

NOTICE

Modifications to this Funding Opportunity Announcement (FOA) may have been made since this version was posted. Applicants are strongly advised to consult the FOA version posted on www.FedConnect.com, the official application website, for the latest changes regarding the application materials, dates, and other requirements.

The FedConnect system can be accessed through the following steps:

1. Go to <http://www.FedConnect.net/>
2. Click on "Search Public Opportunities"
3. Select "Reference Number" in the Search Criteria drop down box and then enter the Reference Number of the funding opportunity you are interested in (DE-FOA-XXXXXXX), followed by clicking the "Search" button
4. Click on the Title hyperlink after search results are displayed
5. On the right side of the screen, click on "BODY" under the "Solicitation" or "Amendment" folder; if multiple amendments exist, click on the most recent award amendment for the latest changes.

If you are new to the Federal grant application process, it can take 21 days or more to complete all of the registration processes needed to submit questions or application. These activities include acquiring a DUNS number, completing a Central Contract Registration (CCR), and FedConnect.com registration. Hence, if you are considering applying for this or another Funding Opportunity, we recommend beginning the registration process as soon as possible.

For further assistance throughout the application process, contact the following numbers:

- **General inquiries:** 1-888-DOE-RCVY (1-888-363-7289), <https://recoveryclearinghouse.energy.gov/>
- **Central Contract Registration (CCR) system:** 1-888-227-2423, <http://www.ccr.gov/Help.aspx>
- **FedConnect:** 1-800-899-6665, support@fedconnect.net
- **Specifics on FOA:** see "Questions" portion of the FOA

**FINANCIAL ASSISTANCE
FUNDING OPPORTUNITY ANNOUNCEMENT**



U. S. Department of Energy

National Energy and Technology Laboratory

Recovery Act-Transportation Electrification

Funding Opportunity Number: DE-FOA-0000028

Announcement Type: *Amendment No. 000002*

CFDA Number: *81.087 Renewable Energy Research and Development*

Issue Date:	03/19/2009
Letter of Intent Due Date:	Not Applicable
Pre-Application Due Date:	Not Applicable
Application Due Date:	May 13, 2009 at 8:00:00 PM Eastern Time

EVALUATION PERIOD

APPLICATION DUE DATE

Round 1:

Area of Interest 1, 2, 3 and 4

May 13, 2009 8:00 PM Eastern time

The Government is contemplating a Round 2 for the same Areas of Interest, contingent upon the outcome of Round 1 and the availability of appropriated funds. If the Government issues a Round 2, it will be issued under a separate Funding Opportunity Announcement number.

NOTE:

The purpose of this amendment is to:

- 1. Correct the CFDA number on the cover page of this announcement. CFDA number 81.502 Miscellaneous Federal Funds is hereby deleted in its entirety and replaced with the CFDA 81.087 Renewable Energy Research and Development.***
- 2. Delete the following requirement as outlined on page 9 of the announcement, under Area of Interest 1 in its entirety. "The PHEVs and EVs shall be capable of being charged using a 110 volt outlet for home charging."***
- 3. Incorporate the term "low speed vehicles (LSV)" as defined in the Funding Opportunity Announcement as a list of vehicles that are not desired in the announcement.***
- 4. Incorporate the following statement into Area of Interest 4. "Demonstration projects do not qualify as education projects within this area of interest and will be deemed non-responsive to the announcement."***

All changes are posted in BOLD ITALICED GREEN PRINT.

NOTE: REGISTRATION REQUIREMENTS

Registration Requirements

There are several one-time actions you must complete in order to submit an application in response to this Announcement (e.g., obtain a Dun and Bradstreet Data Universal Numbering System (DUNS) number, register with the Central Contractor Registration (CCR), and register with FedConnect). Applicants who are not registered with CCR and FedConnect, should allow at least 10 days to complete these requirements. It is suggested that the process be started as soon as possible.

Applicants must obtain a DUNS number. DUNS website: http://www.dnb.com/US/duns_update/

Applicants must register with the CCR. CCR website: <http://www.ccr.gov/>

Applicants must register with FedConnect to submit their application. FedConnect website: www.fedconnect.net

Questions

Questions relating to the **system requirements or how an application form works** must be directed to Grants.gov at 1-800-518-4726 or support@grants.gov.

Questions regarding the **content** of the announcement must be submitted through the FedConnect portal. You must register with FedConnect to respond as an interested party to submit questions, and to view responses to questions. It is recommended that you register as soon after release of the FOA as possible to have the benefit of all responses. More information is available at <http://www.compusearch.com/products/fedconnect/fedconnect.asp>. DOE/NNSA will try to respond to a question within 3 business days, unless a similar question and answer have already been posted on the website.

Questions pertaining to the **submission** of applications through FedConnect should be directed by e-mail to support@FedConnect.net or by phone to FedConnect Support at 800-899-6665.

Application Preparation and Submission

Applicants must download the application package, application forms and instructions, from Grants.gov. Grants.gov website: <http://www.grants.gov/>
(Additional instructions are provided in Section IV A of this FOA.)

Applicants must submit their application through the FedConnect portal. FedConnect website: www.fedconnect.net
(Additional instructions are provided in Section IV H of this FOA.)

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PART I – FUNDING OPPORTUNITY DESCRIPTION

Project Description:

Projects under this FOA will be funded, in whole or in part, with funds appropriated by the American Recovery and Reinvestment Act of 2009, Pub. L. 111-5, (Recovery Act or Act). The Recovery Act's purposes are to stimulate the economy and to create and retain jobs. The Act gives preference to activities that can be started and completed expeditiously, including a goal of using at least 50 percent of the funds made available by it for activities that can be initiated not later than June 17, 2009. Accordingly, special consideration will be given to projects that promote and enhance the objectives of the Act, especially job creation, preservation and economic recovery, in an expeditious manner.

Be advised that special terms and conditions may apply to projects funded by the Act relating to:

- Reporting, tracking and segregation of incurred costs;
- Reporting on job creation and preservation;
- Publication of information on the Internet;
- Access to records by Inspectors General and the Government Accountability Office;
- Prohibition on use of funds for gambling establishments, aquariums, zoos, golf courses or swimming pools;
- Ensuring that iron, steel and manufactured goods are produced in the United States;
- Ensuring wage rates are comparable to those prevailing on projects of a similar character;
- Protecting whistleblowers and requiring prompt referral of evidence of a false claim to an appropriate inspector general; and
- Certification and Registration.

These special terms and conditions will be based on provisions included in Titles XV and XVI of the Act. The exact terms and conditions will be incorporated into the awards as soon as they become available.

The Office of Management and Budget (OMB) has issued Initial Implementing Guidance for the Recovery Act. See M-09-10, Initial Implementing Guidance for the American Recovery and Reinvestment Act of 2009. OMB will be issuing additional guidance concerning the Act in the near future. Applicants should consult the DOE website, www.energy.gov, the OMB website <http://www.whitehouse.gov/omb/>, and the Recovery website, www.recovery.gov regularly to keep abreast of guidance and information as it evolves.

Recipients of funding appropriated by the Act shall comply with requirements of applicable Federal, State, and local laws, regulations, DOE policy and guidance, and instructions in this FOA, unless relief has been granted by DOE. Recipients shall flow down the requirements of applicable Federal, State and local laws, regulations DOE policy and guidance, and instructions in this FOA to subrecipients at any tier to the extent necessary to ensure the recipient's compliance with the requirements.

Be advised that Recovery Act funds can be used in conjunction with other funding as necessary to complete projects, but tracking and reporting must be separate to meet the reporting requirements of the Recovery Act and related OMB Guidance. Applicants for projects funded by sources other than the Recovery Act should plan to keep separate records for Recovery Act funds and to ensure those records comply with the requirements of the Act. Funding provided through the Recovery Act that is supplemental to an existing grant is one-time funding.

Applicants should begin planning activities for their first tier subawardees, including obtaining a DUNS number (or updating the existing DUNS record), and registering with the Central Contractor Registration (CCR). The extent to which subawardees will be required to register in CCR will be determined by OMB at a later date.

The Department of Energy (DOE) National Energy Technology Laboratory (NETL), on behalf of the Office of Energy Efficiency and Renewable Energy's (EERE) Office of Vehicle Technologies (OVT) Program, is seeking applications for grants to establish development, demonstration, evaluation, and education projects to accelerate the market introduction and penetration of advanced electric drive vehicles. DOE's goal is for the vehicles and electric technologies to achieve a fast market introduction and reach high volume production.

A key objective of the OVT program is to accelerate the development and production of various electric drive vehicle systems to substantially reduce petroleum consumption. One of the electric drive technologies that will be emphasized in this project are Plug-in Hybrid Electric Vehicles (PHEV), which directly supports the President's goal to Get One Million Plug-In Hybrid Cars on the Road by 2015. Furthermore, advanced electric drive technologies will allow manufacturers to meet increased fuel economy standards while reducing vehicular emissions of greenhouse gases. The resulting grants will also meaningfully aide in the nation's economic recovery by creating US based jobs as outlined in the American Recovery and Reinvestment Act of 2009.

Program Areas of Interest:

This funding opportunity announcement (FOA) contains multiple Program Areas of Interest and closing dates as shown below.

Area of Interest 1: Electric Drive Vehicle Demonstration and Evaluation

Area of Interest 2: Transportation Sector Electrification

Area of Interest 3: Combined Proposals for Area of Interest 1 and 2

Area of Interest 4: Advanced Electric Drive Vehicle Education Program

This Funding Opportunity Announcement (FOA) closes as outlined below.

EVALUATION PERIOD

APPLICATION DUE DATE

Round 1:

Area of Interest 1, 2, 3 and 4

May 13, 2009 8:00 PM Eastern time

The Government is contemplating a Round 2 for the same Areas of Interest, contingent upon the outcome of Round 1 and the availability of appropriated funds. If the Government issues a Round 2, it will be issued under a separate Funding Opportunity Announcement number.

Mandatory Requirements

Notwithstanding the Initial Review Criteria, the following technical criteria must be met for the application to be considered technically responsive to this announcement for AREA OF INTEREST 1, 2, 3 and 4. If the following criteria are not met the application will be considered NON-RESPONSIVE to the announcement for AREA OF INTEREST 1, 2, 3 and 4 and will not be forwarded for comprehensive merit evaluation.

