

**FINANCIAL ASSISTANCE
FUNDING OPPORTUNITY ANNOUNCEMENT**



U. S. Department of Energy

National Energy Technology Laboratory

**Recovery Act - Electric Drive Vehicle Battery and Component
Manufacturing Initiative**

Funding Opportunity Number: DE-FOA-0000026

Announcement Type: Initial

CFDA Number: 81.502 Miscellaneous Federal Activities

Issue Date:	03/19/2009
Letter of Intent Due Date:	Not Applicable
Pre-Application Due Date:	Not Applicable
Application Due Date:	05/19/2009 at 8:00:00 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 Round 2, a new Funding Opportunity Announcement (FOA) will be issued under a separate FOA Number.

NOTE: REGISTRATION/SUBMISSION 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 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

American Recovery and Reinvestment Act of 2009 (ARRA 2009)

Projects under this Funding Opportunity Announcement (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 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 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.

Project Description

Consistent with ARRA, the Department of Energy (DOE) National Energy Technology Laboratory (NETL), on behalf of the Office of Energy Efficiency and Renewable Energy's (EERE's) Vehicle Technologies (VT) Program, is seeking applications for grants supporting the construction (including production capacity increase of current plants), of U.S. based manufacturing plants to produce batteries and electric drive components. The battery manufacturing area is focused on battery manufacturing plants, material and component supplier manufacturing plants, and recycling plants, including facilities and manufacturing equipment, for Li ion and other advanced batteries for advanced vehicles such as electric drive vehicles¹ (EDVs) and micro-hybrids. To establish a successful business case, the importance of leveraging other battery markets is acknowledged; these battery applications include idle reduction systems for long-haul trucks, military applications, utility ancillary services and power quality, and consumer products. The electric drive manufacturing area is focused on production plants for components and subcomponents for the power electronics and electric machines used in EDVs. This work will enable market introduction of various electric vehicle technologies by lowering the cost of battery packs, batteries, and electric propulsion systems for EDVs through high-volume manufacturing.

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. A supporting goal is the development of production-ready batteries, power electronics, and electric machines that can be cost-effectively produced in volume to support the introduction of EDVs. The successful commercialization of EDVs directly supports the DOE's Energy Strategic Goal: "to protect our national and economic security by promoting a diverse supply and delivery of reliable, affordable, and environmentally sound energy." The grants awarded here will also meaningfully aide in the nation's economic recovery by creating U.S. based manufacturing jobs as outlined in the American Recovery and Reinvestment Act (ARRA) of 2009.

Program Areas of Interest:

This FOA contains multiple Program Areas of Interest as shown below:

Area of Interest

Topic

- Area of Interest 1: Cell and Battery Manufacturing Facilities
- Area of Interest 2: Advanced Battery Supplier Manufacturing Facilities
- Area of Interest 3: Combined Applications for Areas of Interest 1 and 2
- Area of Interest 4: Advanced Lithium ion Battery Recycling Facilities
- Area of Interest 5: Electric Drive Component Manufacturing Facilities
- Area of Interest 6: Electric Drive Subcomponent Manufacturing Facilities
- Area of Interest 7: Combined Applications for Areas of Interest 5 and 6

While not mandatory, teaming among materials/component manufacturers with Battery Original Equipment Manufacturers (OEMs) is encouraged. Responses that cover both topics 1 and 2 in a joint application should apply under Area of Interest 3. It is strongly encouraged that teams include battery material suppliers and at least one Battery OEM. It is also encouraged that teams include one or more potential customers/end users of the batteries to be produced (i.e., automotive OEMs, makers of

¹ EDVs include Plug-In Hybrid Electric Vehicle (PHEVs), Extended Range Electric Vehicles (EREVs), hybrid electric vehicles (HEVs), and Electric Vehicle (EVs).

consumer products, military applications, heavy duty vehicles, idle reduction equipment, etc.). Inclusion of customers/end users as team members is intended to indicate interest and intent from the potential markets for the batteries, as well as a mechanism for the end users to advise the team; it is not anticipated that end users would receive funds, unless the end user is participating in the material, cell, or battery manufacturing process.

Also, while not mandatory, teaming among applicants in areas of interest 5 and 6 is encouraged. It is strongly encouraged that teams include component material or subcomponent suppliers and at least one EDV component or system OEM. It is also encouraged that teams include one or more potential customers/end users of the components to be produced (i.e., automotive OEMs, makers of consumer products, devices supporting defense applications, etc). The inclusion of customers/end users as team members is intended to indicate interest and intent from the potential markets for the components, as well as a mechanism for the end users to advise the team; it is not anticipated that end users would receive funds, unless the end user is participating in the material, subcomponent, component, or system manufacturing process. Responses that cover both topics 5 and 6 in a joint application should apply to Area of Interest 7.

