

**Texas Commission on Environmental Quality
New Technology Research & Development (NTRD) Program
Monthly Project Status Report**

Contract
Number: 582-11-11141-3264

Grantee: GRIDbot, LLC

Report for the **Date**
Monthly period: 3/08/2011 – 4/08/2011 **Submitted:** 4/08/11

Section I. Accomplishments

Provide a bulleted list of project accomplishments as well as a description of their importance to the project.

- February monthly Progress Report and Financial Status Report were submitted.
- Ongoing information sharing and project coordination with representatives from City of Houston (COH), Good Company, Houston Advanced Research Consortium (HARC), and GRIDbot, along with several contractors, to provide input on updated planning, permitting, and project timeline.
- UL testing was completed on 3/24/11 and a final report was sent to confirm that the GRIDbot product may be installed.
- Financing has been secured to assure the cash flow needed by GRIDbot to complete this project.
- First 2 vehicle Purchase Orders have been executed by the COH, with expected delivery in early April. The continued communications between COH and Nissan indicate that the remaining vehicles will be available sometime after July 1st.
- GRIDbot continues to provide manufacturer with specification review and technical support.
- GRIDbot has provided technical support to the contractors for the electrical plan and installation layout. Electrical plans for the site will be completed by 4/8/11 for presentation to the City Permitting office the following week. The permitting review process will take approximately one week from our meeting.
- HARC reviewed vehicle specific data available from the on-board diagnostics.
- HARC prepared more detailed data specifications and data collection processes, identified four primary data sources, and assembled their team for technical support.
- GRIDbot identified necessary changes to the firmware and software to facilitate data gathering. Contractors have reviewed and coordinated to implement these changes.
- GRIDbot identified that Texas Solar Company would also provide installation of the Transformer and the 2 distribution panels. (see change order attached)
- User instructions are being developed by Good Company, to coordinate and support the charging station's simplicity. These will be made available both online and in the vehicle. Charging access will be designed with a specific RFID for each vehicle, which will enable the data collecting on each.

The location at Tranquility Garage was confirmed to have capacity for 28 charging stations to support the City of Houston plan for a centralized pool. Plans are being drafted for this installation to be permitted as one project, but the installation will occur in three phases:

- Phase I will include all the electrical support (transformers and distribution panels) and concrete coring for the entire project (to begin the last week of April).
- Phase II will be the wiring and installation of the first 14 charging stations (first week of May).
- Phase III will be the wiring and installation of the second 14 charging stations (July).

These timing decisions have been made to reflect the arrival of the vehicles, as well as to reduce disruption to the parking garage and to reduce any unnecessary costs.

Indicate which part of the Grant Activities as defined in the grant agreement, the above accomplishments are related to:

Task 1: Planning and Design – all activities under Task 1 have been completed or are in final stages of completion. In addition, Tasks 2.2.2, 2.3.4 and 2.4.1 have been initiated. Reporting continues to meet the requirements under Task 6.

Section II: Problems/Solutions

Problem(s) Identified: Report anticipated or unanticipated problem(s) encountered and its effect on the progress of the project

City of Houston is in the process of hiring a new Fleet Manager, which should occur by mid-April. This has delayed some decisions regarding the fleet management software and the logos for the project.

Proposed Solution(s): Report any possible solution(s) to the problem(s) that were considered/encountered

We continue to stay in contact with the COH fleet staff.

Action(s) Conducted and Results: Describe the action(s) taken to resolve the problem(s) and its effect

- We are waiting to produce signage or printed materials until the logo is determined.
- We are going ahead with data gathering plans, without relying on the software for any support. However, once this is determined we may find additional information can be obtained.
- We have also decided not to try to link the vehicle access RFID which will be produced by the fleet management system, with the recharging RFID.

Section III. Goals and Issues for Succeeding Period:

Provide a brief description of the goal(s) you hope to realize in the coming period and identify any notable challenges that can be foreseen

- Manufacturing and assembly completed of 30 stations, for April delivery.
- Review of electrical engineering plans with COH Permitting Department, followed by submission for the Electrical Permit for installation of all 28 stations. They expect to take 5 days to review and issue electrical permit. No other permits are needed.
- Submit Task 1 Deliverable Report for approval to proceed with installation as planned.
- COH will work with us to order wheel stops and signage for the EV area, due to the layout; we will need 56 wheel stops for the 28 reserved spaces.
- Schedule coordination with COH Facility Manager for the site installation.
- Working with COH, HARC and GCA to continue to define data collection requirements and scenarios, including driver experience/data input requirements, fleet management software data collection, and onboard data collection.
- Begin to establish protocol for fleet management system, reservations, and charging procedures for the COH staff. Develop educational materials for employees with access to use the EV Fleet.
- Troubleshooting instructions and basic training will be developed for the COH security staff that work in the garage.
- Legal support for permitting process if needed.
- Continued reporting of progress.

Date: 4/08/11

Authorized Project Representative's Signature

NOTE: *Please attach any additional information that you feel should be a part of your report or that may be required to meet the deliverable requirements for tasks completed during this reporting period.*