Integrated Computational Materials Engineering (ICME) Development of Carbon Fiber Composites for Lightweight Vehicles (Area of Interest 2)			
Ford Motor Company	Dearborn, MI	This project will develop, integrate and implement predictive models for Carbon-Fiber Reinforced Polymer composites that link the material design, molding process and final performance.	$6,000,000
Beyond Lithium Ion Technologies (Area of Interest 3)			
Michigan State University	East Lansing, MI	This project will demonstrate polycrystalline membranes in Li-metal and Li-sulfur batteries that support current densities approaching that of defect-free crystals.	$1,233,555
Board of Trustees of the Leland Stanford Junior University	Palo Alto, CA	This project will use nanomaterials to improve the interface between lithium metal anodes and the electrolytes to improve the cycle life of lithium metal batteries.	$1,350,000
University of Pittsburgh	Pittsburgh, PA	This project will develop and scale up synthesis of high capacity cathodes by high-throughput cost-effective approaches.	$1,250,061 (jointly funded)
The Research Foundation for State University of New York (SUNY), Binghamton University	Binghamton, NY	This project will replace the carbon anode with a Sn-Fe-C composite with twice the volumetric energy density of carbon, and provide a high energy cathode.	$1,221,125
Liox Power, Inc.	Pasadena, CA	This project will develop high specific energy, high power and highly reversible Li-air batteries that are based on the concept of replacing traditional electrolytes in the air electrode with a stable inorganic molten salt electrolyte.	$1,500,000
University of Maryland	College Park, MD	This project will utilize a multifaceted and integrated (experimental and computational) approach to solve the key issue in solid-state Li-ion batteries, interfacial impedance, with a focus on Garnet-based solid-state electrolytes.	$1,212,877 (jointly funded)

[1] Through the Advanced Vehicle Power Technology Alliance between the Department of Energy and the Department of the Army, the Army is contributing a total of $3.7 million over two fiscal years in co-funding in several areas where there are joint development opportunities.

Applicant	Location	Description	Federal Cost Share[1]
Oak Ridge National Laboratory	Oak Ridge, TN	This project will utilize nanoindentation to determine mechanical properties and identify the causes of premature failures at the protected lithium interface.	$1,000,000 (jointly funded)
Texas A&M Engineering Experiment Station	College Station, TX	This project will improve the design of the electrolyte chemistry and cathode architecture of Li-sulfur batteries based on the development of the "internal shuttle effect" obtained from first-principles atomistic and mesoscopic modeling.	$990,000
Brookhaven National Laboratory	Upton, NY	This project will develop a low-cost, anodeless Li-sulfur battery technology utilizing the Dual Functional Cathode Additives concept and able to deliver energy densities relevant for PEV applications.	$1,500,000 (jointly funded)
Commercialization of Power Electronics for Electric Traction Drives Using Wide Band Gap (WBG) Semiconductors (Area of Interest 4)			
Cree, Inc.	Durham, NC	This project will evaluate an 88kW SiC inverter with next generation 900V SiC MOSFET technology.	$1,937,752
Delta Products Corporation	Fremont, CA	This project will develop a high efficiency high density GaN based 6.6 kW bi-directional on-board charger for plug-in electric vehicles.	$1,487,593
Tire Efficiency (Area of Interest 5)			
PPG Industries, Inc.	Monroeville, PA	This project will develop novel surface modified silica technology to improve dispersion in natural and synthetic rubber for fuel-efficient truck and bus tires.	$939,950
Oak Ridge National Laboratory	Oak Ridge, TN	This project will reduce the rolling resistance and enhance the wear resistance of tires by synergistically combining graphene nanoplatelets and silica nanofibers in the rubber composite.	$1,000,000
Multi-Speed Gearbox for Commercial Delivery Medium Duty Plug-In Electric Drive Vehicles (Area of Interest 6)			
Eaton Corporation	Menomonee Falls, WI	This project will develop a new transmission, controller and shift strategy to match the bidirectional performance characteristics of a motor/generator and improve top speed, efficiency and acceleration of medium duty plug-in electric vehicles.	$2,999,755
Advanced Climate Control Auxiliary Load Reduction (Area of Interest 7)			
Delphi Automotive Systems, LLC	Troy, MI	This project will develop a total thermal management solution for electric vehicles using a compact refrigerant loop, a coolant-based thermal energy distribution network and waste heat harvesting from the power electronics.	$2,536,303
National Renewable Energy	Golden, CO	This project will develop a multi-technology, complete-car solution for minimizing thermal	$2,433,800

[1] Through the Advanced Vehicle Power Technology Alliance between the Department of Energy and the Department of the Army, the Army is contributing a total of $3.7 million over two fiscal years in co-funding in several areas where there are joint development opportunities.