- **Area of Interest 1**
 - The vehicles must be either an advanced EV, PHEV, or FCV.
 - The vehicles must be a light, medium, or heavy duty vehicle, which shall not include motorcycles, trikes, **neighborhood electric vehicles (NEV), and low speed vehicles (LSV)** as outlined in the FOA.
 - The project must demonstrate one hundred (100) or more advanced EVs, PHEVs, and/or FCVs.
 - The team is required to have a vehicle manufacturer as the lead or partner in the project or include a letter of commitment from a vehicle OEM as outlined in the announcement.

- **Area of Interest 2**
 - Proposals for general infrastructure improvements, i.e. improvements that are not necessary for the advancement of the transportation electrification technologies or installation of the proposed technology, are not desired
 - The vehicles for deployment must be identified in the proposal.
 - The vehicles must be one or more types of the following vehicles; electric-drive material and cargo handling equipment, electric airport ground support equipment, light duty passenger vehicles, medium or heavy duty vehicles, commercial rail, and marine vessels. Other off-road vehicles, motorcycles, trikes, neighborhood electric vehicles (NEV), **and low speed vehicles (LSV)** are not desired and will be deemed non-responsive to the announcement.
 - The team must include a member capable of manufacturing the technology developed or letter of support from a manufacturer of the technology.

- **Area of Interest 3**
 - The vehicles must be either an advanced EV, PHEV, or FCV.
 - The vehicles must be a light, medium, or heavy duty vehicle, which shall not include motorcycles, trikes, **neighborhood electric vehicles (NEV), and low speed vehicles (LSV)** as outlined in the FOA.
 - The project must demonstrate one hundred (100) or more advanced EVs, PHEVs, and/or FCVs.
 - The team is required to have a vehicle manufacturer as the lead or partner in the project or include a letter of commitment from a vehicle OEM as outlined in the announcement.
 - Proposals for general infrastructure improvements, i.e. improvements that are not necessary for the advancement of the transportation electrification technologies or installation of the proposed technology, are not desired
 - The vehicles for deployment must be identified in the proposal.

- **Area of Interest 4**
 - The proposals must be for education, training, outreach, or public awareness for advanced electric drive vehicles, including EVs, PHEVs, FCVs, their electric system components, or their direct supporting electrical infrastructure.

NOTE:

Applicants must identify the Area of Interest they are applying to in the project Narrative and identify the Area of Interest in the file name. For example if an applicant were applying to Area of Interest 1 (Project01.pdf); if applying to Area of Interest 2 (Project02.pdf); if applying to Area of Interest 3 (Project03.pdf); and if applying to Area of Interest 4 (Project04.pdf). Each application must have its own unique title.

Applicants must submit their application under the Program Area of Interest that they feel best fits the majority of the effort to be performed and identify the Area of Interest and intent upfront. If DOE believes an application fits more appropriately in a Program Area of Interest other than the one to which it was submitted, DOE will either consider the application under the more appropriate Area of Interest or will direct the Applicant to resubmit to the appropriate Area of Interest. **Do not submit identical applications under more than one Area of Interest.**

Area of Interest 1: Electric Drive Vehicle Demonstration and Evaluation

A key objective of the VT program is to accelerate the development and production of various electric drive vehicle systems to substantially reduce petroleum consumption. In order to meet this goal, advanced electric drive vehicles need to be cost effective and meet the customers' performance expectations. The vehicle usage and typical operation needs to be understood to provide an optimized vehicle, at a low cost and providing the desired performance to achieve mass market penetration. Grants in this Area of Interest will accelerate the vehicle usage learning curve and the production schedules necessary to achieve the 2015 goals and objectives. The resulting grants will also meaningfully aide in the nation's economic recovery by creating US based jobs as outlined in the American Recovery and Reinvestment Act of 2009.

The objective of this Area of Interest is to establish widespread demonstration and evaluation of projects to accelerate the market introduction and penetration of advanced electric drive vehicles (AEDV). Grants will be made to conduct development, demonstration and data collection projects on a wide range of electric drive transportation technologies. Projects in this Area of Interest will develop and test AEDVs to enable a fast ramp-up to production and achieve significant market penetration. Recipients are expected to develop and optimize an AEDV that can 1) achieve commercialization within five (5) years of project initiation or 2) reach volume production within one year of the project conclusion, whichever occurs first.

Technologies that are eligible for selection include PHEV and similar extended range electric vehicles (EREV), Electric Vehicles (EV), or fuel cell vehicles (FCV), and the recharging and electric support infrastructure required for each technology. The classes of vehicles that are covered range from light duty passenger vehicles to medium and heavy duty over-the-road trucks. All vehicles will be Federal Motor Vehicle Safety Standard (FMVSS) compliant or have appropriate FMVSS exemptions. **Motorcycles, three-wheeled vehicles, neighborhood electric vehicles, *low speed electric vehicles (LSV)* and other non-conventional passenger vehicles are not desired and will be deemed non responsive to the announcement.**

It is highly encouraged that the proposing applicant be a vehicle manufacturer currently producing vehicles in the United States with other team members proposed as subcontractors. Applications from other entities will only be considered if a vehicle manufacturer is a team member or provides a commitment to manufacture and build vehicles in the United States. In addition, a novel application will

be considered if the applicant demonstrates in the application the requisite technical expertise and the capability for production of the vehicle developed under the project within one (1) year of project completion. All vehicles produced as a result of vehicle development in this project shall be manufactured in the United States. If a specific component or subsystem is developed under this project, production of the component shall be in the United States.

The actual vehicle usage, including charging frequency, impacts due to varying climates, availability of vehicle chargers, and actual real-world electric range are all unknowns that limit PHEV, EV, and FCV introductions. All of these factors impact the benefit to the consumer and the overall optimum vehicle design. It is the intent of the announcement to gain an understanding of these operating characteristics and ultimately use the information to feed the design and development of a PHEV, EV, or FCV that can quickly be introduced into the market and provide a high market penetration. The vehicles will be optimized for cost and performance in real world operational scenarios, while meeting all applicable federal safety and emissions standards.

Applicants shall include general plans for development of advanced electric drive vehicle technologies and demonstration of the PHEV, EV, and/or FCV in diverse areas of the US, with the initial deployment beginning within twelve (12) months from the date of award. Tasks will include development on an advanced electric drive vehicle, followed by a demonstration of the vehicle for a two (2) year period. In parallel with the demonstration, development will continue on the vehicle, or a more advanced electric drive vehicle, using the information provided by the demonstration to feed into the vehicle development. Development work may include the analysis, design, fabrication, and integration of component or propulsion systems and vehicle integration development. If a component or subsystem supplier is the lead for the project, and not the vehicle OEM, the team shall include a vehicle manufacturer as a team member or a commitment by a vehicle manufacturer to utilize the component. The vehicle manufacturer must provide the requirements for the component or subsystem at the start of the project.

The demonstration is not limited to one (1) platform or technology. Combinations of vehicle technologies (EV or PHEV, etc.) or platforms are acceptable for demonstration purposes. The total number of advanced EVs, PHEVs, and/or FCVs shall be one hundred (100) or more over a two (2) year period, however, it is mandatory that large scale projects (projects with a substantial contribution of DOE funding) have a greater number of vehicles. **Applications proposing less than one hundred (100) vehicles will be considered non-responsive to the announcement.** The vehicles shall be demonstrated at geographically and climatically diverse locations to be reviewed by DOE.

In parallel with the on-road demonstration fleet, the PHEVs, EVs, or FCVs may be demonstrated on a closed track or test facility (not to exceed 10% of the demonstration fleet), provided sufficient (minimum of three (3)) vehicles are available and are operated under DOE approved test protocols which can mimic real-world operation for vehicle charging schedules, HVAC operation, powertrain durability, fueling schedules and other evaluation schedules. Demonstration on the closed test track or facility should include vehicles undergoing testing or charging on a daily basis and accumulate significantly more test hours and operating cycles than would be possible in an on-road vehicle demonstration. In addition, the applicant must also show how the proposed testing would create (or retain) an equal or greater number of jobs than an on-road demonstration of the vehicles. Vehicles demonstrated and tested only on the closed track or test facility do not have to be full FMVSS certified since they will not be tested on road. While it is expected that the demonstrations will include development vehicles or near production vehicles, production vehicles may be used for demonstrations if the vehicle technology has not been offered for sale to the general public for more than one (1) year from the date of initial demonstration. Vehicles may also use a fast charge port provided the vehicle still retains the capability of being charged by the 110 volt outlet. Vehicles will meet the following minimum requirements;

Technology	Emissions	Electric Range	Total Range
PHEV/EREV	2010 Emissions Compliant	≥ 10 miles	≥ 300 miles
EV	Current California Air Resources Board Zero Emission Standards	≥ 100 miles	≥ 100 miles
FC	Current California Air Resources Board Zero Emission Standards	N/A	≥ 200 miles

All on-road vehicles will comply with Federal Motor Vehicle Safety Standards applicable on the date of award or date of vehicle production, whichever is later. If certification includes exemption, the exemption number issued by the National Highway Transportation Safety Administration (NHTSA), the date of its Publication in the Federal Register and the page number(s) of the Federal Register Acknowledging issuance of the exemption must be provided prior to the start of the vehicle demonstration. Exemptions for any reason other than non-applicability shall not be allowed.

The duration of the vehicle demonstration is a minimum of two (2) years up to three (3) years. The expected initial deployment will begin within twelve (12) months from the date of award, with all one hundred (100) demonstration vehicles deployed within eighteen months of the award date. Initial deployment includes either vehicles ready for on-road, closed track, or test facility testing. The vehicles will complete the testing without requiring extraordinary maintenance, such as battery pack replacement. Selected applicants will provide both interval maintenance activity records as well as failure maintenance records for all vehicles.

The vehicles will be demonstrated in at least three (3) locations throughout the United States, including geographically and climatically different locations and may include rural and urban areas. The locations identified for vehicle deployment will include testing with real world operation, including vehicles being operated and charged at a home or residence. The diverse locations and test plan must be chosen that provides a significant variation in the actual vehicle usage and electric range, including charging frequency, climate variation, and charger availability. The vehicle demonstration is not intended to be a controlled fleet for durability testing, but rather a large, dispersed fleet to collect data of real world operation and the impact it has on the actual application of AEDVs including impacts on the electricity grid. Data gathered during the demonstrations should provide the manufacturer with the optimum vehicle attributes necessary for mass market penetration, such as optimized energy storage system size, component selection, powertrain configuration, and operating strategy to span the advanced electric drive vehicle markets. Testing locations and test plans shall be subject to DOE review and approval.

