

The Ohio State University EcoCAR Project Communications Plan

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Forward

The purpose of this document is to map out the outreach and communications efforts of the OSU EcoCAR team over the course of the three-year EcoCAR Competition. An initial communications plan was proposed in January 2009. Based on feedback from the EcoCAR Challenge Competition panel as well as an internal team review, the OSU EcoCAR team has developed the final plan outlined in this report.

Changes from the initial proposal to this final version were made in an effort to set forth an ambitious, yet reasonable plan that is feasible for the OSU EcoCAR team to accomplish. The team recognizes the importance of understanding and acknowledging its limitations; therefore, the team plans to “phase in” its various communications focuses, rather than attempt to do everything all at once. A Communications Plan Timeline was developed to illustrate the team’s overall strategy for building up its communications efforts over the course of the project. This timeline is included on pages 15 and 16.

Situational Analysis

About OSU EcoCAR:

The Ohio State University (OSU) EcoCAR Project is a three-year \$165,000 initiative designed to develop a hybrid electric vehicle for the EcoCAR: The Next Challenge Competition (EcoCAR) and to advance the current research being conducted at the OSU Center for Automotive Research (CAR) in the area of alternative vehicles. OSU EcoCAR is based in Columbus, Ohio.

The project is the newest in OSU’s long-term participation in the 19-year history of Advanced Vehicle Technology Competitions, designed to advance research in the area of hybrid vehicles, provide hands-on experience and train new generations of engineers, and promote public visibility and outreach. Sponsors of EcoCAR include the U.S. Department of Energy (DoE), General Motors (GM), and the Government of Canada (Transport Canada, Natural Resources Canada). The three-year project was launched in August 2008.

During the course of this project, the OSU EcoCAR team will design and implement hybrid vehicle technology into a Saturn VUE, with goals of improving fuel economy, decreasing emissions, and maintaining vehicle performance. In addition, the team will promote public interest and knowledge in the area of alternative vehicle technologies. The project will develop a fully-functioning E85 electric range extended vehicle with plug-in capability to compete in the EcoCAR competition events and provide a research platform for continued plug-in hybrid electric vehicle (PHEV) studies and data collection at CAR.

The following Vehicle Technical Specifications set forth by the OSU EcoCAR team are targets that the team will design its hybrid vehicle to meet:

- 0-60 acceleration time within a range of 9 to 11.1 seconds
- 50-70 acceleration time of 4.3 seconds
- Towing capacity of at least 1500 pounds
- Cargo capacity of 0.76 cubic meters
- Seating for 5 passengers
- 60-0 braking distance between 38 and 43 meters
- Vehicle mass of 2038 kilograms
- Starting time less than 5 seconds
- Minimum ground clearance of 178 millimeters (7 inches)
- Vehicle range of 354 kilometers (220 miles)
- All-electric range between 30 and 40 miles
- 50% reduction in fuel costs for the 50th percentile driver, relative to the stock Saturn VUE

Public Perception of OSU EcoCAR:

To gain a better understanding of how OSU EcoCAR is perceived by the public, industry experts, and members of the news media who influence public opinion, the OSU EcoCAR team is in the process of conducting market research through paper- and web-based surveys and will hold an annual focus group to investigate changes in perception during the three-year project. Goals of this research are to determine public opinion, attitudes, and concerns regarding OSU EcoCAR, PHEVs, and E85 fuel.

Since the launch of EcoCAR in August 2008, the OSU EcoCAR team has been working to generate media coverage and public visibility and to establish a baseline by which to measure future increases in the team's media exposure. An initial, informal media audit indicates that the public who has been familiar with Challenge X has a positive opinion about OSU EcoCAR. Yet, public opinion about vehicle technology is more varied. Many people are excited about the idea of plug-in hybrid electric vehicles; however, others are skeptical of the idea, with concerns being raised about battery technology, increased demands on the electrical grid, and the use of bio-fuels such as ethanol.

Communications Challenges and Opportunities:

Hybrid electric vehicles (HEVs) are becoming more common, with total sales of hybrid vehicles reaching 350,000 in 2007, a 40% increase over total hybrid sales in the previous year¹. In addition, more automakers are in the process of developing PHEVs, with great public anticipation of near-production vehicles such as the Chevy Volt (2010). However, issues surrounding these technologies still remain.

Main concerns revolve around batteries. The OSU EcoCAR Project will use lithium-ion (Li-ion) batteries, which are desirable for PHEV applications due to increased energy density and packagability (compared to other battery technologies such as nickel-metal hydride). However, these batteries are expensive and are not yet in mass-production – a hurdle for automakers working to get PHEVs out on the street in the next couple years. In addition, due to aging, current batteries will not last the lifetime of the vehicle. Therefore, the battery pack will need to be replaced – a costly investment that consumers do not want to make.