Applications in Areas of Interest 1 through 3 that include basic research on batteries or battery materials shall be deemed nonresponsive and will not be considered for comprehensive review. Qualification work on battery packs and cells (under Area of Interest 1) and materials screening and validation testing (under Area of Interest 2) however is permitted on a limited basis.

Applications in Areas of Interest 5, 6, and 7 that include basic research on inverters, converters, motors or subcomponents for EDV drivetrains shall be deemed nonresponsive and will not be considered for comprehensive review. Qualification work on EDV components or systems (under Area of Interest 5) and materials or subcomponent screening and validation testing (under Area of Interest 6) however is permitted on a limited basis.

Area of Interest 1: Cell and Battery Manufacturing Facilities

Applications under Area of Interest 1 are sought to build, or increase production capacity, and validate production capability of advanced automotive battery manufacturing plants located in the U.S. Applicants under this Area of Interest must be knowledgeable in battery manufacturing processes and preferably have an established presence in manufacturing of Li ion or other advanced batteries.

Applications should provide evidence of commitment from one or more vehicle sector original equipment manufacturers (OEMs) (manufacturers that produce light, medium or heavy duty vehicles (not including motorcycles, trikes or NEVs)) to buy batteries produced at the manufacturing facility. Both domestic and foreign OEM partners may be included. The type, amount, and duration of the commitment shall be included. Applications that indicate significant interest and intent (at a minimum, letters of commitment and preferably orders) from a battery manufacturer's customer(s) are preferred and will be given priority. Applications shall also provide evidence of the ability to meet the required production volume to satisfy OEM demand.

Applications shall provide evidence of supplier commitments which clearly indicate their ability or expected ability to supply the projected demand from the battery manufacturer.

For each award made in this area, recipients are expected to build, or increase production capacity of, manufacturing plant(s) in the United States that can produce, or be expanded within the constructed factory's footprint to produce, 20,000 to 100,000 PHEV batteries and/or their cells per year or equivalent volumes of other EDV, or microhybrid (stop/start assist) batteries. For purposes of production volume estimation each PHEV battery must be capable of delivering at least 5kWh of available energy

(production of 100,000 to 500,000 kWhs). The battery design shall comply with vehicle OEM specifications. Applications shall include an analysis indicating the capability of the proposed approach to meet this requirement. Further, applications shall include plans to update this analysis as the project matures and should account for equipment installation and actual manufacturing data that will become available. For awards made in this area, updated analysis results shall be provided as a part of the required quarterly reports.

Applications shall provide a detailed description of the battery technology, including materials, chemistry and performance, as well as cost estimates of the materials and the final battery product. The battery description must include specification of the volume, weight and power capability and any available supporting data for the battery specifications and performance claims.

Applications may include single or multiple sites. The end product must be a facility producing fully functional advanced batteries or cells that can be incorporated into a fully functional advanced battery.

The developed batteries should utilize state of the art, domestically produced, materials (anode and cathode active materials) and other components (separators, electrolytes, salts, etc.) to the greatest possible extent. Battery developers may test and optimize materials and components from various domestic suppliers for their system. Developers should also plan to provide feedback to those suppliers to enable them to improve their products.

Applications shall address the approach to recycling in terms of plans for recovery, transportation of (if required), and reuse of materials within the manufacturing process. Analysis shall address the amount of recycled material that will reenter the manufacturing process as well as the anticipated waste material or residue that will be discarded. A business case analysis shall be provided for instances where recycling will not be pursued.

For awards made in this area, in addition to deliverables required in the Federal Reporting Requirements Checklist, other technical deliverables under Area of Interest 1 will include:

- Cost estimates of battery cells/packs manufactured in the completed manufacturing facility
- Delivery to the DOE of 100 battery cells and/or 20 packs manufactured at the completed manufacturing facility from low rate initial production for validation purposes
- Test plan for battery cells/packs to meet at least one OEM specification
- Battery cell/pack performance and abuse tests and associated test report

Area of Interest 2: Advanced Battery Supplier Manufacturing Facilities

Under Area of Interest 2, applications are sought to build, or increase production capacity, and validate production capability of battery materials (anode and cathode active materials) and component (e.g., separator, packaging material, and electrolyte) and processing equipment manufacturing plants located in the U.S. Applicants under this Area of Interest must be knowledgeable in battery chemistries, materials, and components and preferably have an established presence in the field of advanced batteries materials manufacturing or related materials manufacturing.