The hydrogen infrastructure development for the FCVs in this project may not be included in this project; however, a Funding Opportunity Announcement (FOA) has been released by DOE that seeks hydrogen infrastructure development projects.

The project shall include a cost analysis to show how the vehicle will be optimized for cost and performance to enable volume production and high market penetration. Applicants shall provide a preliminary cost analysis in the proposal to show how the vehicle or technology developed under the project can be cost feasible.

Priority shall be given to projects that encourage widespread use of advanced electric drive vehicles, are likely to make a significant contribution to the advancement of production vehicles in the US, and can reach the mass market by being cost feasible and meeting the needs of consumers.

Access should be provided to pertinent vehicle propulsion system data if not readily available through the vehicles' On Board Diagnostic (OBD) connection for the purpose of data logging during testing and evaluation. Data collected should include vehicle efficiency, petroleum consumption, charging profiles, including times, duration, and electricity used, operational profiles, including times of operation, type of operation, and loading, accessory loading, time stamps, battery specific data, including state of charge, voltage, current, and temperatures, operating costs, and maintenance costs.

Applications shall provide the following expected benefits (as compared to a FY09 commercially available similar class vehicle):

- Expected Market Penetration
 - Within five (5) years
 - Within ten (10) years
- Expected Reduction in Petroleum Consumption
 - Fuel Economy Improvement (MPG) or Gallons per hour (GPH)
 - Reduction in petroleum consumption (Million Barrels Per Day (MBPD)) based on the expected Market Penetration in 5 years
 - Reduction in petroleum consumption (Million Barrels Per Day (MBPD)) based on the expected Market Penetration in 10 years
- Expected Reduction of Green House Gas Emissions (Million Metric Tons of Carbon Equivalent (MMTCE)/year)
 - Per Vehicle Type
 - Based on the expected Market Penetration in 5 years
 - Based on the expected Market Penetration in 10 years

In addition to the General Requirements mentioned in Part IV – Application and Submission Information, Section C Content and Form of Application, the following specific information is required and shall be included in the project narrative, which is defined in Part IV:

1. Teaming arrangement, including OEM role or letter of support from an OEM
2. Technology concept/development (i.e. vehicle and technology concept)
3. Demonstration sites/areas for testing
4. The number and type of vehicles to be used in the demonstration
5. Infrastructure additions or improvements (if required)
6. Test plan, including method to achieve diverse operation
7. Concurrent vehicle development plan (if applicable)
8. Vehicle and technology benefits that will lead to increased market penetration
9. Analysis of the petroleum reduction potential as a result of mass production and the expected market penetration of the technology
10. Projected purchase and life-cycle costs of the vehicle/technology with comparisons to conventional vehicles/technologies
11. Planned outcome, including plans and commitments to manufacture and sell electric drive vehicles and/or electric transportation technologies resulting from the project no later than one year after project completion.

Area of Interest 2: Transportation Sector Electrification

A key objective of the VT program is to accelerate the development and production of various electric drive vehicle systems to substantially reduce petroleum consumption. The transition to electric drive vehicles requires improvements in both the vehicles and electric infrastructure. Grants in this Area of Interest must advance the introduction of electric drive vehicles, vehicle electrification, and supporting infrastructure technologies. The resulting grants will also meaningfully aid in the nation's economic recovery by creating US based jobs as outlined in the American Recovery and Reinvestment Act of 2009.

The objective of this Area of Interest is to develop and demonstrate transportation sector electrification, which may include truck stop electrification, electric idle reduction technologies, electric truck refrigeration units, shoreside electrification, non-road vehicle electrification, and the recharging and electrical support infrastructure required for each technology, with the goal of maximizing petroleum reduction and reducing greenhouse gas emissions from the vehicle. The electrification projects must include vehicles to demonstrate the proposed technology as part of the project. The classes of demonstration vehicles that are covered range from electric-drive material and cargo handling equipment, electric airport ground support equipment, light duty passenger vehicles, medium or heavy duty vehicles, commercial rail, and marine vessels. **Other off-road vehicles, motorcycles, trikes, neighborhood electric vehicles (NEV) and low speed vehicles (LSV) are not desired and will be deemed non-responsive to the announcement.** At the conclusion of the project applicants will have developed and demonstrated an advanced transportation sector electrification technology that can either 1) achieve commercialization within five (5) years of project initiation or 2) reach volume production within one year of the project conclusion, whichever is first.

The team must include a member capable of manufacturing the technology developed under the project or letter of support from a manufacturer of the technology. **Applications NOT providing a letter of support or manufacturer as a team member will be deemed non-responsive to the announcement.**

The development and demonstration shall be for on-vehicle technologies or infrastructure technologies, or a combination of the two. The combined efforts are encouraged if both activities complement each other.

The on-vehicle technologies include idle reduction, non-road vehicle electrification, vehicle integrated electric heating and air conditioning systems, electric truck refrigeration units, advanced battery auxiliary power units, or other advanced electric idle reduction technologies. The work to be performed in this area includes development of the vehicle, system, or component, followed by a demonstration beginning within twelve months of the award date. The development can continue in parallel with the demonstration provided that the development provides substantial improvements to the technology. The demonstration vehicles shall be an advanced electric drive vehicle including EVs, PHEVs, FCVs, or other advanced vehicles compatible with the technology.

Infrastructure and off-vehicle transportation sector electrification technologies include truck stop electrification, shoreside electrification, integration of vehicles into an intelligent transportation system, optimization of the vehicle and electric charging infrastructure, and establishing smart charging and grid interaction. The work shall include development of the system with vehicle demonstrations beginning within twelve months of the award date. The demonstration shall include testing of the system in real world conditions and collecting data to verify the impact on

the overall transportation sector and specific vehicle efficiencies. Projects involving vehicles interacting with the grid or an intelligent transportation system while in operation must also have a set of control advanced electric drive vehicles operated in parallel under the same conditions to demonstrate the impact of the vehicle integration on overall efficiency, emissions, safety, and operating costs.

The technology demonstrations must be performed at multiple geographically diverse locations throughout the US. Locations and test plans are subject to review and approval by DOE.

The duration of the vehicle and technology demonstration is two years from the date of initial deployment. The expected initial deployment will begin within twelve (12) months from the date of award, with all demonstration vehicles deployed within eighteen (18) months of the award date. Initial deployment includes either vehicles ready for on-road, closed track, or test facility testing. The vehicles will complete the testing without requiring extraordinary maintenance, such as battery pack replacement. Selected applicants will provide both interval maintenance activity records as well as failure maintenance records for all vehicles.

While it is expected that the demonstrations will include development vehicles or near production vehicles, production vehicles may be used for demonstrations if the vehicle technology has not been on sale to the general public for more than one (1) year from the date of initial deployment or if the production vehicle has been modified to be compatible with the proposed technology. The vehicles must be in place or planned as part of the project and all on-road vehicles shall be FMVSS compliant. The non-road vehicles, including electric-drive material and cargo handling equipment, electric airport ground support equipment, commercial rail, and marine vessels, shall meet all relevant safety and emissions standards. Vehicles not in compliance with safety and emissions standards will not be eligible for the demonstration. The vehicles and demonstrated technology shall be optimized for performance and cost while meeting all safety and emissions standards. Applicants shall provide all pertinent data regarding the overall performance of the technology, including but not limited to the efficiency, reliability, costs, etc., and impact the project has on the transportation sector and electric grid.

The demonstration is not limited to one (1) platform or technology. Combinations of vehicle technologies (EV or PHEV, etc.) or platforms are acceptable for demonstration purposes. The total number of advanced EVs, PHEVs, FCVs or advanced vehicles compatible with the technology developed under the project must be one hundred (100) or more over a two year period for on-road demonstration projects, however, it is mandatory that larger scale projects have a greater number of vehicles.

Applications for on-road demonstrations proposing less than one hundred (100) vehicles will be considered non-responsive. Non-road demonstration vehicles are required; however, due to the variation in vehicle size and application the number of vehicles necessary for a successful demonstration will vary. The applicants should propose the number of vehicles to be demonstrated in the project to successfully demonstrate the technology in diverse operation. Applicants should provide justification for the basis of the number of vehicles needed to execute the project successfully. All infrastructure upgrades shall be for transportation sector electrification technologies and demonstration of the technology to enable volume production. **Proposals for general infrastructure improvements, i.e. improvements that are not necessary for the advancement of the transportation electrification technologies or installation of the proposed technology, are not desired and will be deemed non-responsive to the funding opportunity announcement.**

The hydrogen infrastructure development for the demonstration of FCVs may not be included in this project; however, a Funding Opportunity Announcement (FOA) has been released by DOE that seeks hydrogen infrastructure development projects.

Applicants must provide an analysis of the petroleum reduction potential as a result of mass production and the expected market penetration of the technology.

All vehicles produced as a result of vehicle development in this project shall be manufactured in the United States. If a specific component or subsystem is developed under this project, production of the component shall be in the United States.

A cost analysis for mass production of the vehicle or implementation of the technology shall be performed during the project. Applicants should provide a preliminary cost analysis to show the vehicle or technology developed under the project can be cost feasible.

Applications shall provide the following expected benefits (as compared to a FY09 commercially available similar class vehicle):

- Expected Market Penetration
 - Within five (5) years
 - Within ten (10) years
- Expected Reduction in Petroleum Consumption
 - Fuel Economy Improvement (MPG) or gallons per hour (GPH)
 - Reduction in petroleum consumption (Million Barrels Per Day (MBPD)) based on expected Market Penetration in 5 years
 - Reduction in petroleum consumption (Million Barrels Per Day (MBPD)) based on expected Market Penetration in 10 years

In addition to the General Requirements mentioned in Part IV – Application and Submission Information, Section C Content and Form of Application, the following specific information is required and shall be included in the project narrative, which is defined in Part IV:

1. Teaming arrangement, including OEM role or letter of support from an OEM
2. Technology concept/development (i.e. vehicle and technology concept)
3. Demonstration sites/areas for testing
4. The number and type of vehicles to be used in the demonstration
5. Infrastructure additions or improvements (if required)
6. Test plan, including method to achieve diverse operation
7. Concurrent vehicle or technology development plan (if applicable)
8. Vehicle and technology benefits that will lead to increased market penetration
9. Analysis of the petroleum reduction potential as a result of mass production and the expected market penetration of the technology
10. Projected purchase and life-cycle costs of the vehicle/technology with comparisons to conventional vehicles/technologies
11. Planned outcome, including plans and commitments to manufacture and sell electric drive vehicles and/or electric transportation technologies resulting from the project no later than one year after project completion.

