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Sponsorship Invitation

Formula Electric Team 2011-2012

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COLLEGE OF ENGINEERING

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October 29, 2011

Dear Sponsor and Future Team Member,

We are the FSU College of Engineering's Formula Hybrid/Electric team for the 2011-2012 school year. Our goal is to design and build a vehicle suitable to be competitive at the 2012 Formula Hybrid International Competition located in Loudon, New Hampshire. This competition is fairly new to the Society of Automotive Engineers (SAE) and is growing vastly. Our first year at competition, the Formula Hybrid team placed first in the Hybrid-in-Progress category and seventh overall. The 2012 competition will mark the college's third entry into the competition and the first year into the All-Electric category. With your assistance and contributions, the team can design and build a car worthy of winning this year's competition.

Sincerely,

George Alex Nimick
Team Leader/Mechanical Engineering Lead
gan07@fsu.edu

Scott Hill
Electrical Engineering Lead
sbh09d@fsu.edu

Danny Covyeau
Treasurer/Secretary/Electrical Engineering
dannycovyeau@hotmail.com

Stephen Kempinski
Mechanical Engineering
smk09f@fsu.edu

Tomas Bacci
Mechanical Engineering
teb08@fsu.edu

Sam Risberg
Mechanical Engineering
sj407c@fsu.edu

* Please contact George Alex Nimick, Danny Covyeau or Scott Hill with any questions that you may have or go to formula-hybrid.org for further details about the competition.

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Our Team and the Importance of Your Donation

Two years ago marked the first year that the FSU College of Engineering embarked into the Hybrid and Electric racing field. After a successful entry, the students of this year's team hope to surpass all expectations and bring home the gold to our campus. Our team is composed of an interdisciplinary effort from both electrical and mechanical senior engineering students. As seniors, we have studied a variety of topics in our disciplines and are finally given our chance to represent both our individual skills, and our college. All of us have been working diligently on research and design for the vehicle since the beginning of the fall semester when the project was first assigned. Ideas have been brought about and discussed and an overall project heading has been determined. Whether or not our goals can be met is up to you.

Your assistance will immensely assist us in continuing this project. Our school's budget cuts have immensely reduced their contribution to this project and it simply cannot be completed thus far. Keeping this project successful both now and going into the feature is our ultimate goal. Your contribution, whether it is a monetary donation, a discount, or actual parts, would be absolutely priceless to us and the future of our organization.

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Budget and Sponsorship Information

Below is a brief summary of our budget in order to build and race a formula electric car at the competition. This budget is based on actual amounts spent on the formula hybrid car built in the last two years, parts we would like to obtain to become more competitive and amounts spent on another student design vehicle, which we deemed should be similar to costs for this vehicle. To view the entire budget analysis, please contact us and we can email the spreadsheet to you.

2011-2012 Proposed SAE Formula Hybrid (Electric Division)

Manufactured Parts	Frame, control arms, body panels, etc	$4,000
Purchased Parts	Axles, brake components, tires, hubs, electric motors, controllers, batteries, etc.	$23,000
Equipment and Supplies	Paint, carbon fiber, extinguishers, harnesses, etc.	$2,000
Trip for team to the Competition	Vehicle rentals, gas, room & board, etc.	$5,000
Design and Misc. Costs	Registration fee, mock chassis (conduit), etc.	$2,000
Total Project Budget		**$36,000**

Our College has given us a financial donation in the sum of $7,500. Therefore we are still in need of **$28,500**. However, donations need not be in monetary form. Our team also encourages and appreciates supportive donations through materials, supplies and services (tools, computers, equipment loans, repairs, etc.) Below are a few of our team's needs.

2011-2012 Items of Need

Composite Materials	Fiberglass/**carbon fiber**, Resin, Balsa Wood
Steel	Chromoly, Mild, Carbon
Tools	Drills, Saws, Screw Drivers, etc.
Helmet	SAE Certified (please contact)
Safety Equipment	Fire Suits, Extinguishers, Harnesses, Helmet
Electric Motors	Agni 95R
Motor Controllers	Kelly KDH14401A
Lithium Polymer Batteries	1S or 3S, 5000+ mAh
Shocks	TBD
Tires	Dry tires, wet tires
Rims	10 inches
Braking Components	Rotor, caliper, brake lines,

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Sponsorship Packages and Benefits

Definition of Levels

In an effort to show our appreciation for your generosity, we would like give your company publicity in a manner that is fair with respect to the level of assistance that is received. Therefore, we have devised a chart that explains how we will partition the advertising space that we have available based on the total assistance that we receive. The advertisement space that we will provide includes space on our website, on our race vehicle, trailer, and our team's T-shirt. Additional publicity is provided through various forms of media. Some examples of previous media coverage are provided on the next page.