Applications shall provide evidence of commitment from one or more battery manufacturers to buy battery materials or components produced at the manufacturing facility. The type, amount, and duration of the commitment shall be included. Preferably the battery manufacturer would already be producing EDV, microhybrids or idle reduction batteries, or similar batteries for other markets. Applications shall also provide evidence of the ability to meet the required production volume to satisfy battery manufacturer demand.

For each award made in this area, recipients are expected to build, or increase production capacity of, a materials manufacturing plant or facility in the United States that can produce enough material, components or equipment to supply a battery manufacturer making from 20,000 to 100,000 PHEV batteries and/or their cells per year or equivalent volumes of other EDV batteries. For purposes of production volume estimation, each PHEV battery must be capable of delivering at least 5kWh of available energy. Applications shall include an analysis indicating the capability of the proposed approach to meet this requirement. Further, applications shall include plans to update this analysis as the project matures and should account for equipment installation and actual manufacturing data that will become available. For awards made in this area, updated analysis shall be provided as a part of the required quarterly reports.

Applications shall include a detailed description of the material or component and any pertinent performance data.

The developed materials should, to the greatest extent possible, utilize domestically produced precursors and manufacturing equipment.

Applications shall address the approach to recycling in terms of plans for recovery, transportation of (if required), and reuse of materials. Analysis shall address the amount of recycled material that will reenter the manufacturing process as well as the anticipated waste material or residue that will be discarded. A business case analysis shall be provided for instances where recycling will not be pursued.

For awards made in this area, in addition to deliverables required in the Federal Reporting Requirements Checklist, other technical deliverables under Area of Interest 2 will include:

- Cost estimates of materials and components manufactured in the completed manufacturing facility
- Delivery to the DOE, 50 battery cells manufactured using material or components made by the completed manufacturing facility for low rate initial production for validation purposes
- Material/component screening test plan to meet customer specification
- Material/component screening test report
- Cell or battery test plan to meet customer specification
- Cell or battery performance and abuse tests and associated test report

Area of Interest 3: Combined Applications for Areas of Interest 1 and 2

Under this Area of Interest, applicants may propose to combine Area of Interest 1 and Area of Interest 2 requirements into one application. See the requirements above for Area of Interest 1 and Area of Interest 2.

Area of Interest 4: Advanced Lithium ion Battery Recycling Facilities

Under Area of Interest 4, applications are sought to build, or increase production capacity, and validate capability of the recycling or refurbishment plants located in the U.S. for Li ion batteries. Applicants under this Area of Interest must be knowledgeable in battery recycling or refurbishment and preferably have an established presence in the field. Preference will be given to recyclers/refurbishers that can return a large amount of material (or refurbished cells) to the battery manufacturing industry for reuse, as well as processes that are capable of handling multiple cell chemistries.

Applications shall provide evidence of commitment from one of more customers. The type, amount, and duration of the commitment shall be included.

For each award made in this area, recipients are expected to build, or increase production capacity of, a recycling/refurbishment plant in the United States that can recycle from 20,000 to 100,000 PHEV Lithium ion battery packs per year (or equivalent throughput). For purposes of recycling volume estimation, each PHEV battery must be capable of delivering at least 5kWh of available energy. Applications shall include an analysis indicating the capability of the proposed approach to meet this requirement. Further, applications shall include plans to update this analysis as the project matures. For awards made in this area, updated analysis results shall be provided as part of the required quarterly reports. Preferably, the plant will be capable of recycling consumer cells as well. Applications must include a description of how the facility will be used prior to automotive batteries becoming available.

Applications shall include a detailed description of the recycling/refurbishment process, an assessment of the availability of the necessary chemicals or materials, and an estimate of the total material residue. Applications shall specifically address how the process handles multiple chemistries and what the end products will be, i.e. refurbished cells, materials to be used again by the battery industry, or materials for other industries. Cost benefit estimates of the proposed processes shall be included.

For awards made in this area, in addition to deliverables required in the Federal Reporting Requirements Checklist, other technical deliverables under Area of Interest 4 will include:

- Cost benefit analysis of the final recycling process
- Material/component screening test plan to meet customer specification
- Material/component screening test report, and
- Delivery of material samples from recycling of aged cells, or
- Delivery of 50 aged battery cells that have been refurbished within the completed facility based on low rate initial production for validation purposes

Area of Interest 5: Electric Drive Component Manufacturing Facilities

Under this Area of Interest, applications are sought to build, or increase production capacity, and validate production capability of advanced automotive electric drive component manufacturing plants located in the U.S. Applicants to Area of Interest 5 must be knowledgeable in applicable manufacturing processes and preferably have an established presence in manufacturing of power electronics or motors.

