

THE DEPARTMENT OF ENERGY
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**Energy Department Announces New ARPA-E Projects to Advance
Innovative Natural Gas Vehicle Technologies**

*Awards totaling \$30 million to develop new ways of harnessing U.S. energy resources
to reduce America's dependence on foreign oil*

HOUSTON, Texas - U.S. Deputy Secretary of Energy Daniel Poneman today announced 13 new cutting-edge research projects that will receive a total of \$30 million to find new ways of harnessing America's abundant natural gas supplies for cars and trucks and expand the use of natural gas as a vehicle fuel. Through its Advanced Research Projects Agency - Energy (ARPA-E), the Department's new program, titled Methane Opportunities for Vehicular Energy - or "MOVE" - aims to engineer light-weight, affordable natural gas tanks for vehicles and develop natural gas compressors that can efficiently fuel a natural gas vehicle at home.

"These innovative projects will leverage the ingenuity of U.S. scientists, engineers and entrepreneurs to develop breakthrough technologies to fuel cars with natural gas," said Deputy Secretary Poneman. "These projects could transform America's energy infrastructure and economy by utilizing domestic energy sources to power our vehicles, reducing our reliance on imported oil, and increasing American energy security."

These projects build on President Obama's call for a new era for American energy that benefits from the safe, responsible development of the near 100-year supply of U.S. natural gas resources, which has the potential to support more than 600,000 American jobs. Shale gas production in the U.S. has more than tripled since 2008. Over the past five years, it has grown from 5 percent to more than 30 percent of total domestic natural gas production. The Department of Energy sponsored early research that helped lead to this development, funding research and development jointly with industry and universities that was essential to the development of American shale gas resources.

Today's natural gas vehicle technologies require tanks that can withstand high pressures, are often cumbersome, and are either too large or too expensive to be suitable for smaller passenger vehicles. ARPA-E's new projects are focused on removing these barriers, which will help encourage the widespread use of natural gas cars and trucks. For example, REL, Inc. in Calumet, Michigan will receive \$3 million to develop an internal "foam core" for natural gas tanks that allows tanks to be formed into any shape. This will enable higher storage capacity than current carbon fiber tanks at one third the cost.

The projects will also focus on developing natural gas compressors that make it easier for consumers to re-fuel at home. For example, the Center for Electromechanics at the University of Texas at Austin will receive \$4 million to develop an at-home natural gas re-fueling system that compresses gas with a single piston. Unlike current four piston compressors, the Center for Electromechanics - UT Austin's highly integrated single-piston system will use fewer moving parts, leading to a more reliable, lighter, and cost-effective compressor.

The investments announced today build on efforts underway through the Clean Cities program and National Clean Fleets Partnership to help large fleet operators in the country, such as large companies, cities, and states, identify opportunities to transition to natural gas vehicles. Many commercial fleet operators nationwide have already begun to transition long-haul trucks and other commercial vehicles to run on compressed natural gas (CNG) and liquefied natural gas (LNG). The advances achieved under this latest set of research and development awards will help expand the use of natural gas vehicles, so that consumers nationwide can benefit.

Deputy Secretary Poneman announced the newly selected projects, two of which are located in Texas, at a meeting of the National Petroleum Council (NPC) in Houston, Texas. The NPC is a federal advisory committee to the Secretary of Energy that advises, informs, and makes recommendations on matters relating to natural gas and oil or to the natural gas and oil gas industries.

Selected projects are located in California, Colorado, Connecticut, Illinois, Michigan, New York, Texas, Washington, and Wisconsin. Information on all projects announced today is available [HERE](#).

President Obama launched ARPA-E in 2009 to seek out transformational, breakthrough technologies that are too risky for private-sector investment but have the potential to translate science into quantum leaps in energy technology, form the foundation for entirely new industries, and have large commercial impacts. Demonstrating the success ARPA-E has already seen, the program announced last year that eleven of its projects secured more than \$200 million in outside private capital investment after initial funding from its programs. To date, ARPA-E has attracted over 5,000 applications from research teams, which has resulted in approximately 180 groundbreaking projects worth nearly \$500 million.

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