

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

Contract Number: 582-11-13471-2019
Grantee: Boulder Electric Vehicle, Inc.
Report for the Monthly period: November 2011 **Date Submitted:** 12/8/2011

Section I. Accomplishments

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

- A more robust relay control unit was prototyped and added into the control units so as to have more reliable mileage recording control for the data logging units on the test vehicles.
- 30 axles and associated brake parts were received into inventory.
- Part files and cut files had final determinations made so that vehicle decks could be properly cut.
- Incoming materials inspection reports were specified and are going to be ordered as a custom report from our inventory management system company.
- Many additional accounts were set up with new vendors which are providing parts on a more reliable basis.
- Remote keyless entry systems for both FedEx and UPS have either been ordered or are in house so as to adjust our wiring harnesses accordingly.
- We had conversations with two separate motor suppliers who can develop and or deliver motors needed for vehicles 10-18 of this project.
- A custom extrude was specified and custom ordered for the aluminum frame rails within the honeycomb core; we expect to have this in stock mid-month of December.
- Over 50 different purchase orders were bid and issued.

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

- All the above accomplishments are related to Task 2 building the test vehicles.

Section II: Problems/Solutions

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

- a) One particular supplier of our antilock brake system component is completely out of new parts. This could delay that particular area but we believe we have a work around with a secondary supplier.
- b) We are not progressing as fast as we would like on the larger vehicles for UPS.

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

- a) In addition to the above supply line issue we have sourced a secondary supplier of the same component.
- b) We have started conversations with a three person team of engineers who have previously developed vehicles for another electric vehicle company. We intend to hire all three of them just after the new year 2012.

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

- a) We have started conversations with the secondary supplier and we have also sourced a third supplier. The third supplier would involve some custom engineering on the level of controller area network (CAN) based control unit. Out of all of these options the secondary supplier will be the fastest and most cost effective.
- b) Hiring these three engineers will provide a much faster product development cycle vehicle alterations. To hire them immediately would not be cost effective since it will take 2-3 weeks for new engineering workstations to arrive from Dell. These workstations have already been ordered.

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

- The first five trucks should have their decks cut and have their fastener hardware installed.
- All axles for these trucks should be prepped with mounting hardware and ready to be mounted on the trucks.
- The custom extrusion for the deck frames on the inside of the honeycomb core should be delivered and be going into the second set of five trucks. This will make the build process faster and less labor intensive.

Date: 12/8/2011

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.*