

Notice of Intent No. DE-FOA-0001812

Notice of Intent to Issue Funding Opportunity Announcement No. DE-FOA-0001813

The Office of Energy Efficiency and Renewable Energy (EERE) intends to issue, on behalf of the Vehicle Technologies Office (VTO), a Funding Opportunity Announcement (FOA) entitled “Medium/Heavy-Duty, On-Road Natural Gas Engine Research and Development”.

Vehicles move our national economy. Annually, vehicles transport 11 billion tons of freight - more than \$32 billion worth of goods each day – and move people more than 3 trillion vehicle-miles. Growing our economy requires transportation, and transportation requires energy. The transportation sector currently accounts for 70% of U.S. petroleum consumption. Twenty five percent of U.S. petroleum consumption is imported. The U.S. sends more than 10 billion dollars per month overseas for crude oil, and the average U.S. household spends nearly one-fifth of its total family expenditures on transportation, making it the second-most expensive spending category after housing. Oil price volatility also affects our national economy and household budgets, causing difficult fluctuations in annual household budgets and business operating expenses.

To support future U.S. economic growth and help consumers and businesses, the VTO funds early-stage, high-risk research to generate knowledge upon which industry can develop and deploy innovative transportation energy technologies that improve efficiency, lower cost for families and business, and increase use of secure, domestic energy sources.

Natural gas is an abundant resource across the United States, and new discoveries and extraction methods have led to a dramatic rise in shale gas development, making America the world’s leading natural gas producer while changing the dynamics of the global energy mix. The low and stable cost of natural gas provides medium and heavy-duty vehicle fleets with an option for consistently lower transportation costs.

In order to improve the viability of natural gas fueled medium – and heavy-duty vehicles (includes buses), the CNG engine efficiency must be closer to that of diesel. Opportunities exist to improve performance, reliability, durability, cost effectiveness, and efficiency of natural gas vehicles through research and development. A public workshop on natural gas vehicles was held at the National Renewable Energy Laboratory on July 25, 2017 to identify early-stage research needs for natural gas engines. A summary of the key observations can be found “[here](#)”).

The objective of the FOA is to address barriers to adoption of natural gas vehicles through early-stage research on medium- and heavy-duty on-road engine technologies. The programmatic goal is to enable natural gas engines that can cost-effectively achieve diesel-like efficiency while meeting current and future emissions standards. A complete engine development project is

outside the scope of this effort, but engine subsystem research must have a plausible pathway to higher engine efficiency. Emission control technology projects addressing criteria pollutants and GHGs are desired, with consideration that future standards are likely to influence NGV technology adoption. Potential technologies include (but are not limited to) combustion strategies, engine subsystems, emission control systems, fuel systems, and controls.

EERE envisions awarding multiple financial assistance awards in the form of cooperative agreements. Teams are encouraged to include medium- and heavy-duty vehicle or engine manufacturers but it is not required.

This notice is issued so that interested parties are aware of the EERE's intention to issue a FOA in the near term. All of the information contained in this notice is subject to change. It should be noted that the NOI (DE-FOA-0001812) number and FOA number (DE-FOA-0001813) are different, as outlined in the heading on the cover page of this notice. EERE will neither respond to questions nor accept applications under this notice. Once the FOA has been released, EERE will provide an avenue for potential Applicants to submit questions.

EERE plans to issue the FOA in October 2017 via the EERE Exchange website <https://eere-exchange.energy.gov/>. If Applicants wish to receive official notifications and information from EERE regarding this FOA, they should register in EERE Exchange. When the FOA is released, applications will be accepted only through EERE Exchange.

In anticipation of the FOA being released, Applicants are advised to complete the following steps, which are **required** for application submission:

- Register and create an account in EERE Exchange at <https://eere-exchange.energy.gov/>. This account will allow the user to register for any open EERE FOAs that are currently in EERE Exchange. It is recommended that each organization or business unit, whether acting as a team or a single entity, use only one account as the contact point for each submission.

Questions related to the registration process and use of the EERE Exchange website should be submitted to: EERE-ExchangeSupport@hq.doe.gov

- Obtain a Dun and Bradstreet Data Universal Numbering System (DUNS) number (including the plus 4 extension, if applicable) at <http://fedgov.dnb.com/webform>
- Register with the System for Award Management (SAM) at <https://www.sam.gov>. Designating an Electronic Business Point of Contact (EBiz POC) and obtaining a special password called an MPIN are important steps in SAM registration. Please update your SAM registration annually.
- Register in FedConnect at <https://www.fedconnect.net/>. To create an organization account, your organization's SAM MPIN is required. For more information about the SAM MPIN or other registration requirements, review the FedConnect Ready, Set, Go! Guide at https://www.fedconnect.net/FedConnect/Marketing/Documents/FedConnect_Ready_Set_Go.pdf

This is a Notice of Intent (NOI) only. EERE may issue a FOA as described herein, may issue a FOA that is significantly different than the FOA described herein, or EERE may not issue a FOA at all.

- Register in Grants.gov to receive automatic updates when Amendments to a FOA are posted. However, please note that applications will not be accepted through Grants.gov. <http://www.grants.gov/>. All applications must be submitted through EERE Exchange.