Applications shall provide evidence of commitment from one or more automotive sector OEM (manufacturers that produce light, medium or heavy duty vehicles (not including motorcycles, trikes or NEVs)) to buy power electronic devices or motors produced at the manufacturing facility. The type, amount, and duration of the commitment shall be included. Applications that indicate significant interest and intent from a component or system manufacturer's customer(s) are preferred and will be given priority.

Applications shall provide evidence of supplier commitments which clearly indicate their ability or expected ability to supply the projected demand from the component manufacturer.

For each award made in this area, recipients are expected to build, or increase production capacity of, manufacturing plant(s) in the United States that can produce, or be expanded within the constructed factory's footprint to produce, from 20,000 to 100,000 EDV drivetrain components or systems such as inverters, converters, and motors. The component design shall comply with vehicle OEM specifications, and motor designs may include any required gear reduction or gearsets necessary for their application in an EDV. Applications shall include an analysis indicating the capability of the proposed approach to meet this requirement. Further, applications shall include plans to update this analysis as the project

matures. For awards made in this area, updated analysis results shall be provided as part of the required quarterly reports.

Applications shall provide a detailed description of the component technology (including a full bill of materials) as well as an estimate of the material costs and an estimate of the cost of the final component.

Applications may include single site full component manufacturing or partnerships between disparate subcomponent manufacturing and full component assembly facilities. The end product must be a facility or combination of facilities producing complete components or drive systems with the expected volume of production.

The developed components or systems should utilize state of the art domestically produced subcomponents and materials to the greatest possible extent. Component or system developers may test and optimize materials and subcomponents from various domestic suppliers for their system. Developers should also plan to provide feedback to those suppliers to enable them to improve their products.

Applications shall address the approach to recycling in terms of plans for recovery, transportation of (if required), and reuse of materials. Analysis shall address the amount of recycled material that will reenter the manufacturing process as well as the anticipated waste material or residue that will be discarded, if any. A business case analysis shall be provided for instances where recycling will not be pursued.

For awards made in this area, in addition to deliverables required in the Federal Reporting Requirements Checklist, other technical deliverables under Area of Interest 5 will include:

- Cost estimates of components or systems manufactured in the completed manufacturing facility
- Delivery to the DOE of 10 components or systems manufactured at the completed manufacturing facility from low rate initial production for validation purposes
- Development and validation test plan for components or systems to meet OEM specifications
- Component or system performance and reliability tests and associated test report

Area of Interest 6: Electric Drive Subcomponent Manufacturing Facilities

Under this Area of Interest, applications are sought to build, or increase production capacity, and validate production capability of electric drive subcomponent supplier manufacturing plants located in the U.S. to supply advanced automotive electric drive component manufacturers. Specific components that will be supported are power semiconductors including packaging, DC bus capacitors, motor magnets, and related material processing equipment. Applicants under this Area of Interest must be knowledgeable in electric drive components and preferably have an established presence in the field of supplying subcomponents to inverter, converter, motor, or related system manufacturers.

Applications shall provide evidence of commitment from one of more component manufacturers for subcomponents or subcomponent assemblies produced at the manufacturing facility. The type, amount, and duration of the commitment shall be included. Preferably, the component manufacturer would already be producing EDV components or similar systems for another market.

For each award made in this area, recipients are expected to build, or increase production capacity of, a subcomponent or material manufacturing plant or facility in the United States that can produce enough material, components or equipment to supply a component manufacturer making from 20,000 to 100,000 EDV drivetrain components or systems such as inverters, converters, and motors. Applications

shall include an analysis indicating the capability of the proposed approach to meet this requirement. Further, applications shall include plans to update this analysis as the project matures. For awards made in this area, updated analysis results shall be provided as part of the required quarterly reports.

The developed subcomponents or materials should to the greatest extent possible utilize domestically produced materials and manufacturing equipment.

Applications shall address the approach to recycling in terms of plans for recovery, transportation of (if required), and reuse of materials. Analysis shall address the amount of recycled material that will reenter the manufacturing process as well as the anticipated waste material or residue that will be discarded, if any. A business case analysis shall be provided for instances where recycling will not be pursued.

For awards made in this area, in addition to deliverables required in the Federal Reporting Requirements Checklist, other technical deliverables under Area of Interest 6 will include:

- Cost estimates of materials and subcomponents manufactured in the completed manufacturing facility
- Delivery to the DOE of 25 testing samples of materials or subcomponents made by the completed manufacturing facility for low rate initial production for validation purposes
- Material/subcomponent screening test plan to meet customer specification
- Material/subcomponent screening test report
- Material/subcomponent test plan to meet customer specification
- Material/subcomponent performance and reliability tests and associated test report

Area of Interest 7: Combined Applications for Areas of Interest 5 and 6

Under this Area of Interest, applicants may propose to combine Area of Interest 5 and Area of Interest 6 requirements into one application. See the requirements above for Area of Interest 5 and Area of Interest 6.