Area of Interest 3: Combined Proposals for Area of Interest 1 and Area of Interest 2

Applicants may submit an application to combine Areas of Interest 1 and Area of Interest 2 requirements into one proposal if applicable. See the requirements above for Area of Interest 1 and Area of Interest 2.

Area of Interest 4: Advanced Electric Drive Vehicle Education Program

A key objective of the VT program is to accelerate the development and production of various electric drive vehicle systems to substantially reduce petroleum consumption. In order to meet this goal, the vehicle support and awareness needs to be in place. Engineers need the necessary education for vehicle development, technicians and service personnel need training to maintain the vehicles and support infrastructure, and the public and future generations need to be well educated about advanced electric drive vehicles and their role in reducing petroleum consumption. The resulting grants shall also meaningfully aide in the nation's economic recovery by creating US based jobs as outlined in the American Recovery and Reinvestment Act of 2009.

The objective of this Area of Interest is to establish education projects that accelerate the mass market introduction and penetration of advanced electric drive vehicles, which includes light, medium, and heavy duty advanced electric vehicles (EV), plug-in hybrid electric vehicles (PHEV), and fuel cell electric vehicles (FCV). Education programs include educational outreach encompassing the basics of the technologies; technician training for servicing the advanced vehicles, their components, and the required recharging infrastructure; emergency responder and safety training for vehicles, and/or providing engineering degree programs to advance the development of vehicles and components.

Over the three (3) year project period, the work shall include development and execution of education programs for advanced electric drive vehicles.

Tasks shall include one or more of the following:

- Developing and providing teaching materials to secondary schools, colleges and universities,
- Training service personnel and vehicle mechanics for working with advanced electric drive vehicles and their supporting infrastructure,
- Creating new degree programs to ensure the availability of trained electrical and mechanical engineers with the skills necessary for the advancement of EVs, PHEVs, FCVs, and
- Educating consumers on the basics of advanced electric drive vehicles to increase consumer acceptance and market demand.

The teaching materials for electric drive transportation technology for schools shall be developed and provided for classroom use in secondary schools. The teaching material shall cover EVs, PHEVs, FCVs, and other advanced transportation vehicles and infrastructure.

Training programs may be developed for educating vehicle technicians and engineers, emergency responders, electrical infrastructure technicians and engineers, and other personnel on EVs, PHEVs, FCVs, and the required support infrastructure. The training programs must be administered by qualified personnel and approved by the appropriate company, agency, or regulating authority.

Education programs for higher education institutions shall provide financial assistance to institutions of higher education to create new degree programs for electrical, mechanical, and other engineers specifically focused on the necessary skills for the advancement of EVs, PHEVs, FCVs, and other forms of advanced electric drive technology vehicles. Such programs may also include education for electric

drive systems, components and infrastructure.

Consumer education programs should focus on the basics of electric drive technologies and how electric drive vehicles can meet consumer's needs. Life-cycle cost information and calculating methods should also be included, along with information on the greenhouse gas reduction potential of electric drive vehicles.

All proposed non-degree training programs shall provide information to show that a legitimate source is approving the training or providing course material for each training area as follows.

- The training programs for emergency responders and safety personnel shall include information sourced or provided by the original equipment manufacturers (OEM) of the vehicles or appropriate government/regulatory agencies on how to handle the various components. The training shall also comply with existing standards for safety training.
- Training programs for vehicle service technicians shall be approved by a vehicle original equipment manufacturer (OEM) or other appropriate certification authorities.
- Training programs for electrical infrastructure technicians and service personnel shall be approved by a utility company or the appropriate regulating authority. The training may include training technicians for installation and maintenance of residential or distributed charging stations

Teaming is highly encouraged, with one lead university or organization coordinating the education, outreach, and/or training activities. Teams should include personnel with the qualifications and background necessary for educating students and trainees, and conducting outreach on advanced electric drive vehicles.

Widespread programs, such as university collaborative efforts or joint development programs, large scale (regional or nationwide) training programs, or large scale (regional or nationwide) outreach programs encompassing all education programs are encouraged.

Due to the requirements for approved training programs, the applicants are encouraged to propose larger scale projects and coordinate the work with OEMs and other regulating authorities to develop the training for technicians and service personnel.

All applications should address the merits of their proposed training and the corresponding need for its development, the audience they would be targeting, the type of materials they would develop, a strategy and plan to develop the materials, a strategy and plan to deliver the information, and the metrics or milestones for assessing training program effectiveness.

The proposals should include, where applicable, the planned type and number of higher education courses, training and service programs, visits and coordinated activities with secondary schools, and outreach activities to the public.

Applicants shall NOT propose training, education, or course work that is unrelated to advanced electric drive vehicles, their components or their direct supporting infrastructure. Applicants proposing non-advanced electric drive vehicle outreach, training, or education will be deemed non-responsive to this announcement and the application will not be forwarded for technical review.

Demonstration projects do not qualify as education projects within this area of interest and will be deemed non-responsive to the announcement.

The applicants must demonstrate that at the conclusion of the program the project can be self-sustaining and the education/training can continue in the absence of future Federal funds. Applicants must provide the number of potential consumers and students reached, how they are reached, and the quantity and type of materials to be developed.

It is intended that DOE will have unlimited rights to any materials developed under this award for secondary school or public outreach including the ability to use, disclose, reproduce, distribute copies to the public, and perform future outreach based on these materials in any manner and for any purpose.

PART II – AWARD INFORMATION

A. TYPE OF AWARD INSTRUMENT

- DOE anticipates awarding grants under this program announcement.

B. ESTIMATED FUNDING

- Approximately \$378 million dollars is expected to be available for all Areas of Interest for new awards under this announcement for Round 1 and possibly Round 2 contingent upon the outcome of Round 1 and the availability of appropriated funds.

C. MAXIMUM AND MINIMUM AWARD SIZE

Ceiling (i.e., the maximum amount for an individual award made under this announcement):
\$ NONE

Floor (i.e., the minimum estimated amount for an individual award made under this announcement):
\$20,000,000 (For Area of Interest 1)
\$10,000,000 (For Area of Interest 2)
\$30,000,000 (For Area of Interest 3)
\$500,000 (For Area of Interest 4)

D. EXPECTED NUMBER OF AWARDS

- Under this announcement, DOE expects to make the following number of awards for each Program /Topic Area:

Area of Interest (AOI)	Title	Estimated Number of Selections Anticipated
1	Advanced Vehicle Electrification	2-10
2	Transportation Sector Electrification	2-4
3	Combined Proposal (1 and 2)	TBD
4	Advanced Electric Drive Vehicle Education Program	5-20

E. ANTICIPATED AWARD SIZE

- The anticipated award size for projects under each Program/Topic Area in this announcement is:

Area of Interest (AOI)	Title	Anticipated Award Sizes
1	Advanced Vehicle Electrification	\$20M - \$100M
2	Transportation Sector Electrification	\$10M - \$75M
3	Combined Proposal (1 and 2)	\$30M - \$175M
4	Advanced Electric Drive Vehicle Education	\$500k - \$10M

F. PERIOD OF PERFORMANCE

- The anticipated period of performance for projects under each Program/Topic Area in this announcement is:

Area of Interest (AOI)	Title	Period Of Performance
1	Advanced Vehicle Electrification	36 – 48 months
2	Transportation Sector Electrification	36 – 48 months
3	Combined Proposal (1 and 2)	36 – 48 months
4	Advanced Electric Drive Vehicle Education Program	36 months

G. TYPE OF APPLICATION

- DOE will accept only new applications under this announcement.

PART III - ELIGIBILITY INFORMATION

A. ELIGIBLE APPLICANTS

- All types of entities are eligible to apply as a prime applicant (Including, but not limited to state government agencies, local government agencies, institution of higher education, other non-profit organizations, and for profit organizations), except other Federal agencies, Federally Funded Research and Development Center (FFRDC) Contractors, and nonprofit organizations described in section 501(c)(4) of the Internal Revenue Code of 1986 that engaged in lobbying activities after December 31, 1995.

B. COST SHARING

AREA OF INTEREST 1

The recipient cost share is **required** to be 50% **or higher** of the total allowable costs of the project (i.e., the sum of the Government share, including FFRDC contractor costs if applicable, and the recipient share of allowable costs equals the total allowable costs of the projects) and must come from non-Federal sources unless otherwise allowed by law. **However, applications with proposed cost share as low as 25% recipient share shall be considered, using the Secretary's statutory authority to reduce cost share requirements. Applicants proposing a cost share below 50% recipient share shall provide a justification for their request. Please note that cost share is an evaluated criterion in accordance with Part V of the FOA.**

AREA OF INTEREST 2

The recipient cost share is **required** to be 50% **or higher** of the total allowable costs of the project (i.e., the sum of the Government share, including FFRDC contractor costs if applicable, and the recipient share of allowable costs equals the total allowable costs of the projects) and must come from non-Federal sources unless otherwise allowed by law. **However, applications with proposed cost share as low as 25% recipient share shall be considered, using the Secretary's statutory authority to reduce cost share requirements. Applicants proposing a cost share below 50% recipient share shall provide a justification for their request. Please note that cost share is an evaluated criterion in accordance with Part V of the FOA.**

AREA OF INTEREST 3

The recipient cost share is **required** to be 50% **or higher** of the total allowable costs of the project (i.e., the sum of the Government share, including FFRDC contractor costs if applicable, and the recipient share of allowable costs equals the total allowable costs of the projects) and must come from non-Federal sources unless otherwise allowed by law. **However, applications with proposed cost share as low as 25% recipient share shall be considered, using the Secretary's statutory authority to reduce cost share requirements. Applicants proposing a cost share below 50% recipient share shall provide a justification for their request. Please note that cost share is an evaluated criterion in accordance with Part V of the FOA.**

AREA OF INTEREST 4

The cost share must be at least 20% of the total allowable project costs. (i.e., the sum of the Government share, including FFRDC contractor costs if applicable, and the recipient share of allowable costs equals the total allowable cost of the project) and must come from non-Federal sources unless otherwise allowed by law.

C. OTHER ELIGIBILITY REQUIREMENTS

- **Federally Funded Research and Development Center (FFRDC) Contractors**

FFRDC contractors are not eligible for an award under this announcement, but they may be proposed as a team member on another entity's application subject to the following guidelines:

Authorization for non-DOE/NNSA FFRDCs. The Federal agency sponsoring the FFRDC contractor must authorize in writing the use of the FFRDC contractor on the proposed project and this authorization must be submitted with the application. The use of a FFRDC contractor must be consistent with the contractor's authority under its award and must not place the FFRDC contractor in direct competition with the private sector.

