

Notice of Intent No. DE-FOA-0001814**Notice of Intent to Issue
Funding Opportunity Announcement No. DE-FOA-0001815**

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 “Energy Efficiency R&D for Fluid-Power Systems in Off-Road Vehicles”.

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 transporation, 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 reduce their transporation energy costs, the VTO funds early-stage, high-risk research to generate knowledge upon which industry can develop and deploy innovative energy technologies for the efficient and secure transporation of people and goods across America.

The commercial off-road vehicle sector, including industrial, construction, mining, and farm equipment, relies heavily on fluid-power systems. The technology is preferred over electric motors because of the high specific power density and ability to tolerate shock and harsh environments. However, current fluid-power systems have poor efficiency. Research in this area can provide decreased operating costs for these key domestic industries.

The objective of the FOA is to research technologies and innovations that can improve the energy efficiency of fluid power systems for commercial off-road where fluid power systems actuate most of the functions.

Relevant technologies for efficiency improvement could include new system architectures, energy storage, engineered fluid properties, advanced materials, engine technologies, and hybridization. A public workshop on energy efficiency R&D for fluid power systems in off-road vehicles was held at the National Renewable Energy Laboratory on September 12, 2017 to identify early-stage research needs. A summary of the key observations can be found ([here](#)). Innovations in this sector will yield domestic commercialization, exports, and technological leadership in the global off-road vehicle market.

EERE envisions awarding multiple financial assistance awards in the form of cooperative agreements. Teams are encouraged to include off-road vehicle or fluid power systems 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-0001814) number and FOA number (DE-FOA-0001815) 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
- 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.

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.