PART II – AWARD INFORMATION

A. TYPE OF AWARD INSTRUMENT

- DOE anticipates awarding grants under this program announcement.

B. ESTIMATED FUNDING

- Approximately \$2.0 billion in Federal funds is expected to be available for all Areas of Interest for new awards under this announcement as follows:

<u>Area of Interest (AOI)</u>	<u>DOE Funding</u>
1 – Cell and Battery Pack Manufacturing Facilities	\$1.2B
2 – Advanced Battery Supplier Manufacturing Facilities	\$0.275B
3 – Combined Applications for Areas of Interest 1 and 2	\$TBD
4 – Advanced Lithium ion Battery Recycling Facilities	\$0.025B
5 – Electric Drive Component Manufacturing Facilities	\$0.35B
6 – Electric Drive Subcomponent Manufacturing Facilities	\$0.15B
7 – Combined Applications for Areas of Interest 5 and 6	\$TBD
Total	\$2.0B

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 amount for an individual award made under this announcement):
\$ None

D. EXPECTED NUMBER OF AWARDS

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

<u>Program/Topic Area:</u>	<u>Number of Awards</u>
1 – Cell and Battery Pack Manufacturing Facilities	7-8
2 – Advanced Battery Supplier Manufacturing Facilities	14
3 – Combined Applications for Areas of Interest 1 and 2	TBD
4 – Advanced Lithium ion Battery Recycling Facilities	2
5 – Electric Drive Component Manufacturing Facilities	3-5
6 – Electric Drive Subcomponent Manufacturing Facilities	6-8
7 – Combined Applications for Areas of Interest 5 and 6	TBD

E. ANTICIPATED AWARD SIZE

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

<u>Program/Topic Area</u>	<u>Award Size</u>
1 – Cell and Battery Pack Manufacturing Facilities	\$0.100B - \$0.150B
2 – Advanced Battery Supplier Manufacturing Facilities	\$.020B
3 - Combined Applications for Areas of Interest 1 and 2	TBD
4 – Advanced Lithium Ion Battery Recycling Facilities	\$0.0125B
5 – Electric Drive Component Manufacturing Facilities	\$0.080B
6 – Electric Drive Subcomponent Manufacturing Facilities	\$0.020B
7 - Combined Applications for Areas of Interest 5 and 6	TBD

F. PERIOD OF PERFORMANCE

- DOE anticipates making awards with project period durations of 2 to 3 years.

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, institutions of higher education, other non-profit organizations, and for project 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

- 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.**

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 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 FFRDCs. The cognizant contracting officer for the FFRDC must authorize in writing the use of a DOE 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 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 will fund a DOE 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 FFRDC contractor may not be more significant than the scope of work to be performed by the applicant. Significant is defined as at least 50% of the total project cost must 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 – SF 424

You must complete the mandatory forms and any applicable optional forms (e.g., SF-LLL-Disclosure of Lobbying Activities) 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 - Application for Federal Assistance

Complete this form first to populate data in other forms. Complete all 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 21 can be found on the DOE Financial Assistance Forms Page at http://management.energy.gov/business_doe/business_forms.htm under Certifications 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. Other Attachments Form

Submit the following files with your application and attach them to the Other Attachments Form. Click on “Add Mandatory Other Attachment” to attach the Project Narrative. Click on “Add Optional Other Attachment,” to attach the other files.

- **Project Narrative File - Mandatory Other Attachment**

The project narrative must not exceed 50 pages, single-spaced, 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 REVIEW ONLY 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. See Part VIII.D for instructions on how to mark proprietary application information. **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, save the information in a single file named "Project01.pdf"; if an applicant were applying to Area of Interest 2, save the information in a single file named "Project02.pdf"; if applying to Area of Interest 3, save the information in a single file named "Project03.pdf"; if applying to Area of Interest 4, save the information in a single file named "Project04.pdf"; if applying to Area of Interest 5, save the information in a single file named "Project05.pdf"; if applying to Area of Interest 6, save the information in a single file named "Project06.pdf"; and/or if applying to Area of Interest 7, save the information in a single file named "Project07.pdf". Click on "Add Mandatory Other Attachment" to attach.**

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 Section 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. The application must include a detailed business plan as listed in Merit Review Criterion 3, and described in Appendix A. Provide the detailed business plan as an appendix to your project narrative. Do not attach a separate file. The business plan is NOT included in the 50 page limit of the Project Narrative file.
- 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. The justification for the proposed project should include a clear statement of the importance of the project in terms of the utility of the outcomes and the target community of beneficiaries.
- Roles of Participants: For multi-organizational projects, describe the roles and the work to be performed by each participant, business agreements between the applicant and participants, and how the various efforts will be integrated and managed.
- Facilities And Other Resources: Details associated with the planned site shall be included in a separate appendix and shall address the following as a minimum. Provide the planned site information as an appendix to your project narrative. Do not attach a separate file. The following planned site information is NOT included in the 50 page limit of the Project Narrative file.