Authorization for DOE/NNSA FFRDCs. The cognizant contracting officer for the FFRDC must authorize in writing the use of a DOE/NNSA FFRDC contractor on the proposed project and this authorization must be submitted with the application. The following wording is acceptable for this authorization.

"Authorization is granted for the _____ Laboratory to participate in the proposed project. The work proposed for the laboratory is consistent with or complimentary to the missions of the laboratory, will not adversely impact execution of the DOE/NNSA assigned programs at the laboratory, and will not place the laboratory in direct competition with the domestic private sector."

Value/Funding. The value of, and funding for, the FFRDC contractor portion of the work will not normally be included in the award to a successful applicant. Usually, DOE/NNSA will fund a DOE/NNSA FFRDC contractor through the DOE field work proposal system and other FFRDC contractors through an interagency agreement with the sponsoring agency.

Cost Share. The applicant's cost share requirement will be based on the total cost of the project, including the applicant's and the FFRDC contractor's portions of the effort.

FFRDC Contractor Effort:

- The scope of work to be performed by the National Laboratory may not be more significant than the scope of work to be performed by the applicant

Responsibility. The applicant, if successful, will be the responsible authority regarding the settlement and satisfaction of all contractual and administrative issues, including but not limited to, disputes and claims arising out of any agreement between the applicant and the FFRDC contractor.

PART IV – APPLICATION AND SUBMISSION INFORMATION

A. ADDRESS TO REQUEST APPLICATION PACKAGE

- Application forms and instructions are available at Grants.gov. To access these materials, go to <http://www.grants.gov>, select “Apply for Grants,” and then select “Download Application Package.” Enter the CFDA and/or the funding opportunity number located on the cover of this announcement and then follow the prompts to save the application package. Once you have SAVED the application package and completed all the required documentation, you will submit your application via the Fedconnect portal. **DO NOT use the Save & Submit selection in Grants.gov.**

B. LETTER OF INTENT AND PRE-APPLICATION

1. Letter of Intent.

- Letters of Intent are not required.

2. Pre-application

- Pre-applications are not required.

C. CONTENT AND FORM OF APPLICATION – 424 (R&R)

You must complete the mandatory forms and any applicable optional forms (e.g., Disclosure of Lobbying Activities (SF-LLL)) in accordance with the instructions on the forms and the additional instructions below. Files that are attached to the forms must be in Adobe Portable Document Format (PDF) unless otherwise specified in this announcement.

1. **SF 424 (R&R)** Complete this form first to populate data in other forms. Complete all the required fields in accordance with the pop-up instructions on the form. To activate the instructions, turn on the “Help Mode” (Icon with the pointer and question mark at the top of the form). The list of certifications and assurances referenced in Field 18 can be found on the DOE Financial Assistance Forms Page at http://management.energy.gov/business_doe/business_forms.htm under Certification and Assurances.

2. Project/Performance Site Location(s)

Indicate the primary site where the work will be performed. If a portion of the project will be performed at any other site(s), identify the site location(s) in the blocks provided.

Note that the Project/Performance Site Congressional District is entered in the format of the 2 digit state code followed by a dash and a 3 digit Congressional district code, for example VA-001. Hover over this field for additional instructions.

Use the Next Site button to expand the form to add additional Project/Performance Site Locations.

3. RESEARCH AND RELATED Other Project Information

Complete questions 1 through 5 and attach files. The files must comply with the following instructions:

Project Summary/Abstract (Field 6 on the Form)

The project summary/abstract must contain a summary of the proposed activity suitable for dissemination to the public. It should be a self-contained document that identifies the name of the applicant, the project director/principal investigator(s), the project title, the objectives of the project, a description of the project, including methods to be employed, the potential impact of the project (i.e., benefits, outcomes), and major participants (for collaborative projects). This document must not include any proprietary or sensitive business information as the Department may make it available to the public. The project summary must not exceed 1 page when printed using standard 8.5" by 11" paper with 1" margins (top, bottom, left and right) with font not smaller than 11 point. To attach a Project Summary/Abstract, click "Add Attachment."

Project Narrative (Field 7 on the Form)

The project narrative must not exceed **50** pages, **for applications under Areas of Interest 1, 2 and 3**, and shall not exceed **20** pages for Area of Interest 4, including cover page, table of contents, charts, graphs, maps, photographs, and other pictorial presentations, when printed using standard 8.5" by 11" paper with 1 inch margins (top, bottom, left, and right).

EVALUATORS WILL ONLY REVIEW THE NUMBER OF PAGES SPECIFIED IN THE PRECEDING SENTENCE. The font must not be smaller than 11 point. Do not include any Internet addresses (URLs) that provide information necessary to review the application, because the information contained in these sites will not be reviewed. See Part VIII.D for instructions on how to mark proprietary application information. To attach a Project Narrative, click "Add Attachment." **Applicants must identify the Area of Interest they are applying to in the project narrative and identify the Area of Interest number in the file name. For example if an applicant were applying to Area of Interest 1 "Project01.pdf"; if applying to Area of Interest 2 "Project02.pdf"; if applying to Area of Interest 3 "Project03.pdf"; and if applying to Area of Interest 4 "Project04.pdf".**

The project narrative must include:

- **Project Objectives:** This section should provide a clear, concise statement of the specific objectives/aims of the proposed project.
- **Merit Review Criterion Discussion** The section should be formatted to address each of the merit review criterion and sub-criterion listed in Part V.A. Provide sufficient information so that reviewers will be able to evaluate the application in accordance with these merit review criteria. **DOE WILL EVALUATE AND CONSIDER ONLY THOSE APPLICATIONS THAT ADDRESS SEPARATELY EACH OF THE MERIT REVIEW CRITERION AND SUB-CRITERION.**
- **Relevance and Outcomes/Impacts:** This section should explain the relevance of the effort to the objectives in the program announcement and the expected outcomes and/or impacts.
- **Roles Of Participants:** For multi-organizational or multi-investigator projects, describe the roles and the work to be performed by each participant/investigator, business agreements between the applicant and participants, and how the various efforts will be integrated and managed.

- Multiple Principal Investigators: The applicant, whether a single organization or team/partnership/consortium, must indicate if the project will include multiple PIs. This decision is solely the responsibility of the applicant.

If multiple PIs will be designated, the application must identify the Contact PI/Project Coordinator and provide a “Coordination and Management Plan” that describes the organization structure of the project as it pertains to the designation of multiple PIs. This plan should, at a minimum, include:

- process for making decisions on scientific/technical direction;
 - publications;
 - intellectual property issues;
 - communication plans;
 - procedures for resolving conflicts; and
 - PIs’ roles and administrative, technical, and scientific responsibilities for the project.
- Facilities And Other Resources: Identify the facilities (e.g., office, laboratory, computer, etc.) to be used at each performance site listed and, if appropriate, indicate their capacities, pertinent capabilities, relative proximity, and extent of availability to the project. Describe only those resources that are directly applicable to the proposed work. Provide any information describing the other resources available to the project such as machine and electronics shops.
 - Equipment: List important items of equipment already available for this project and, if appropriate, note the location and pertinent capabilities of each. If you are proposing to acquire equipment, describe comparable equipment, if any, already at your organization and explain why it cannot be used.
 - Bibliography And References, If Applicable: Provide a bibliography for any references cited in the Project Narrative section. This section must include only bibliographic citations.

- Statement Of Project Objectives (SOPO):

The project narrative must contain a single, detailed Statement of Project Objectives that addresses how the project objectives will be met. The Statement of Project Objectives must contain a clear, concise description of all activities to be completed during project performance and follow the structure discussed below. The Statement of Project Objectives may be released to the public by DOE in whole or in part at any time. It is therefore required that it shall not contain proprietary or confidential business information.

The Statement of Project Objectives is generally less than 10 pages in total for the proposed work. Applicants shall prepare the Statement of Project Objectives in the following format:

TITLE OF WORK TO BE PERFORMED

(Insert the title of work to be performed. Be concise and descriptive.)

A. OBJECTIVES

Include one paragraph on the overall objective(s) of the work. Also, include objective(s) for each phase of the work.

B. SCOPE OF WORK

This section should not exceed one-half page and should summarize the effort and approach to achieve the objective(s) of the work for each Phase.

C. TASKS TO BE PERFORMED

Tasks, concisely written, should be provided in a logical sequence and should be divided into the phases of the project, as appropriate. This section provides a brief summary of the planned approach to this project. An outline of the Project Management Plan (referenced in Task 1.0 below and required to be submitted with your application) is provided later in this Part.

PHASE I

Task 1.0 – Project Management and Planning

(Description includes work elements required to revise and maintain the Project Management Plan and to manage and report on activities in accordance with the plan)

Subtask 1.1

(Description)

Task 2.0 - (Title)

PHASE II (Optional)

Task 3.0 - (Title)

D. DELIVERABLES

The periodic, topical, and final reports shall be submitted in accordance with the attached "Federal Assistance Reporting Checklist" and the instructions accompanying the checklist.

[Note: The Recipient shall provide a list of deliverables other than those identified on the "Federal Assistance Reporting Checklist" that will be delivered. These reports shall also be identified within the text of the Statement of Project Objectives. See the following examples:

1. Task 1.1 - (Report Description)
2. Task 2.2 - (Report Description)

- Bibliography & References Cited Appendix:
Provide a bibliography of any references cited in the Project Narrative. Each reference must include the names of all authors (in the same sequence in which they appear in the publication), the article and journal title, book title, volume number, page numbers, and year of publication. Include only bibliographic citations. Applicants should be especially careful to follow scholarly practices in providing citations for source materials relied upon when preparing any section of the application. In order to reduce the number of files attached to your application, please provide the Bibliography and References Cited information as an appendix

to your project narrative. Do not attach a file in field 8. This appendix will not count in the project narrative page limitation.

- Applications shall identify jobs directly created or retained as a result of this project (e.g. engineers, test operators, etc.) as well as the long term jobs created as a result of the project. Specifically, the applicants should provide information detailing 1) the number of new jobs directly created (or retained) within the first year of the project, 2) the number of new jobs indirectly created (or retained) within the first year of the project for major suppliers to the project, and 3) the number of long term jobs created by the project (lasting more than five years from the end of the project). Consideration will be given to projects which create the greatest number of jobs within the first three years of the project and projects that create long term sustainable jobs. Speculation on induced jobs that may occur as a result of workers employed as a result of this project should not be included (e.g. jobs associated with grocery stores, retail stores, transportation, etc).