Furthermore, questions still remain regarding vehicle recharging infrastructure and the increased demand on the electrical grid that would result from adding plug-ins as a percentage of vehicles on the road. Also, from a consumer perspective, potential vehicle owners have concern regarding vehicle recharge time, since current technology estimates a lengthy vehicle recharge time of about 8 hours.

¹ U.S. Department of Energy, "Fact #514: April 14, 2008, Historical U.S. Hybrid Vehicle Sales", http://www1.eere.energy.gov/vehiclesandfuels/facts/2008_fotw514.html

Finally, communication challenges for the OSU EcoCAR Project also involve the use of E85 and electricity as energy sources, since bio-fuels like E85 have generated debate over the effects of using corn for fuel instead of livestock feed or as food for human consumption.

In light of the recent economic downturn, media portrayal of PHEVs tends to be of two camps. Some paint plug-ins to be the salvation of the automotive industry. Others, however, are more skeptical, arguing that PHEVs, though more efficient, are also expensive and low-volume products that penny-pinching consumers might be less likely to buy. OSU EcoCAR sees concerns about the media exposure of hybrid and plug-in hybrid electric vehicles; the media only provides fragmented snapshots rather than conveying a more complete picture of these vehicle technologies, their relation to other industries (such as electrical utilities), and also the concept of hybrid vehicles as a stepping stone toward further technological improvements.

Despite these challenges, the OSU EcoCAR Project is a fresh initiative that has the opportunity to build off of the current heightened public interest in improving vehicle technology to produce more efficient and environmentally-friendly vehicles. OSU EcoCAR has set forth clear goals and has a major opportunity in the tangible result of a fully-functional PHEV. Therefore, there is great potential to educate and inform the public about plug-in hybrid technology and to provide evidence of their benefit through vehicle testing, data collection, and outreach.

Communications Goals:

1. Increase public understanding of hybrid and plug-in hybrid vehicle technology through direct communication with target audiences and through the media,
2. Increase acceptance of hybrid electric and plug-in hybrid electric vehicles as viable future alternatives to conventional internal combustion engine (ICE) vehicles,
3. Ensure target audiences have a clear understanding of the issues facing the industry and the timelines and milestones required to address those issues.

Measurable Communications Objectives:

The following objectives are designed to help meet the overall operational and communications goals of OSU EcoCAR and the goals of the partners involved in the project. The communications strategies and tactics are designed to increase:

1. OSU student body awareness of plug-in hybrid vehicle technology and the OSU EcoCAR Project by 10% in Years Two and Three, to be determined based on the results of an annual electronic survey of this audience.
2. Public awareness and acceptance of plug-in hybrid vehicle technology and OSU EcoCAR by 10% in Years Two and Three, as compared to the baseline of results from Year One, as determined by website hits and paper surveys distributed on a rolling basis.
3. Media coverage of OSU EcoCAR by 10% in the state of Ohio in Years Two and Three, as compared to the baseline of results from Year One, to be determined by a thorough media coverage analysis.
4. Placement of OSU EcoCAR key messages in media coverage in the first year and increase in that placement by 10% in the second and third year, as determined by coverage in the first year.
5. Exposure to influencers and decision-makers at all levels of government to generate increased financial support for additional demonstration projects and generate policies surrounding the adoption of hybrid and plug-in technology. Percent increase goals to be established at the end of the first year of the Project.

Target Audiences:

The OSU EcoCAR team has begun to develop a list of key opinion leaders in the areas of transportation, environment, and climate change, and has decided to focus on the following target audiences:

- K-12 Students
- College Students
- Faculty and Educators
- Government
- Companies and Local Businesses
- Families and Communities

By focusing on the environmental aspects of hybrid technology, coupled with information regarding the technological and engineering aspects of our vehicle, we feel that our outreach attempts can be successful in terms of drawing a larger and more diverse group of both individuals and corporate sponsors. Starting with the focus on the environmental benefits that potential sponsors of OSU EcoCAR can enjoy from a “green” marketing and public relations perspective, we believe we could get more companies to partner with the initiative. By adding our goal of addressing technological innovation and competitiveness issues, we feel that even market segments that are not specifically interested automotive technologies might be compelled to take an interest in our competition. Educating the public on the environmental and educational benefits associated with green technology competitions, we believe would generate visibility, allowing us to target individuals who are focused on sustainable energy solutions. It is our hope in the end to grow public, governmental, and sponsor support for our competition and its successors.