- identify the proposed host site or alternate sites being considered ;
 - describe the area on and around the host site;
 - provide evidence of the right to use the site in order to construct the planned facilities to include ownership documents, options to buy or lease, or site agreements, etc;
 - provide evidence that the site has access to utilities, transportation, etc. that provide the appropriate interfaces for basic operation.
- 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. Identify planned equipment purchases, potential vendors, price information, status of equipment availability, with special emphasis on equipment planned to be purchased in whole or in part with government funds.
 - 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 Department of Energy's, National Energy Technology Laboratory uses a specific format for Statement of Project Objectives in its awards. In announcements such as this one, where the Government does not provide a Statement of Project Objectives, the Applicant is to provide one, which the DOE will then use to generate the Statement of Project Objectives to be included in the award.

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. The Statement of Project Objectives is NOT included in the 50 page limit of the Project Narrative file. 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)

- **Project Summary/Abstract File**

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 one (1) page when printed using standard 8.5" by 11" paper with 1" margins (top, bottom, left and right) with font no smaller than 11 point. Save this information in a file

named "Summary.pdf," and click on "Add Optional Other Attachment" to attach.

- **Resume File**

Provide a resume for each key person proposed, including subawardees and consultants if they meet the definition of key person. A key person is any individual who contributes in a substantive, measurable way to the execution of the project. Save all resumes in a single file named "bio.pdf" and click on "Add Optional Other Attachment" to attach. The biographical information for each resume must not exceed 2 pages when printed on 8.5" by 11" paper with 1 inch margins (top, bottom, left, and right) with font no smaller than 11 point and should include the following information, if applicable:

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

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.

- **SF 424 C Excel, Budget Information – Construction Programs File**

You must provide a separate budget for each year of support requested and a cumulative budget for the total project period. Use the SF 424 C Excel, "Budget Information – Construction Programs" form on the DOE Financial Assistance Forms Page at http://management.energy.gov/business_doe/business_forms.htm. You may request funds under any Cost Classification 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). Save the information in a single file named "SF424C.xls," and click on "Add Optional Other Attachment" to attach.

- **Budget Justification File (ARRA 2009)**

You must justify the costs proposed in each Object Class Category/Cost Classification category (e.g., identify key persons and personnel categories and the estimated costs for each person or category; provide a list of equipment and cost of each item; identify proposed subaward/consultant work and cost of each subaward/consultant; describe purpose of proposed travel, number of travelers, and number of travel days; list general categories of supplies and amount for each category; and provide any other information you wish to support your budget). Provide the name of your cognizant/oversight agency, if you have one, and the name and phone number of the individual responsible for negotiating your indirect rates. If cost sharing is required, you must have a letter from each third party contributing cost sharing (i.e., a party other than the organization submitting the application) stating that the third party is committed to providing a specific minimum dollar amount of cost sharing. In the budget justification, identify the following

information for each third party contributing cost sharing: (1) the name of the organization; (2) the proposed dollar amount to be provided; (3) the amount as a percentage of the total project cost; and (4) the proposed cost sharing – cash, services, or property. By submitting your application, you are providing assurance that you have signed letters of commitment. Successful applicants will be required to submit these signed letters of commitments.

ARRA 2009 Additional Budget Justification Information

Applications 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>.

Save the budget justification information and the ARRA 2009 additional budget justification information in a single file named "Budget.pdf," and click on "Add Optional Other Attachment" to attach.

- **Subaward Budget File(s)**

You must provide a separate budget (i.e., budget for each budget year and a cumulative budget) for each subawardee that is expected to perform work estimated to be more than \$500,000 or 10 percent of the total work effort (which ever is less). Use the SF 424 A Excel for Non Construction Programs or the SF 424 C Excel for Construction Programs. These forms are found on the DOE Financial Assistance Forms Page at http://management.energy.gov/business_doe/business_forms.htm. Save each Subaward budget in a separate file. Use up to 10 letters of the subawardee's name (plus .xls) as the file name (e.g., ucla.xls or energyres.xls), and click on "Add Optional Other Attachment" to attach.