Other Attachments (Field 11 on the form):

If you need to elaborate on your responses to questions 1-5 on the “Other Project Information” document, attach a file in field 11.

Also, attach the following files:

Project Management Plan.

This plan should be formatted to include the following sections with each section to include the information as described below:

- A. Executive Summary: Provide a description of the project that includes the objective, project goals, and expected results. For purposes of the application, this information is included in the Project Narrative (Field 7) and should be simply copied to this document for completeness, so that the Project Management Plan is a stand-alone document.
- B. Risk Management: Provide a summary description of the proposed approach to identify, analyze, and respond to perceived risks associated with the proposed project. Project risk events are uncertain future events that, if realized, impact the success of the project. As a minimum, include the initial identification of significant technical, resource, and management issues that have the potential to impede project progress and strategies to minimize impacts from those issues.
- C. Milestone Log: Provide milestones for each budget period (or phase) of the project. Each milestone should include a title and planned completion date, Milestones should be quantitative and show progress toward budget period and/or project goals.

[Note: During project performance, the Recipient will report the Milestone Status as part of the required quarterly Progress Report as prescribed under Attachment 4, Reporting Requirements Checklist. The Milestone Status will present actual performance in comparison with Milestone Log, and include:

- (1) the **actual** status and progress of the project,
- (2) specific progress made toward achieving the project’s milestones, and,

(3) any proposed changes in the project's schedule required to complete milestones.]

D. Funding and Costing Profile: Provide a table (the Project Funding Profile) that shows, by budget period, the amount of government funding going to each project team member. Also provide a table (the Project Costing Profile) that projects, by month, the expenditure of government funds for the first budget period, at a minimum.

E. Project Timeline: Provide a timeline of the project (similar to a Gantt chart) broken down by each task and subtask, as described in the Statement of Project Objectives. The timeline should include for each task, a start date, and end date. The timeline should show interdependencies between tasks and include the milestones that are identified in the Milestone Log (Section C).

F. Success Criteria at Decision Points: Provide success criteria for each decision point in the project, including go/no-go decision points and the conclusions of budget periods and the entire project. The success criteria should be objective and stated in terms of specific, measurable, and repeatable data. Usually, the success criteria pertain to desirable outcomes, results, and observations from the project.

[Note: As the first task in the Statement of Project Objectives, successful applicants will revise the version of the Project Management Plan that is submitted with their applications by including details from the negotiation process. This Project Management Plan will be updated by the Recipient as the project progresses, and the Recipient must use this plan to report schedule and budget variances.]

Save this plan in a single file named "pmp.pdf" and click on "Add Attachments" in Field 11 to attach.

Commitment Letters from Third Parties Contributing to Cost Sharing

If a third party, (i.e., a party other than the organization submitting the application) proposes to provide all or part of the required cost sharing, the applicant must include a letter from the third party stating that it is committed to providing a specific minimum dollar amount of cost sharing. The letter should also identify the proposed cost sharing along with justification for proposing less than 50% cost share (e.g., cash, services, and/or property) to be contributed. Letters must be signed by the person authorized to commit the expenditure of funds by the entity and be provided in a PDF format. Save this information in a single file named "CLTP.pdf" and click on "Add Attachments" in Field 11 to attach.

Budget for DOE Federally Funded Research and Development Center (FFRDC)

Contractor, if applicable. If a DOE/NNSA FFRDC contractor is to perform a portion of the work, you must provide a DOE Field Work Proposal in accordance with the requirements in DOE Order 412.1 Work Authorization System. This order and the DOE Field Work Proposal form are available at http://management.energy.gov/business_doe/business_forms.htm. Use the FFRDC name as the file name (up to 10 letters) and attach to the R&R Other Project Information form in Field 11 – Add Attachments.

Environmental Questionnaire

You must complete the environmental questionnaire at <http://www.netl.doe.gov/business/forms.html>. Save the questionnaire in a single file named "Env.pdf" and click on "Add Attachments" in Field 11 to attach.

- **Vehicle Requirement (*Applies to Area of Interest 1 and 3*)**

Eligible applicants must include a letter stating their intention to demonstrate one hundred (100) (EV, PHEV and or FCV) vehicles over a two (2) year period. Combinations of the vehicle technologies or platforms are acceptable for demonstration purposes. Letters must be signed by the person authorized to commit the expenditure of funds by the entity and provided in a PDF format. Save this letter in a single file named veh.pdf.

- **Class Advance Patent Waiver**

Eligible applicants must include a letter stating their intention to participate or not to participate in the class waiver and agree to the standard waiver terms and conditions, including US competitiveness. Letters must be signed by the person authorized to commit the expenditure of funds by the entity and be provided in a PDF format. Save this letter in a single file named "WVR.pdf"

- **Manufacturer Letter of Commitment (*Applies to Area of Interest 2 and 3*)**

Eligible applicants must include a team member capable of manufacturing the technology developed under the project or a letter from a manufacturer of the technology. Letter must be signed by the person authorized to commit the manufacturer to the expenditure of funds by the entity and provided in PDF format. Save this letter in a single file named mnf.pdf

- **Cost Share Reduction Justification (*Applies to Areas of Interest 1, 2, and 3*)**

If applicable, you must provide a cost share reduction justification if proposing less than the required 50% or higher recipient cost share. Justifications must be signed by the person authorized to commit the expenditure of funds for the entity and be provided in a PDF format. Save this letter in a single file named "Just.pdf," and click on "Add Optional Other Attachment" to attach.

4. **RESEARCH AND RELATED Senior/Key Person**

Complete this form before the Budget form to populate data on the Budget form. Beginning with the PD/PI, provide a profile for each senior/key person proposed. A senior/key person is any individual who contributes in a substantive, measurable way to the scientific/technical development or execution of the project, whether or not a salary is proposed for this individual. Subawardees and consultants must be included if they meet this definition. For each senior/key person provide:

Biographical Sketch.

Complete a biographical sketch for each senior/key person and attach to the "Attach Biographical Sketch" field in each profile. The biographical information for each person must not exceed 2 pages when printed on 8.5" by 11" paper with 1 inch margins (top, bottom, left, and right) with font not smaller than 11 point and must include:

Education and Training. Undergraduate, graduate and postdoctoral training, provide institution, major/area, degree and year.

Research and Professional Experience: Beginning with the current position list, in chronological order, professional/academic positions with a brief description.

Publications. Provide a list of up to 10 publications most closely related to the proposed project. For each publication, identify the names of all authors (in the same sequence in which they appear in the publication), the article title, book or journal title, volume number, page numbers, year of publication, and website address if available electronically.

Patents, copyrights, and software systems developed may be provided in addition to or substituted for publications.

Synergistic Activities. List no more than 5 professional and scholarly activities related to the effort proposed.

Current and Pending Support

- Provide a list of all current and pending support (both Federal and non-Federal) for the Project Director/Principal Investigator(s) (PD/PI) and senior/key persons, including subawardees, for ongoing projects and pending applications. For each organization providing support, show the total award amount for the entire award period (including indirect costs) and the number of person-months per year to be devoted to the project by the senior/key person. Concurrent submission of an application to other organizations for simultaneous consideration will not prejudice its review. Save the information in a separate file and attach to the “Attach Current and Pending Support” field in each profile.

5. RESEARCH AND RELATED BUDGET (TOTAL FED + NON-FED)

Complete the Research and Related Budget (Total Fed & Non-Fed) form in accordance with the instructions on the form (Activate Help Mode to see instructions) and the following instructions. You must complete a separate budget for each year of support requested. The form will generate a cumulative budget for the total project period. You must complete all the mandatory information on the form before the NEXT PERIOD button is activated. You may request funds under any of the categories listed as long as the item and amount are necessary to perform the proposed work, meet all the criteria for allowability under the applicable Federal cost principles, and are not prohibited by the funding restrictions in this announcement (See PART IV. G).

Budget Justification (Field K on the form).

Provide the required supporting information for the following costs (See R&R instructions): equipment; domestic and foreign travel; participant/trainees; material and supplies; publication; consultant services; ADP/computer services; subaward/consortium/contractual; equipment or facility rental/user fees; alterations and renovations; and indirect cost type. Provide any other information you wish to submit to justify your budget request. If cost sharing is required, provide an explanation of the source, nature, amount, and availability of any proposed cost sharing. Attach a single budget justification file for the entire project period in Field K. The file automatically carries over to each budget year.

ARRA 2009 Additional Budget Justification Information

Proposals shall provide information which validates that all laborers and mechanics on projects funded directly by or assisted in whole or in part by and through funding appropriated by the Act are paid wages at rates not less than those prevailing on projects of a character similar in the locality as determined by subchapter IV of Chapter 31 of title 40, United States Code (Davis-Bacon Act). For guidance on how to comply with this provision, see <http://www.dol.gov/esa/whd/contracts/dbra.htm>.

6. R&R SUBAWARD (Total Fed + Non-Fed) FORM

Budgets for Subawardees, other than DOE FFRDC Contractors. You must provide a separate cumulative R&R budget for each subawardee that is expected to perform work estimated to be more than \$100,000 or 50 percent of the total work effort (whichever is less). Download the R&R Budget Attachment from the R&R SUBAWARD BUDGET (Total Fed + Non-Fed) FORM and e-mail it to each subawardee that is required to submit a separate budget. After the Subawardee has e-mailed its completed budget back to you, attach it to one of the blocks provided on the form. Use up to 10 letters of the subawardee's name as the file name.

7. Disclosure of Lobbying Activities (SF-LLL)

If applicable, complete SF- LLL. Applicability: If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the grant/cooperative agreement, you must complete and submit Standard Form - LLL, "Disclosure Form to Report Lobbying."

