



**U.S. Department of Energy  
Advanced Research Projects Agency – Energy  
Announcement of Teaming Partner List  
for an Upcoming Funding Opportunity Announcement:  
Traveler Response Architecture using Novel Signaling for Network  
Efficiency in Transportation (TRANSNET)**

The Advanced Research Projects Agency Energy (ARPA-E) intends to issue a Funding Opportunity Announcement (FOA) entitled Traveler Response Architecture using Novel Signaling for Network Efficiency in Transportation (TRANSNET). This FOA will solicit applications to pursue innovative research targeted at minimizing energy consumption in a surface transportation network through control mechanisms that utilize personalized signals directed at individual travelers. As described in more detail below, the purpose of this announcement is to facilitate the formation of new project teams that respond to the anticipated TRANSNET FOA. The FOA will provide specific program goals, technical metrics, and selection criteria and the FOA terms are controlling. For purposes of the Teaming Partner List, the following summarizes current planning for the FOA:

The overall objective of the TRANSNET program is to reduce energy use in a multi-modal, urban transportation network through network control mechanisms employing personalized signaling. Currently, ARPA-E anticipates that the FOA will target research and development of technologies that employ simulation and develop control architectures to generate energy saving through network optimization. This new approach, if successful, will have a significant impact on all three of ARPA-E's mission areas: reduction of imports of energy from foreign sources, reduction of energy-related emissions, and improvement in energy efficiency.

Previously, ARPA-E held a Transportation Network Optimization Workshop. More information on the workshop can be found at <http://arpa-e.energy.gov/?q=arpa-e-events/transportation-network-optimization-workshop>.

Expertise in the following technical areas may be useful in responding to the TRANSNET FOA:

- Transportation data modeling & simulation
  - Intermodal traveler data collection, particularly via wireless technologies
  - Regional traffic flow simulation at micro-, meso-, and macro- scales
  - Measurement of energy use across modes, particularly with respect to occupancy
- Mathematical control and optimization of networks
  - Reduced complexity models
  - Incomplete information
  - Bayes-Nash equilibria
- Data analytics
  - Game theory
  - Complex systems
  - Computational sociology
  - Multi-agent systems
  - Evolutionary programming
- Personalized signaling
  - Behavioral economics
  - Non-monetary incentives
  - Consumer decision making and choice frameworks
  - Applied behavior analysis



As a general matter, ARPA-E strongly encourages outstanding scientists and engineers from different organizations, scientific disciplines, and technology sectors to form new project teams. Interdisciplinary and cross-sector collaboration spanning organizational boundaries enables and accelerates the achievement of scientific and technological outcomes that were previously viewed as extremely difficult, if not impossible.

The Teaming Partner List is being compiled to facilitate the formation of new project teams. The Teaming Partner List will be available on ARPA-E eXCHANGE (<http://arpa-e-foa.energy.gov>), ARPA-E's online application portal, starting in October 2014. The Teaming Partner List will be updated periodically, until the close of the Full Application period, to reflect new Teaming Partners who have provided their information.

Any organization that would like to be included on this list should complete all required fields in the following link: <https://arpa-e-foa.energy.gov/Applicantprofile.aspx>. Required information includes: Organization Name, Contact Name, Contact Address, Contact Email, Contact Phone, Organization Type, Area of Technical Expertise, and Brief Description of Capabilities.

By submitting a response to this Notice, you consent to the publication of the above-referenced information. **By facilitating this Teaming Partner List, ARPA-E does not endorse or otherwise evaluate the qualifications of the entities that self-identify themselves for placement on the Teaming Partner List.** ARPA-E will not pay for the provision of any information, nor will it compensate any respondents for the development of such information. Responses submitted to other email addresses or by other means will not be considered.

**This Notice does not constitute a FOA. No FOA exists at this time.** Applicants must refer to the final FOA, expected to be issued in October 2014, for instructions on submitting an application and for the terms and conditions of funding.