- **Budget for DOE Federally Funded Research and Development Center (FFRDC) Contractor, if applicable**

If a DOE 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 up to 10 letters of the FFRDC name (plus .pdf) as the file name (e.g., lanl.pdf or anl.pdf), and click on "Add Optional Other Attachment" to attach.

- **Environmental Questionnaire**

You must complete the environmental questionnaire (NETL Form 451.1-1/3) at <http://www.netl.doe.gov/business/forms.html>. Save the questionnaire in a single file named "Env.pdf" and click on "Add Optional Other Attachment" to attach.

- **Commitment Letters**

Commitment letters should be limited to project partners and customers. Letters of support from other organizations (i.e. not project partners or customers) interested in lending their support to the worthiness of the project will not be considered and should not be included as

part of the application. Save commitment letters in a single file named "CL.pdf" and click on "Add Optional Other Attachment" to attach.

- **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 and should be simply copied to this document for completeness, so that the Project Management Plan is a stand-alone document.

B. A description of the project management system to be used for monitoring and control of scope, schedule, and cost including the industry accepted "Earned Value Management System" to manage progress in the construction of their proposed facilities.

C. 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.

D. 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.]

E. 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.

F. 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).

G. 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 Optional Other Attachment” to attach.

- **Cost Share Reduction Justification**

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. SF-LLL Disclosure of Lobbying Activities

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

Your application must include the following documents:

Name of Document	Format	File Name
Application for Federal Assistance – SF424	Form	N/A
Project/Performance Site Location(s)	Form	N/A
Other Attachments Form: Attach the following files to this form:	Form	N/A
Project Narrative File, including required appendices	PDF	Project.pdf
Project Summary/Abstract File	PDF	Summary.pdf
Resume File	PDF	Bio.pdf
SF 424C File - Budget Information for Construction Programs	Excel	SF424C.xls
Budget Justification File (ARRA 2009)	PDF	Budget.pdf
Subaward Budget File(s)	Excel	See Instructions

Budget for FFRDC Contractor, if applicable	PDF	See Instructions
Environmental Questionnaire	PDF	See Instructions
Commitment Letters	PDF	See Instructions
Project Management Plan	PDF	See Instructions
Cost Share Reduction Justification, if applicable	PDF	See Instructions
SF-LLL Disclosure of Lobbying Activities, if applicable.	Form	N/A

D. SUBMISSIONS FROM SUCCESSFUL APPLICANTS

If selected for award, DOE 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
- Additional information required to permit DOE to conduct its review under the National Environmental Policy Act (NEPA)

E. SUBMISSION DATES AND TIMES

1. Pre-application Due Date

- Pre-applications are not required.

2. Application Due Date

- Applications should be received by May 19, 2009, 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.

F. INTERGOVERNMENTAL REVIEW

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

G. FUNDING RESTRICTIONS

Cost Principles Costs must be allowable in accordance with the applicable Federal cost principles referenced in 10 CFR part 600. Applicants are advised that equipment acquired utilizing government project funds will be subject to property management rules set forth in 10 CFR part 600

(see Property Management, below). The cost principles for commercial organization are in FAR Part 31.

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.

H. 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. 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. Merit Review Criteria

- 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." This guide is available under Financial Assistance, Regulations and Guidance at <http://www.management.energy.gov/documents/meritrev.pdf>.
- *Merit Review Criteria:* All applications that pass the initial review process will receive a detailed and consistent technical evaluation utilizing the evaluation criteria described below. The following criteria are proposed to be used to evaluate applications:

Criterion 1: Technical Approach and Project Management

Weight: 40%

- Technical feasibility of the project, including both the ability to complete the facility and to deliver a commercial ready product within 3 years or less of award.
- Soundness of cost estimates, both for the project and for the product.
- Soundness of plans for recycling.
- Adequacy, reasonableness and soundness of the proposed project management plan, including go/no-go decisions, interim milestones, success/failure metrics, and the industry accepted "Earned Value Management System" proposed to manage progress in the construction of the proposed facilities.
- Ability to track project expenditures against project accomplishments throughout the construction and subsequent operational phase of the facility.
- Adequacy, appropriateness, and reasonableness of the proposed work and budget distribution among the team members.
- Adequacy of the manufacturing plan to provide the capability to meet throughput requirements, including integration of processes, equipment and equipment availability, and human resources.
- Adequacy of the plan to obtain clearly defined customer requirements.
- Adequacy of the identification of implementation barriers and risks and "timely" strategies for resolution.
- Soundness of a plan to expeditiously address environmental, siting, and other regulatory requirements for the project.

Criterion 2: Commercialization and Market Acceptance

Weight: 25%

- Strength of business plan, including customer letters of intent, current sales and identification of commercialization pathways. (Reference Appendix A to this FOA for suggested checklist of items to be addressed in the detailed business plan.)
- Reasonableness of the ability of suppliers to meet the required production capacity.