Summary of Required Forms/Files

Name of Document	Format	Attach to
SF 424 (R&R)	Form	N/A
Project/Performance Site Location(s)	Form	N/A
RESEARCH AND RELATED Other Project Information	Form	N/A
Project Summary/Abstract	PDF	Field 6
Project Narrative, including required appendices	PDF	Field 7
Project Management Plan	PDF	Field 11
Commitment Letters from Third Parties	PDF	Field 11
Budget for DOE FFRDC, if applicable	PDF	Field 11
Environmental Questionnaire	PDF	Field 11
Vehicle Requirement (Area of Interest 1)	PDF	Field 11
Class Advanced Patent Waiver	PDF	Field 11
Manufacturer Letter of Commitment (Area of Interest 2)	PDF	Field 11
Cost Share Reduction Justification, if applicable	PDF	Field 11

RESEARCH & RELATED SENIOR/KEY PERSON (Optional)	Form	N/A
Biographical Sketch	PDF	Attach to appropriate block
Current and Pending Support	PDF	Attach to appropriate block
RESEARCH AND RELATED BUDGET (Total Fed + Non-Fed)	Form	N/A
Budget Justification/ ARRA 2009	PDF	Field K
R&R SUBAWARD BUDGET (Total Fed + Non-Fed) ATTACHMENT(S) FORM , if applicable	Form	N/A
SF-LLL Disclosure of Lobbying Activities , if applicable	Form	N/A

C. SUBMISSIONS FROM SUCCESSFUL APPLICANTS

If selected for award, DOE/NNSA reserves the right to request additional or clarifying information for any reason deemed necessary, including, but not limited to:

- Indirect cost information
- Other budget information
- Name and phone number of the Designated Responsible Employee for complying with national policies prohibiting discrimination (See 10 CFR 1040.5)
- Representation of Limited Rights Data and Restricted Software, if applicable
- Commitment Letter from Third Parties Contributing to Cost Sharing, if applicable

D. SUBMISSION DATES AND TIMES

1. Pre-application Due Date

- Pre-applications are not required.

2. Application Due Date

- Applications shall be received by **dates outlined below**, not later than 8:00 PM Eastern Time. You are encouraged to transmit your application well before the deadline. APPLICATIONS RECEIVED AFTER THE DEADLINE WILL NOT BE REVIEWED OR CONSIDERED FOR AWARD.

This Funding Opportunity Announcement (FOA) has closes as outlined below.

EVALUATION PERIOD

APPLICATION DUE DATE

Round 1:

Area of Interest 1, 2, 3, and 4

May 13, 2009 8:00 PM Eastern time

The Government is contemplating a Round 2 for the same Areas of Interest, contingent upon the outcome of Round 1 and the availability of appropriated funds. If the Government issues a Round 2, it will be issued under a separate Funding Opportunity Announcement number.

E. INTERGOVERNMENTAL REVIEW

- This program is not subject to Executive Order 12372 – Intergovernmental Review of Federal Programs.

F. FUNDING RESTRICTIONS

Cost Principles Costs must be allowable in accordance with the applicable Federal cost principles referenced in 10 CFR part 600. The cost principles for commercial organization are in FAR Part 31.

Pre-award Costs Recipients may charge to an award resulting from this announcement pre-award costs that were incurred within the ninety (90) calendar day period immediately preceding the effective date of the award, if the costs are allowable in accordance with the applicable Federal cost principles referenced in 10 CFR part 600. Recipients must obtain the prior approval of the contracting officer for any pre-award costs that are for periods greater than this 90 day calendar period.

Pre-award costs are incurred at the applicant's risk. DOE is under no obligation to reimburse such costs if for any reason the applicant does not receive an award or if the award is made for a lesser amount than the applicant expected.

Property Management. Consistent with 10 CFR 600.134 (Non-Profits), 10 CFR 600.232 (States and Local Governments), and 10 CFR 600.321 (For Profits), title to all real property, equipment and supplies (excluding Government-furnished property) acquired by or on behalf of the Recipient in connection with performance of the project will not vest in the Recipient. The Government retains its equitable interest in the property purchased by the Recipient in connection with performance of the project. During the term of the award, the Recipient may, with the DOE Contracting Officer's prior approval, encumber its title to or dispose of such property. If the property is sold or Recipient otherwise receives financial benefit from the property disposition, during the term of the award, the Recipient shall share the financial benefit with the Government in the same share ratio as the total project cost sharing

G. OTHER SUBMISSION AND REGISTRATION REQUIREMENTS

1. Where to Submit

- **APPLICATIONS MUST BE SUBMITTED THROUGH FEDCONNECT TO BE CONSIDERED FOR AWARD.** Submit electronic applications through the FedConnect portal at www.fedconnect.net. Information regarding how to submit applications via Fed Connect can be found at https://www.fedconnect.net/FedConnect/PublicPages/FedConnect_Ready_Set_Go.pdf.

Further, it is the responsibility of the applicant, prior to the offer due date and time, to verify successful transmission.

2. Registration Process

- There are several one-time actions you must complete in order to submit an application in response to this Announcement (e.g., obtain a Dun and Bradstreet Data Universal Numbering System (DUNS) number, register with the Central Contract Registry (CCR), and register with FedConnect). Applicants, who are not registered with CCR and Fedconnect, should allow at least 10 days to complete these requirements. It is suggested that the process be started as soon as possible.

Part V - APPLICATION REVIEW INFORMATION

A. CRITERIA

1. Initial Review Criteria

- Prior to a comprehensive merit evaluation, DOE will perform an initial review to determine that (1) the applicant is eligible for an award; (2) the information required by the announcement has been submitted; (3) all mandatory requirements are satisfied; and (4) the proposed project is responsive to the objectives of the funding opportunity announcement.
- 2. If a written application fails to meet all of the mandatory requirements as outlined in PART I, Funding Opportunity Description including the initial criteria, the application will not be forwarded for comprehensive merit review

3. Merit Review Criteria

The following criteria are to be used to evaluate Applications:

Evaluation Criteria for Area of Interest 1, 2, and 3

Criterion 1: Technical Approach and Project Management

Weight: 40%

- Responsiveness and relevance to the programmatic research goals and requirements identified in this announcement for this area of interest, including rationale for the vehicle and/or infrastructure design
- Demonstrated knowledge and understanding of vehicle design and manufacturing, related past and current work and how the proposed effort builds on or expands from these prior efforts to ensure a production-intent design, i.e., their adaptation of and application to specific vehicle propulsion systems and platforms
- Degree and source of the identified risk in demonstrating the proposed technology, including definition of potential technology deficiencies along with proposed solutions to mitigate the risk;
- Innovativeness of the proposed technology
- Scientific soundness and technical feasibility of the proposed technology for the vehicle and/or infrastructure. (Is it based on sound scientific principles and on an understanding of the current state-of-the-art?)
- Degree of the current state of development of the proposed technology and the applicability to the proposed vehicle, including any modeling or laboratory data and results
- Identification of vehicle type and quantity to be used in the demonstration, and infrastructure additions or improvements
- The thoroughness of the testing, operation, and maintenance plans for the vehicles
- The appropriateness or methodology for data collection and evaluation that will lead to advancement of the technology
- Adequacy of the plan to meet all relevant emission regulations and comply with applicable safety standards
- Adequacy, reasonableness and soundness of the proposed project management approach, including identification of criteria for, and creation of go/no-go decisions, interim milestones and success/failure metrics to enable effective project management.

- Adequacy of the planned testing to address key operational and performance aspects of the technology, including method to achieve diverse operation,
- Adequacy of the product integration plans/processes to meet the delivery schedule according to the Program Area of Interest
- Adequacy and appropriateness of the schedule including the duration and sequencing of tasks and the scheduling of project milestones and decision points
- Adequacy and appropriateness of the proposed plan for coordinating, directing, and performing the proposed work.
- Soundness of a plan to expeditiously address environmental siting, and other applicable regulatory requirements

Criterion 2: Commercialization and Market Acceptance

Weight: 25%

- Ability to commercialize the technology within five (5) years of project initiation
- Adequacy of plans for continued development, integration, and commercialization plan for the proposed technology beyond the proposed effort
- Potential to compete economically in and benefit the U.S. marketplace
- Characterization of expected market penetration rate and major assumptions (i.e. units manufactured per year).
- Identification of pathways and commercialization partners to connect the technology with the mainstream end-users.
- Extent of analysis of the risks to successful commercialization, including market, regulatory, intellectual property, and any other significant barriers.
- Potential of the proposed vehicle technologies to reduce petroleum, including economic viability and production potential within one year of project completion.
- Potential for the proposed vehicle to reduce or support reduction of the environmental impact relative to the conventional production version of the vehicle

Criterion 3: Cost Share

Weight:20%

- Percentage of private sector cost share commitment. Private Sector cost share commitments which are less than 50% will be rated lower
- Value expected to be received for the amount of the DOE contribution. Proposals that accomplish more with less DOE support will be rated higher

Criterion 4: Applicant and Team Member Roles, Capabilities, and Facilities Weight: 15%

- Qualifications and capabilities of key personnel;
- Prior success in conventional and advanced vehicle design and volume production;
- Extent of involvement of a vehicle manufacturer in the execution of the proposed work;
- Ability to assemble a team necessary for the successful development of the technology;
- Availability and adequacy of equipment, facilities, and other support necessary for the successful performance of the proposed work;

Evaluation Criteria for Area of Interest 4

Criterion 1: Technical Approach and Project Management

Weight: 40%

- Responsiveness and relevance to the programmatic research goals and requirements identified in this announcement for this area of interest,
- Knowledge and understanding of advanced electric vehicles, related past and current work and how the proposed effort builds on or expands from these prior efforts to ensure a continued program
- Degree of the current state of education programs and the applicability to the proposed education program
- Adequacy, reasonableness and soundness of the proposed project management approach, including identification of criteria for, and creation of go/no-go decisions, interim milestones and success/failure metrics to enable effective project management.
- Adequacy and appropriateness of the schedule including the duration and sequencing of tasks and the scheduling of project milestones and decision points
- Adequacy and thoroughness of the approach to the proposed work to successfully meet the project objectives, including plans to comprehensively address key problems

Criterion 2: Education and Outreach Potential

Weight: 35%

- Adequacy of plans for continued course development, training, and education for the proposed education activities beyond the proposed effort
- Potential for the program to reach students, the public, and trainees
- Ability to inform secondary school students and the public of the benefits of advanced electric drive vehicles to the consumers and US market
- Potential number of students and trainees graduated
- Quality of planned courses and activities,
- Planned type and number of higher education courses, training and service programs, visits and coordinated activities with secondary schools, and outreach activities to the public
- Identification of partners to connect the education program with the technology manufacturers and demonstration programs
- Plans to align the program with employers, including job placement activities or job coordination
- General applicability, timeliness, and economic viability of the proposed education and/or outreach program
- Potential for the program to benefit the US education and automotive sector

Criterion 3: Applicant and Team Member Roles, Capabilities, and Facilities Weight: 25%

- Qualifications and capabilities of key personnel;
- Prior success in outreach, education or training for conventional and advanced electric drive vehicles or relevant activity;
- Prior history of graduating/training students successfully
- Ability to assemble a team necessary for the successful execution of the program;
- Availability and adequacy of equipment, facilities, and other support necessary for the successful performance of the proposed work;
- Adequacy and appropriateness of the proposed plan for coordinating, directing, and performing the proposed work.