In order to effectively improve the visibility of OSU EcoCAR within the community, as well as to ensure its sustainability, the team has investigated our target audiences to better understand how to reach them successfully:

K-12 Students: Our objective is to educate grade-school students about OSU EcoCAR, hybrid and plug-in vehicle technologies, as well science and technology. After-school programs and demonstrations will be crucial in recruiting students oriented to the fields of engineering and marketing who may want to join OSU EcoCAR, or future Advanced Vehicle Technology Competitions. Creating a positive atmosphere that focuses on teamwork will be an effective way to promote interest. We need to focus on educating this target audience about advanced vehicles and alternative fuels. In turn, by bringing the OSU EcoCAR vehicle to schools we can create a “buzz” around our vehicle. When school-age students see the vehicle, they will tell their parents, who will in turn research

our program. Also, it will bring learning to life, leading to memory retention in young adults.

College Students (ages 18-25): Student recruitment is naturally crucial for the success of OSU EcoCAR. Therefore, it is important to develop programs that will encourage students to participate. We need to target environmental and engineering clubs that contain students interested in these fields. In addition, we would like to create a unity concept on campus that would foster a group mentality around our program. We hope to manufacture a campus community that can learn, and in turn spread the word, about hybrid vehicles, especially the OSU EcoCAR vehicle. This target audience can be reached through newspapers, television, the web, t-shirts, and flyers on campus. However, this audience is being marketed to relentlessly, so our campaign needs to be more visceral in order to stand out. Our goal will be to appeal to our fellow students, and by “being one of them” we will be able to forge relationships in the program.

Research has shown that this group is very computer-savvy. These individuals are heavy users of cell phones, DVD players, and multi-task at virtually all times, therefore we want to reach them via these routes. We need to be cautious, however of the extent to which we position our hybrid vehicle as just another car advertisement. Due to the fact that this age group is very wary of advertising, they are quick to tune out usual advertising messages. Therefore, while we encourage using alternative methods of reaching this group (text messages, online advertising, etc.), we want to do so in a way that does not force them to tune out the message. This group processes information very quickly, so advertising can be minimal, yet effective. We will advocate messages on facebook.com, as well as t-shirts on campus and links to our website on university homepages. It is likely that a simple website will not be enough to satisfy this market’s desires, so we will need to update our site with more interactive features. We expect that due to the heavy amount of marketing messages this audience is targeted with, a “typical” informative website will not be effective. Thus, we will avoid “pop-up ads” and concentrate our efforts toward reaching them where they already are while online, (such as facebook.com, myspace.com, university homepage, etc).

Also, we know that students may become annoyed with our message. To combat this we will provide students with an option of permission marketing which will allow students to receive additional and more elaborated information only if they desire to. This interactive marketing has proved useful in research and will help us separate the highly interested parties from those that are only semi-interested in our message, so that we can segment this market more efficiently. If we can get the images of our vehicle in front of these people in alternative ways, they will be less likely to tune out the important message. This segment has strong ties to their reference groups as well. Our purpose, then, with passing out t-shirts on campus is to create a community on campuses so that students will create a buzz around our product. While this will probably happen indirectly through our various activities, we will focus attention on creating this buzz directly as well. Through handouts on campus, t-shirts, and school

newspaper ads, this segment will be effectively reached because their friends will see the media and in turn pass that information on to others. As more buzz is created around our vehicle, a positive affect will be achieved.

Faculty and Educators: Faculty members should be targeted because of their influence on campus. If faculty members are educated about OSU EcoCAR and the educational benefits of working on an E85 plug-in hybrid electric vehicle, they will be able to pass the information on to their students. Mass emails about OSU EcoCAR sent to faculty members (specifically faculty in the engineering and business schools) and visits to classes will be an effective means of reaching this audience. Our hope is that by informing engineering and business instructors, they will pass the information on to students who will partner with us.

We also want to inform educators in K-12 schools, so they will invite us into their classrooms to teach younger generations about advanced vehicle technology. We see university faculty and local educators as role models in our community, and by targeting them we can create buzz in our community about OSU EcoCAR.

Government: It is important for local politicians to see that Ohio State students are working on a project that will help improve the environment and the local economy. By getting local leaders involved, it will encourage environmentally friendly legislation, as well as funding for hybrid research. In taking a stand on hybrid and alternative fuel technologies, we can advance further research and show other schools that these projects are possible.

Government leaders are always looking to take stands on issues that will grab media attention. We see this as a prime opportunity to partner with local leaders. Ideally, we would get politicians to come see our car, drive it, or take pictures with it. These photo opportunities will prove profitable in gaining attention for OSU EcoCAR. Government leaders are looking for OSU EcoCAR to produce tomorrow's business and engineering leaders.

