

STATEMENT OF PROJECT OBJECTIVES (Revised)

City of Boulder, Colorado

Boulder Smart Grid – Plug-In Electric/Hybrid Vehicles

A. PROJECT OBJECTIVES

Through this project, the recipient will increase the use of alternative fueled vehicles and advanced technology vehicles as a means to reduce U.S. dependence on imported petroleum, increase fuel economy and improve emissions. The recipient will also collect data on the success of the project through collection of vehicle, infrastructure and training information

B. PROJECT SCOPE

The recipient will purchase electric vehicles for the city fleet and car sharing. The recipient will also develop, request from others, and test vehicle-to-grid and vehicle-to-building interfaces and charging stations for the recipient's Smart Grid with EVs and PHEVs. Some locations for charging stations will also be connected to existing and planned installations of solar photovoltaic systems along with battery storage systems. The recipient will also conduct outreach to promote use of EVs/PHEVs. Finally, the recipient will conduct monitoring and reporting as requested by DOE

C. TASKS TO BE PERFORMED

- 1.0 Vehicles Procurement and Testing
 - 1.1 Obtain new electric vehicles to test
 - 1.2 Test existing PHEV with vehicle-to-grid capability
- 2.0 Charging Stations Installations
 - 2.1 Obtain applicable state/local permits for charging station installation along with required NEPA approvals for each charging location
 - 2.2 Install charging stations at locations
 - 2.3 Install a solar tree and charger at a location
- 3.0 Smart Grid and Building Charging Integration
 - 3.1 Install building automation systems to control chargers for optimizing building loads and with power tagging compatibility for protecting grid assets
 - 3.2 Install battery storage systems tied to building automation systems
- 4.0 Connect charging stations to solar PV systems on some facilities
- 5.0 Outreach Campaign
 - 5.1 Initiate a rebate program for charging stations at commercial locations that includes requirements for NEPA approvals at each charging location to receive a rebate as part of the program
 - 5.2 Promote the use of the BEVs with car sharing

- 6.0 Monitoring
 - 6.6 Effectiveness of charging use with the Smart Grid
 - 6.7 Fleet and public use of charging stations
- 7.0 Analysis and Report

D. DELIVERABLES

Reports and other deliverables will be provided in accordance with the Federal Assistance Reporting Checklist following the instructions included therein.

E. BRIEFINGS/TECHNICAL PRESENTATIONS

The Recipient shall prepare detailed briefings for presentation to the Project Officer at the Project Officer's facility located in Pittsburgh, PA, Morgantown, WV, Golden, CO or at DOE Headquarters in Washington, DC. Briefings shall be given by the Recipient to explain the plans, progress, and results of the technical effort, and may be requested during the performance period of the award. If requested by DOE, a final briefing shall be presented at least 45 days before the award is due to expire. These briefings shall be made at one of the DOE locations (Washington DC/Pittsburgh, PA/ Morgantown, WV/Golden, CO) or at one of the project team sites as appropriate. These briefings may be done in person or remotely via teleconference/webcast, on an "as needed basis".

In addition, reports shall be developed and delivered as appropriate at Program Merit Reviews, or at technical exchange meetings, which may be organized by DOE.