Upcoming Funding Opportunity: DOE Plans to Release Vehicle Technologies Research and Development Funding Solicitation in February 2020

On December 11, the Department of Energy (DOE) announced its plans to release its annual vehicle technologies research and development funding opportunity announcement in February 2020. In FY 2019, DOE awarded $59 million to 43 projects. Based on projected FY 2020 Congressional appropriations for renewable energy research, a similar amount of funding is expected to be available in FY 2020. The “Fiscal Year 2020 Advanced Vehicle Technologies Funding Opportunity Announcement (FOA)” is managed by DOE’s Vehicle Technologies Office (VTO) within the Office of Energy Efficiency and Renewable Energy. VTO’s research and development portfolio includes advanced batteries, electric drive systems, smart charging technologies, energy efficient mobility technologies and systems, advanced combustion engines and fuels, materials for vehicle light-weighting, technology integration, and transportation and energy analysis.

The FY 2020 funding call is likely to fund 15 research topics:

1. Lithium-ion batteries using silicon-based anode,
2. Low cost electric traction drive systems using no heavy rare earth materials,
3. Utility managed smart charging,
4. Platinum group metals (PGM) content reduction to enable cost-effective aftertreatment for gasoline and diesel engines,
5. Improved efficiency of medium- and heavy-duty natural gas and propane (LPG) engines,
6. Energy-efficient off-road technologies directly applicable to agriculture and/or other off-road vehicles,
7. Lightweight and high-performance fiber-reinforced polymer composites for vehicle applications,
8. Improving transportation system efficiency through better utilization,
9. Enabling vehicle and infrastructure connectivity,
10. Improving mobility, affordability, and energy efficiency through transit,
11. Gaseous fuels technology demonstration projects,
12. Alternative fuel proof-of-concept in new communities and fleets,
13. Electric vehicle and charging community partner projects,
14. Technology integration, such as auxiliary school/transit bus heating systems for electric vehicles and innovative compressed natural gas fuel tank business models, and
15. Transportation and energy analysis, such as developing and validating modeling approaches capable of estimating the potential energy impacts of emerging potential mobility modes (e.g., bike share and scooters).

The Notice of Intent provides more detailed information on each research topic (see attached). Cost sharing of between 20 and 50 percent, depending on research topic is typically required. However, research universities and nonprofit organizations are exempt from cost share requirements in FY 2020. Section 108, “Short-Term Cost-Share Pilot Program” of the Department of Energy Research and Innovation Act (RIA), Pub. L. 115-246, amended EPACT 2005 section 988, included a two-year pilot program (which is in effect until September 2020) exempting institutions of higher education and nonprofit organizations from the minimum 20 percent cost share requirement for research and development activities. Cost-sharing is still recommended, especially when collaborating with industry
partners on specific projects, and improves chances of success, but not required for DOE to consider an application.

In FY 2019, funding awards ranged from $600,000 to $7.5 million to support projects from two to five years. The graphic below shows the distribution of funding in FY 2019.

For faculty interested but unfamiliar with DOE’s VTO and its research and development portfolio, volunteering to participate in VTO’s 2020 annual merit review on June 1-4, 2020 (usually held in the Washington, DC area) is a unique opportunity to learn in detail about VTO’s current projects, meet with DOE program managers and potential industry partners, and have DOE review future applications more favorably. In general, faculty that have served on peer reviews have had a higher level of success on future proposals. DOE selects reviewers from a diverse set of backgrounds, including current and former members of the vehicles industry, academia, national laboratories, and government. Each reviewer evaluates a set of projects based on how much they contribute to or advance DOE’s missions and goals. The reviewer also considers the project’s breadth, depth, appropriateness, accomplishments, and potential. The reviewers then draft and submit findings and recommendations to VTO in the Annual Merit Review Report. Interested faculty can contact a VTO program manager directly with his or her interest in serving as a peer reviewer.