

Lafayette Formula Electric Vehicle Team
Acopian Engineering Center Room 400
steinmej@lafayette.edu

May 13, 2014

Dear Lafayette College Engineering Staff,

The 2014 Electrical and Computer Engineers would like to request extra funding for purchases that are outside the given \$3,000 budget. The extra funding would be used to purchase an electric motor and everything needed for safely testing it. Below are the details of the items and their importance for this project.

From the mission of Lafayette College: “[The College] encourages students ... to develop systems of values that include an understanding of personal, social, and professional responsibility.” And from the Electrical and Computer Engineering Department page: “One of the hallmarks of a Lafayette electrical and computer engineering degree is the involvement of students in exciting projects.”

Due to this, we feel that the funding to purchase these items would help our class grow as it will provide a unique learning experience of combining our knowledge of electrical and mechanical systems. It would also help next years' class so they can fully test the battery packs that will be completed by next year and get a jump start on having all the components needed for the electric car.

Motor:

Name: HPEVS AC 50

HP: 71 hp

Torque: 120 ft-lbs

Voltage: 72-108V

Motor Controller:

Name: Curtis 1238R-7601

Operating Voltage: 72-96V

Price for Motor and Motor controller: \$4,150

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Dynamometer:

Name: Huff HTH-100

Power: 120 VAC @ 10 A

Maximum RPMs: 11250

Maximum Torque: 150 ft-lbs

Includes test bench, software, display for RPMs and torque, and mounting for motor

Price of Dynamometer, test stand and software for data analysis: \$9,975

Power Supply:

Name: Magna Power TSD100-250/208

Output: 0-100 Vdc; 0-250 Adc; 25kW

Input: 208 Vac, 3-phase

Price of power supply: \$15,115

Installation and maintenance costs: \$5,000

Total out of budget expenses: \$35,000

Accompanying this document is a report outlining the selection of these items in more detail. For any further questions please contact Jakob Steinmetz (steinmej@lafayette.edu).

Sincerely,

The 2014 ECE Seniors

By signing below you are indicating that you approve of the request for additional funding by the LFEV team and accept further efforts to acquire the necessary funds.

Print Name

Signature

Date