FY 2018 Vehicle Technologies Program-Wide

Funding Opportunity Announcement Selections

DE-FOA-0001919

Applicant	Location (city, state)	Project Title/Description	Federal Share
Low-Cobalt Active Cathode Materials for Next-generation Li-ion Batteries The United States Army Tank Automotive Research, Development, and Engineering Center (TARDEC) is partnering with DOE and is contributing $1.8 million towards work in this area.			
Cabot Corporation	Billerica, MA	Aerosol manufacturing technology for production of low-cobalt lithium-ion battery cathodes	$2,989,057
NexTech Materials, Ltd. dba Nexceris, LLC	Lewis Center, OH	Cobalt-free lithium manganese nickel titanium oxygenate spinel cathodes for next generation lithium-ion batteries	$2,466,547
Oak Ridge National Laboratory	Knoxville, TN	Cobalt-free aluminum iron nickelate cathode materials for next generation lithium-ion batteries.	$2,100,000
Penn State University Park	University Park, PA	High-performance coated low-cobalt cathode materials for lithium-ion batteries	$1,952,017
University of California: San Diego	La Jolla, CA	Cobalt free cathode materials and novel architectures	$2,500,000
University of California: Irvine	Irvine, CA	Enhancing oxygen stability in low-cobalt cathode materials	$2,500,000
University of Texas at Austin	Austin, TX	High-nickel cathode materials for high-energy, long-life, low-cost lithium-ion batteries	$2,400,000
Plug-In Electric Drive Vehicle Extreme Fast Charging Program (in support of EISA 131)			
Electric Power Research Institute, Inc.	Knoxville, TN	Modular, interoperable extreme fast charging system with direct connection to medium voltage grid	$3,201,500
Missouri University of Science and Technology	Rolla, MO	Enabling Extreme Fast Charging with Energy Storage	$2,915,377
North Carolina State University	Raleigh, NC	Intelligent, grid-friendly, modular extreme fast charging system with solid-state DC protection	$2,675,952
Electric Vehicle Charging Infrastructure Cybersecurity			
ABB Inc.	Raleigh, NC	Real-time cyber-attack and mitigation system protecting electric vehicles, charging equipment, and the grid	$1,676,979
Electric Power Research Institute, Inc.	Knoxville, TN	Open-source cybersecurity architecture for electric vehicle charging to provide retrofitable and scaleable security solutions	$2,000,000
Virginia Polytechnic Institute and State University	Blacksburg, VA	Hardware and software based on gaming theory to provide charging security for electric vehicles, extreme fast chargers, and the grid	$2,500,000
Materials			
Ford Motor Company	Dearborn, MI	Multiscale modeling of corrosion and oxidation performance and impact on high-temperature fatigue of automotive exhaust manifold components	$1,500,000

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Michigan State University	East Lansing, MI	Computational model of damage accumulation in adhesives after exposure to water, heat, and sunlight	$967,662
Oak Ridge National Laboratory	Knoxville, TN	Machine learning and supercomputing to predict corrosion/oxidation of high-performance valve alloys	$1,500,000
University of Florida	Gainesville, FL	Open source multiscale model for stainless steel alloys in high temperature environments	$1,498,605
University of Michigan	Ann Arbor, MI	Development of multi-scale computational models to predict corrosion in joints between aluminum and steel	$1,500,000
Worcester Polytechnic Institute	Worcester, MA	Development of predictive models for corrosion behavior in joints between magnesium and aluminum	$1,499,612
Technology Integration			
American Center for Mobility	Ypsilanti, MI	Fuel-efficient platooning in mixed traffic highway environments	$2,447,271
Argonne National Laboratory	Lemont, IL	Maximizing mobility energy productivity at Chicago O'Hare using distributed sensing and high performance computing	$3,184,770
Carnegie Mellon University	Pittsburgh, PA	Drones, delivery robots, driverless cars, and intelligent curbs for increasing energy productivity of first/last mile goods mo vement	$1,502,632
Carnegie Mellon University	Pittsburgh, PA	Understanding and improving energy efficiency of regional mobility systems leveraging system-level data	$1,000,000
Center for Sustainable Energy	San Diego, CA	Multi-unit dwelling plug-in electric vehicle charging innovation pilots in multiple metropolitan areas	$1,500,000
Chattanooga Area Regional Transportation Authority	Chattanooga, TN	High-dimensional data-driven energy optimization for multi-modal transit agencies	$760,868
Colorado State University	Fort Collins, CO	Mobility and energy improvements realized through prediction-based vehicle powertrain control and traffic management	$828,663
Cummins Inc.	Columbus, IN	Advancing platooning with advanced driver assisted systems control integration and assessment	$2,500,000
Ford Motor Company	Dearborn, MI	Micro-transit/public transit for coordinated multi-modal movement of people	$2,000,000
Metropolitan Energy Center	Kansas City, MO	EVSE Innovations: pairing EV infrastructure with streetlight charging in city right of way	$1,215,708
National Renewable Energy Laboratory	Golden, CO	Advancing transportation hubs' efficiency using novel analytics at Dallas-Fort Worth airport	$5,000,000
OnTo Technology LLC	Bend, OR	Improved safety and reduce cost in handling and transporting reclaimed lithium-ion batteries	$500,000
Purdue University	West Layfette, IN	Multi-modal trip scheduling in real-time platform to optimize energy efficient travel demand	$949,984
University of Maryland: College Park	College Park, MD	Transportation energy analytics dashboards to allow real-time optimization of traffic operations and transportation planning to reduce energy	$1,000,000
University of North Carolina at Charlotte	Charlotte, NC	Solutions for curbside-charging electric vehicles for planned urban growth	$942,757

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University of Washington	Seattle, WA	Technology integration to demonstrate efficient urban goods delivery system	$1,500,000
Co-Optimization of Engines and Fuels			
Auburn University	Auburn, AL	Bio-production and evaluation of renewable butyl acetate as a desirable bio-blendstock for diesel fuel	$1,999,990
Hyundai-Kia America Technical Center, Inc.	Superior Township, MI	Co-optimized, mixed-mode gasoline compression ignition/spark-ignition engine system to improve fuel economy	$2,169,391
SUNY University at Stony Brook	Stony Brook, NY	Naphthenic biofuel-diesel blend for optimizing mixing controlled compression ignition combustion	$1,487,112
University of Massachusetts Lowell	Lowell, MA	Renewable fuel additives from woody biomass	$1,001,932
University of Michigan	Ann Arbor, MI	Tailored Bio-blendstocks with Low Environmental Impact to Optimize MCCI Engines	$2,000,000
University of Wisconsin-Madison	Madison, WI	Mono-ether and alcohol bio-blendstocks to reduce the fuel penalty of mixing controlled compression ignition engine aftertreatment	$1,499,894
Engines/Fuels: Off-road Applications			
Caterpillar Inc.	Mossville, IL	Ultra-efficient diesel engine for off-road vehicles, with integrated mechanical energy storage	$3,441,005

Additional Selection from the DE-FOA-0001815: Energy Efficiency R&D for Fluid-Power Systems in Off-Road Vehicles Funding Opportunity Announcement

Applicant	Location (city, state)	Project Title/Description	Federal Share
Regents of the University of Minnesota	Minneapolis, MN	Hydraulic electric architectures for mobile machines.	$1,504,680