Applicant	Location	Description	Federal Cost Share[1]
Laboratory		loads and their impact on plug-in electric vehicle range and performance.	
Development of High Performance Low Temperature Catalysts for Exhaust Aftertreatment (Area of Interest 8)			
Chrysler Group LLC	Auburn Hills, MI	This project will develop new catalysts to demonstrate a minimum of 90% conversion efficiency of engine produced NOx during portions of the FTP test near 150°C.	$1,500,000
Ford Motor Company	Dearborn, MI	This project will demonstrate new low-temperature catalyst materials that are sufficiently durable to meet full useful life emissions targets while minimizing fuel economy penalties and costs.	$1,352,376
Dual-Fuel Technologies (Area of Interest 9)			
Argonne National Laboratory	Argonne, IL	This project will develop light-duty, spark-ignition engines with natural gas direction injection and gasoline port fuel injection systems.	$1,000,000
Fuel Property Impacts on Combustion (Area of Interest 10)			
Oak Ridge National Laboratory	Oak Ridge, TN	This project will use realistic potential future gasoline formulations to optimize an engine equipped with mainstream technologies.	$1,000,000
Southwest Research Institute	San Antonio, TX	This project will develop Dedicated EGR technology with potential oxygenates (ethanol, n-Butanol, iso butanol) to enhance production of H2 via in-cylinder reformation.	$793,913
Argonne National Laboratory	Argonne, IL	This project will develop new fuel quality metrics for low-temperature combustion in a gasoline direct-injection engine and quantify the impacts of fuel properties on combustion performance.	$1,000,000
Powertrain Friction and Wear Reduction (Area of Interest 11A)			
Oak Ridge National Laboratory	Oak Ridge, TN	This project will develop oil-miscible ionic liquid additized lubricants with surface texturing and topographical control for engine and rear-axle applications.	$1,276,000 (jointly funded)
The George Washington University	Washington, DC	This project will develop formulations for SAE 0W-16 low viscosity lubricant with microencapsulated additives and surface textures to enhance durability of engine components.	$1,000,000 (jointly funded)
Powertrain Friction and Wear Reduction (Area of Interest 11B)			
Ricardo, Inc.	Van Buren Township, MI	This project will develop tools to predict both friction reductions and wear rates from a combination of lab-scale tests, model predictions and improved correlations.	$1,040,000 (jointly funded)

[1] Through the Advanced Vehicle Power Technology Alliance between the Department of Energy and the Department of the Army, the Army is contributing a total of $3.7 million over two fiscal years in co-funding in several areas where there are joint development opportunities.

Applicant	Location	Description	Federal Cost Share[1]
Advanced Technology Powertrains For Light-Duty Vehicles Phase 2 (ATP-2) (Area of Interest 12)			
Delphi Automotive Systems, LLC	Troy, MI	This project will develop a low temperature combustion technology called Gasoline Direct Injection Compression Ignition that provides high thermal efficiency with low NOx and PM emissions.	$10,000,000
Dual-Fuel/Bi-Fuel Class 8 Vehicle Technologies (Area of Interest 13)			
Clean Air Power	Poway, CA	This project will develop a dual-fuel approach for heavy-duty engines by replacing diesel fuel with natural gas as the primary fuel while maintaining overall engine efficiency and performance.	$1,735,194
Early Market Commercialization Opportunities (Area of Interest 14)			
Eaton Corporation	Menomonee Falls, WI	This project will demonstrate an electric variable-speed supercharger operating with energy from a waste heat recovery system on a small gasoline engine.	$1,749,820

[1] Through the Advanced Vehicle Power Technology Alliance between the Department of Energy and the Department of the Army, the Army is contributing a total of $3.7 million over two fiscal years in co-funding in several areas where there are joint development opportunities.