

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
Monthly period:** 10/07/2011 – 11/07/2011

**Date
Submitted:** 11/07/11

Section I. Accomplishments

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

- In October, the September monthly Progress Report and Financial Status Report were prepared and submitted. Task 2 and Task 3 Deliverable Reports were prepared and submitted as well as a Request for Amendment and corresponding Amended Budget and Timeline.
- Information sharing and project coordination continues with representatives from City of Houston (COH), Good Company, Houston Advanced Research Center (HARC), GRIDbot, and the TCEQ along with several contractors, to provide input on updated planning, data collection, and installation and to keep the project on line.
- The second set of 14 units' communications and operational software was tested and confirmed by GRIDbot.
- Cost of the installation of electric charging stations was determined to be approximately \$3,000 per unit for this site, including the permitting fees.
- Modifications to the firmware data reporting to HARC were completed.
- Staff training was provided by Good Company on October 18th for staff representing the Fleet Management Department, Garage Operation Management, Maintenance Department, and the Security Department, and attended by GRIDbot and HARC representatives. Printed materials were provided and discussed and various questions answered regarding the electric charging and vehicles.
- Good Company compiled the information and produced a COH Owner's Manual which includes both the GRIDbot installation manual and the operation manual for the UP 100J, installation/electrical diagrams, the permitting and inspection information, as well as vendor information for the cameras, wheel-stops, signs, transformer, breakers, installation and warranty information. User's educational materials and an Owner's Troubleshooting Guide were developed for staff training and were also included in the Owner's Manual.
- COH maintenance staff will be installing the restricted parking and electric charging signs for installation for the Phase 2 location as the additional fleet cars arrive. Interim data collection and monthly reporting of the vehicle charging has been established, and

will continue through the duration of this project. Interim data for September and October has been analyzed by HARC and summarized in a report.

- COH released the Request for Proposals (RFP) for 23 more electric vehicles to be purchased before the end of the calendar year. The RFP is now closed and purchasing is expected to follow in November as vehicles are available and contracts completed. These may include a variety of electric vehicles in addition to Nissan LEAFs, based on pricing and availability.
- Good Company continues to interact with COH staff to obtain information and feedback on the user experience. Fleet Management has begun to send user information by email to the various drivers – to begin to establish a user-group for direct communication with this group of employees.
- The Request for Amendment included the request to authorize the installation of two additional charging stations at the City's Green Building Resource Center, to further support the City's Electric Vehicles. Preliminary discussions with the staff responsible for this site have begun and bids have been requested for the installation.

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.
- Task 2: Site Installation and Data Collection – all activities under Task 2 have been completed.
- Task 3: Interim Evaluation of Site all activities under Task 3 have been completed.
- Task 4: Site installation and Data Collection of Site 2 – 2.4.1 the second site was included into one permit with one site plan, 2.4.2 Phase 2 installation has been completed, adding another 14 chargers to make a total of 28. The Request for Amendment requests permission to install the final 2 stations budgeted in this grant for the City at an additional site. 2.4.3 The city has completed the selection of the vendors for the additional vehicles and anticipates delivery in November. 2.4.4 The data collection and analysis is developed and will continue during the demonstration. 2.4.5 The project participants are collecting feedback, providing educational materials. An initial survey is being developed.
- Task 5: Data Collection and Analysis – 2.5.1 project participants continue to monitor and collect data on the usage and performance of the charging stations and vehicles, producing a report to the Fleet Management Department on a monthly basis.
- 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

- We were receiving trip data from the CARWINGS online reporting system that did not accurately depict the trips and mileage that were occurring. This was determined to be because of the Nissan's program that requires a driver to "opt-in" every time they start the car – requiring that they press the "ok" button on the GPS screen to provide information to CARWINGS.

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

- Good Company interviewed two of the Nissan LEAF drivers and found that they were unclear about what information was being collected and who it was being reported to. They were concerned that their driving habits and locations were being monitored by City staff.

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

- Once the staff understood that the information we are compiling consists of number of trips and mileage, for the purposes of this study, they agreed to "opt-in" on future trips. The information is now readily available and HARC is incorporating this into their analysis. The Fleet Manager will include this information with the new driver orientation for future assignments to the Nissans.

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

- COH released the RFP for 23 more electric vehicles to be purchased before the end of the calendar year. The RFP is now closed and purchasing is expected to follow in November, as vehicles are available and contracts completed.
- Data collection will continue on all vehicles with access to GRIDbot chargers.
- HARC will provide internal monthly analysis of vehicle charging, vehicle use and emissions modeling, which will be provided to TCEQ.
- Monthly Fleet Manager Reports will be produced by GRIDbot, to report vehicle charging sessions, including length of time charging, electrical consumption, and time of day. These will also be provided to TCEQ.
- With the approval of the Request for Amendment to the timeline and scope of work for this project, Good Company and GRIDbot will coordinate the installation of two charging stations at the third location. This will provide additional data for our analysis.
- A User On-line Survey will be developed and distributed to the drivers to begin to get user feedback from the various participants. This will enable a broader reach for feedback once the additional cars are delivered and drivers assigned.
- Good Company is compiling market data to include in the final report.
- Continued reporting of progress on this project.

Date: 11/07/2011

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.*