Platinum	**50% to 100%**
Gold	**20.1% to 49.9%**
Silver	**5.1% to 20%**
Bronze	**1% to 5%**

Below is a table of logo size displayed according to the levels of assistance listed above. The size of the logos will be proportional to one another based on what item the logo appears on. All logos will be clearly visible to the public.

	Website*	Race Car	Trailer	T-Shirt
Platinum	Large	Large	Large	Large
Gold	Large	Medium	Medium	Medium
Silver	Medium	Small	Small	Small
Bronze	Listed	Listed	Listed	Listed

*The company logos are listed in order of donation size on the website.

**** Private monetary donations are also accepted ****

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Past Media Coverage

Featured in SAE International Momentum Magazine September 2010

The two-school/one team of **Florida A&M University** and **Florida State University** won the Hybrid-in-Progress award with an all-electric entry using Li-ion polymer batteries. But rather than using a type of Li-ion battery commonly associated with light passenger electric vehicle applications, the cells chosen by the Florida A&M/FSU team usually log application time as a power source for remote-control helicopters and airplanes.

"These batteries are very simple to use," said Nathan Scott, one of eight members on the Florida A&M/FSU team. "The lead wires are already attached, which is different from the small circular cells that basically need a $2000 to $5000 tab welder to attach the leads. With these batteries, the connector is hand-twisted and a wrench is used to complete the tightening process. So if you need to replace a battery in a pack, it only takes a few minutes vs. a much longer process with the tab welds."

The Li-ion polymer batteries' high discharge rate also was an important factor. "The batteries we're using on this racecar have a discharge rate in excess of 30C, so that translates to more than 60 kW of power," said Scott. In addition, Formula Hybrid is a motorsports application consisting of three different dynamic events. "So you're not going to have the battery cells in a racecar that's racing 5000 times in a season," he noted.

- **Featured in Multiple Newspapers**
  - Tallahassee Democrat
  - Florida State Times
  - IESES Newsletter
- **Published on Multiple Websites**
  - www.fsu.edu
  - www.eng.fsu.edu
  - www.ieses.fsu.edu
  - www.wctv.com
- **Live Media News Coverage**
  - IEEE TV
  - WCTV Tallahassee News
- Featured Videos:
  - www.fsu.com/Videos/News/Engineering-students-take-hybrid-to-a-whole-new-level

FLORIDA STATE NEWS

Engineering students bring home trophy in hybrid vehicle competition

Building a Formula Hybrid race car from scratch made for a whirlwind spring semester for eight students at the Florida A&M University-Florida State University College of Engineering. Little did they know that their efforts would culminate in a first-place finish for fuel efficiency among all-electric vehicles at the prestigious Formula Hybrid International Challenge.

The multidisciplinary team of students had settled on an ambitious senior design project this year. Their goal: to build an open-wheel, single-seat, plug-in hybrid race car and take it to the New Hampshire Motor Speedway in Loudon, N.H., for the annual competition. The Formula Hybrid International Challenge gives engineering students from around the world the opportunity to work across disciplinary boundaries to design and build a hybrid, plug-in hybrid or electric vehicle to compete in timed and endurance events. Numerous complex elements

FSU College of Engineering

Donor Name: _____

Contact Person 1: _____

Phone: _____ **Email:** _____

Contact Person 2: _____

Phone: _____ **Email:** _____

Address 1: _____

City: _____ **State:** _____ **Zip Code:** _____

Donation: (attach pages if necessary)

Monetary: _____

Parts and their retail value: _____

Materials and their retail value: _____

Services and their retail value: _____

Supplies and their retail value: _____

Other: _____

_____

_____

Checks can be made out to the "FSU Foundation" with "Formula Hybrid Team 3" in the memo section.

This application and donations may be sent to:

College of Engineering
Department of Electrical and Computer Engineering
Attn Donna Butka
2525 Pottsdamer St. Rm A341
Tallahassee, FL 32310-2670

****All students contact information can be located on the 1st page of this packet.**