- Adequacy of the description, and the commercial viability of the technology that will be manufactured.
- Reasonableness of assumptions for estimating, and the market share projection for near term (over next 5 years), mid term (from 5 to 10 years), and long term (greater than 10 years).
- Reasonableness of performance characteristics that would cause buyers/licensees to choose this technology over other options.
- Reasonableness of analysis and prioritization of the barriers to commercialization, including market, regulatory, intellectual property, and any other significant barriers.
- Adequacy, reasonableness, and soundness of efforts to overcome the identified barriers to reduce risk.

Criterion 3: Cost Share

Weight 20%

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

Criterion 4: Qualifications and Resources

Weight: 15%

- Clarity, adequacy and completeness of roles and contributions of each team member in development of the project and/or commercialization of the products, including financial support of partners and subcontractors.
- Adequacy of the plan to fund the private sector share of the project costs, including the strength of financial commitments made to the project.
- Appropriateness and strength of the relationship with partners.
- Evidence of team's experience and success in similar projects.
- Experience and availability of key personnel to complete the proposed project.
- Ability (quality, availability and appropriateness) of the proposed site (or sites) for the manufacturing facilities.
- Ability (quality, availability and appropriateness) of facilities and equipment to accommodate the project.
- Anticipated ability of the product to accelerate the development and production of electric drive vehicle systems.
- Anticipated environmental impacts from the manufacturing facility or facilities.

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. **ARRA 2009 Application Review Information Criteria** – It is desirable to select applications 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. This would include the selection of projects that preserve and protect the greatest number of United States construction and manufacturing jobs (including jobs at facilities that have recently closed or are planned for closure in the near future).

B. SELECTION PROCESS

1. Selection

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

2. 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 by July 2009. DOE anticipates making awards by the end of September 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.

Organizations whose applications have not been selected will be advised as promptly as possible. This notice will explain why the application was not selected.

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_doe/business_forms.htm.

2. 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 Intellectual Property Provisions applicable to awards made under this Announcement can be found at <http://www.gc.doe.gov/documents/NRD-1003.pdf>.

C. REPORTING

Reporting requirements are identified on the Federal Assistance Reporting Checklist, DOE F 4600.2, attached to the award agreement. See the NETL Business Page at <http://www.netl.doe.gov/business/forms/FederalAssistanceReportingChecklistExample> for the proposed Checklist for this program. [{Complete text block}](#)

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 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:	Kelly McDonald
E-mail:	kelly.mcdonald@netl.doe.gov {complete}
FAX:	304-285-4683
Telephone (Optional):	304-285-4113

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.

APPENDICES/REFERENCE MATERIAL

- **Appendix A – Checklist Item Suggestions for Detailed Business Plan**
{Complete text block}

Company Overview

- Legal Business Description.
- Strategic Alliances, partners.

Product

- Describe the product, its features, and how the product fulfills end user needs.
- Production and delivery, number of products which can be currently manufactured, current suppliers.
- R&D – Planned releases of new products.

Manufacturing plan

- Ability to meet output requirements.
- Resource utilization (equipment, personnel, material).
- Manufacturing processes.
- Equipment lead times versus production timelines.
- Estimates for tooling, equipment, and the associated layout for optimized workflow.
- Manpower required for various rates of production (up to the required throughput identified in this FOA).
- Analysis or simulation methods to be used to validate manufacturing capabilities.
- Methods planned to ramp to low rate initial production and capability to meet full rate production.
- Alignment of start of production dates with OEM partner vehicle build schedules to provide for initial application and market penetration.

Marketing

- Market Definition, EV, PHEV, HEV, non-automotive.
- Customer Profile, currently signed customers in the vehicle market, in other markets, volumes, dates, target customers (not already signed), strategies to sign those customers.
- Marketing plan, sales and marketing assumptions (e.g., assumed EV, PHEV, HEV sales in US and other markets), Supporting or secondary markets for your product while the vehicle market matures, description of potential customers in supporting or secondary markets.

Commercialization Strategy

- Sales history, Product sales over the past 3 years, in automotive markets and in other markets. Other sales over the past 3 years such as R&D contracts.
- Distribution Channels.
- Advertising, Promotion, PR.

Competition

- Competitor performance and sales metrics and how you plan to exceed them.

Capital Requirements

- Resources requested.
- Exit/Payback Strategy.

Financial Plan

- Financial Partners.

- Assumptions
 - Financial
 - Economic
 - Operating
- Financial Projections (on an annual basis).
- Financial Statements.
- Financial Commitment Letters.