3. Other Selection Factors

- The selection official will consider the following program policy factors in the selection process:
 1. **Optimization of Federal Funds** - It may be desirable to select projects for award of less technical merit than other projects, if such a selection will optimize use of available funds by allowing more projects to be supported while not being detrimental to the overall objectives of the program.
 2. **Diversity of Organizations** - It may be desirable to select projects that collectively represent diverse types and sizes of applicant organizations.
 3. **Diversity of Technologies** - It may be desirable to select projects for award that represent a diversity of technology concepts and applications, as well as technical approaches.
 4. It may be desirable to select projects, which promote and enhance the objectives of the American Recovery and Reinvestment Act of 2009, P.L. 111-5, especially job creation, and/or preservation and economic recovery in an expeditious manner.

B. REVIEW AND SELECTION PROCESS

1. Merit Review

- Applications that pass the initial review will be subjected to a merit review in accordance with the guidance provided in the "Department of Energy Merit Review Guide for Financial Assistance and Unsolicited Proposals." This guide is available under Financial Assistance, Regulations and Guidance at <http://www.management.energy.gov/documents/meritrev.pdf>.

2. Selection

- The Selection Official will consider the merit review recommendation, program policy factors, and the amount of funds available.

3. Discussions and Award

- The Government may enter into discussions with a selected applicant for any reason deemed necessary, including but not limited to: (1) the budget is not appropriate or reasonable for the requirement; (2) only a portion of the application is selected for award; (3) the Government needs additional information to determine that the recipient is capable of complying with the requirements in 10 CFR part 600; and/or (4) special terms and conditions are required. Failure to resolve satisfactorily the issues identified by the Government will preclude award to the applicant.

C. ANTICIPATED NOTICE OF SELECTION AND AWARD DATES

- DOE anticipates notifying applicants selected for award under Round 1 prior to the end of **July 2009**. DOE anticipates making awards no later than **September 30, 2009**.

Part VI - AWARD ADMINISTRATION INFORMATION

A. AWARD NOTICES

1. Notice of Selection

- DOE will notify applicants selected for award. This notice of selection is not an authorization to begin performance. (See Part IV.G with respect to the allowability of pre-award costs.)

2. Notice of Award

- A Notice of Financial Assistance Award or Assistance Agreement issued by the contracting officer is the authorizing award document. It normally includes either as an attachment or by reference: (1). Special Terms and Conditions; (2). Applicable program regulations, if any; (3). Application as approved by DOE.; (4). DOE assistance regulations at 10 CFR part 600; (5). National Policy Assurances To Be Incorporated As Award Terms; (6). Budget Summary; and (7). Federal Assistance Reporting Checklist, which identifies the reporting requirements.

B. ADMINISTRATIVE AND NATIONAL POLICY REQUIREMENTS

1. Administrative Requirements

The administrative requirements for DOE grants and cooperative agreements are contained in 10 CFR part 600 (See: <http://ecfr.gpoaccess.gov>). Grants and cooperative agreements made to universities, non-profits and other entities subject to OMB Circular A-110 are subject to the Research Terms and Conditions located on the National Science Foundation web site at <http://www.nsf.gov/bfa/dias/policy/rtc/index.jsp>.

ARRA 2009 Award Administration Information

Special Provisions relating to work funded under American Recovery and Reinvestment Act of 2009, Pub. L. 111-5 shall apply. Also, the Office of Management and Budget may be promulgating additional provisions or modifying existing provisions. Those additions and modifications will be incorporated into the Special Provisions as they become available. The Recovery Act Special Terms and Conditions are located at http://management.energy.gov/business_forms.htm.

2. Special Terms and Conditions and National Policy Requirements

Special Terms and Conditions and National Policy Requirements

The DOE Special Terms and Conditions for Use in Most Grants and Cooperative Agreements are located at http://management.energy.gov/business_doe/business_forms.htm.

The National Policy Assurances To Be Incorporated As Award Terms are located at DOE http://management.energy.gov/business_doe/business_forms.htm.

Intellectual Property Provisions

The standard DOE financial assistance intellectual property provisions applicable to the various types of recipients are located at http://www.gc.doe.gov/financial_assistance_awards.htm.

Special Provisions relating to work funded under American Recovery and Reinvestment Act of 2009, Pub. L. 111-5 shall apply. Also, the Office of Management and Budget may be promulgating additional provisions or modifying existing provisions. Those additions and modifications will be incorporated into the Special Provisions as they become available.

C. REPORTING

Reporting requirements are identified on the Federal Assistance Reporting Checklist, DOE F 4600.2, attached to the award agreement. For a sample Checklist, see <http://management.energy.gov/documents/DOEF46002PolicyVersion.pdf>

PART VII - QUESTIONS/AGENCY CONTACTS

A. QUESTIONS

Questions regarding the content of the announcement must be submitted through the FedConnect portal. You must register with FedConnect to respond as an interested party to submit questions, and to view responses to questions. It is recommended that you register as soon after release of the FOA as possible to have the benefit of all responses. More information is available at <http://www.compusearch.com/products/fedconnect/fedconnect.asp>. DOE/NNSA will try to respond to a question within 3 business days, unless a similar question and answer have already been posted on the website.

B. AGENCY CONTACT

Name:	Jeffrey S. Kooser
E-mail:	Jeffrey.Kooser@netl.doe.gov
FAX:	304-285-4683
Telephone (Optional):	304-285-4253

PART VIII - OTHER INFORMATION

A. MODIFICATIONS

Notices of any modifications to this announcement will be posted on Grants.gov and the FedConnect portal. You can receive an email when a modification or an announcement message is posted by registering with FedConnect as an interested party for this FOA. It is recommended that you register as soon after release of the FOA as possible to ensure you receive timely notice of any modifications or other announcements. More information is available at <http://www.fedconnect.net> and <http://www.compusearch.com/products/fedconnect.asp>.

B. GOVERNMENT RIGHT TO REJECT OR NEGOTIATE

DOE reserves the right, without qualification, to reject any or all applications received in response to this announcement and to select any application, in whole or in part, as a basis for negotiation and/or award.

C. COMMITMENT OF PUBLIC FUNDS

The Contracting Officer is the only individual who can make awards or commit the Government to the expenditure of public funds. A commitment by other than the Contracting Officer, either explicit or implied, is invalid.

D. PROPRIETARY APPLICATION INFORMATION

Patentable ideas, trade secrets, proprietary or confidential commercial or financial information, disclosure of which may harm the applicant, should be included in an application only when such information is necessary to convey an understanding of the proposed project. The use and disclosure of such data may be restricted, provided the applicant includes the following legend on the first page of the project narrative and specifies the pages of the application which are to be restricted:

“The data contained in pages _____ of this application have been submitted in confidence and contain trade secrets or proprietary information, and such data shall be used or disclosed only for evaluation purposes, provided that if this applicant receives an award as a result of or in connection with the submission of this application, DOE shall have the right to use or disclose the data herein to the extent provided in the award. This restriction does not limit the government’s right to use or disclose data obtained without restriction from any source, including the applicant.”

To protect such data, each line or paragraph on the pages containing such data must be specifically identified and marked with a legend similar to the following:

“The following contains proprietary information that (name of applicant) requests not be released to persons outside the Government, except for purposes of review and evaluation.”

E. EVALUATION AND ADMINISTRATION BY NON-FEDERAL PERSONNEL

In conducting the merit review evaluation, the Government may seek the advice of qualified non-Federal personnel as reviewers. The Government may also use non-Federal personnel to conduct routine, nondiscretionary administrative activities. The applicant, by submitting its application, consents to the use of non-Federal reviewers/administrators. Non-Federal reviewers must sign conflict of interest and non-disclosure agreements prior to reviewing an application. Non-

Federal personnel conducting administrative activities must sign a non-disclosure agreement prior to performing administrative activities.

F. INTELLECTUAL PROPERTY DEVELOPED UNDER THIS PROGRAM

Patent Rights. The government will have certain statutory rights in an invention that is conceived or first actually reduced to practice under a DOE award. 42 U.S.C. 5908 provides that title to such inventions vests in the United States, except where 35 U.S.C. 202 provides otherwise for nonprofit organizations or small business firms. However, the Secretary of Energy may waive all or any part of the rights of the United States subject to certain conditions. (See “Notice of Right to Request Patent Waiver” in paragraph G below.) **Pursuant to 10 CFR Part 784, DOE intends to execute a class patent waiver for this solicitation. Any entity other than a domestic small business or domestic nonprofit organization, which do not need to request a waiver (see G. below), can elect to participate in the class waiver if they meet the requirements set forth in the waiver determination. In that event, it will not be necessary for that entity to apply for a patent waiver.**

Rights in Technical Data. Normally, the government has unlimited rights in technical data created under a DOE agreement. Delivery or third party licensing of proprietary software or data developed solely at private expense will not normally be required except as specifically negotiated in a particular agreement to satisfy DOE’s own needs or to insure the commercialization of technology developed under a DOE agreement.

G. NOTICE OF RIGHT TO REQUEST PATENT WAIVER

Applicants may request a waiver http://www.gc.doe.gov/documents/gc62_advance.pdf of all or any part of the rights of the United States in inventions conceived or first actually reduced to practice in performance of an agreement as a result of this announcement, in advance of or within 30 days after the effective date of the award. Even if such advance waiver is not requested or the request is denied, the recipient will have a continuing right under the award to request a waiver of the rights of the United States in identified inventions, i.e., individual inventions conceived or first actually reduced to practice in performance of the award. Any patent waiver that may be granted is subject to certain terms and conditions in 10 CFR 784 <http://www.gc.doe.gov/documents/patwaivclau.pdf>.

Domestic small businesses and domestic nonprofit organizations will receive the patent rights clause at 37 CFR 401.14, i.e., the implementation of the Bayh-Dole Act. This clause permits domestic small business and domestic nonprofit organizations to retain title to subject inventions. Therefore, small businesses and nonprofit organizations do not need to request a waiver.

H. NOTICE REGARDING ELIGIBLE/INELIGIBLE ACTIVITIES

Eligible activities under this program include those which describe and promote the understanding of scientific and technical aspects of specific energy technologies, but not those which encourage or support political activities such as the collection and dissemination of information related to potential, planned or pending legislation.