Companies and Local Businesses: Providing information to companies about OSU EcoCAR may inspire them to invest money in environmentally friendly technology and green programs, as well as encourage them to sponsor our car. Prominent business leaders have great influence in the community and could help spread the word about OSU EcoCAR. Informational pamphlets should be sent to these companies, and when appropriate, we could visit them and present more information on the OSU EcoCAR vehicle design and program.

Families and Communities: Promoting both the OSU EcoCAR program and hybrid technology in our families and communities will begin to change our society as a whole. It will focus attention on the need to protect our environment, and will promote education and a desire to learn more about technology in general.

Key Messages:

1. Plug-in hybrid electric vehicles offer significant benefits to the environment and society by addressing air pollution, energy needs, and climate change issues.

- The potential benefits include cleaner air, lower health care costs, reduced greenhouse gases, and industrial development.
- Plug-in hybrid electric vehicles will be an increasingly important part of the global energy mix in the coming decades. As worldwide demand for energy grows, PHEVs offer a needed, new solution.

2. The OSU EcoCAR Project affirms the United States' long-term commitment to investing in technology, innovation, and job creation.

- The OSU EcoCAR Project, as part of the EcoCAR Challenge Competition, is partnered with industry, government and academia to develop and test an innovative and unique plug-in hybrid vehicle over the course of three years.
- As part of the Smart@CAR Consortium initiated by the OSU Center for Automotive Research, the OSU EcoCAR vehicle will be included in the first PHEV fleet demonstration in Ohio, an important step in gaining momentum for this industry and in PHEV fleet testing.

3. You could be driving a plug-in hybrid electric vehicle sooner than you think!

- Vehicle and component costs are coming down and vehicle reliability and performance are improving.
- The OSU EcoCAR Project is here to show you and the world firsthand that plug-in vehicles are viable and realistic as your next vehicle choice.

Communications Strategies and Tactics:

1. Research-Based Communications Approach

Strategy:

Conduct research at regular intervals to measure achievement of communications goals and objectives.

Tactics:

- a) Use opinion polls to gather data and gain an understanding of the feelings and desires that the public have regarding hybrid vehicles. These surveys will be distributed at events in which OSU EcoCAR is involved. For example, OSU EcoCAR has hosted a tailgate event before a football game and has participated in a Macy’s promotional event for living “green.” These public appearances offer an opportunity to formally poll people, as well as inform interested parties about the EcoCAR competition and the OSU EcoCAR team’s key messages. The poll OSU EcoCAR uses is designed to measure aspects such as the respondent’s knowledge of hybrid vehicles and their driving habits, and includes the following questions:

If you were purchasing a crossover SUV, what would be the most important factors out of following? (Please rank 1 through 6, 1 being the most important)

- | | |
|---------------------------|-----------------|
| ___ Exhaust emissions | ___ Performance |
| ___ Fuel (or electricity) | ___ Safety |
| ___ Cargo space | ___ Comfort |

Where did you hear about OSU’s EcoCAR team?

- TV
- Radio
- Website: www.ecocarchallenge.com
- Newspaper
- Word of mouth
- Never heard of EcoCAR
- Other (Please specify) _____

What would be your biggest concern with purchasing a hybrid vehicle?

- Price
- Reliability
- Towing power
- Other (Please specify) _____

How much would you be willing to pay in addition to the base price of a model to purchase a hybrid?

1-5 % extra

6-10 % extra

11-15 % extra

16 % extra or more

Zero, but I would purchase a hybrid if it was the same base price.

Zero, I don't want to buy a hybrid.

In addition to questions such as these, respondents have the option of supplying an email address in order to be kept up to date with OSU EcoCAR. An email list is an effective way of keeping the community informed about our team and the competition.

- b) Use electronic surveys to assess gather data and gain an understanding of the feelings and desires that the OSU student body has regarding hybrid vehicles and OSU EcoCAR. These surveys will be distributed via email to students at OSU.
- c) Conduct an annual focus group as a method of active data collection, to directly communicate with the public, to gain a more complete understanding of the public's perception of OSU EcoCAR, and to gauge the team's progress in meeting its communications goals.

2. Issues Management Program

Strategy:

Plug-in hybrid electric vehicles are the subject of much debate and skepticism, particularly among media and environmental groups. The development of a plug-in, E85-based hybrid electric vehicle may be a catalyst for further debate. Since it is not possible to silence such debate, OSU EcoCAR and partners must have a voice within that debate for the vehicle development project to be understood and well received. Therefore, the OSU EcoCAR team's strategy is to develop an issues management program to mitigate the possible damage of debate by proactively addressing potential issues.

Tactics:

- a) Develop a comprehensive list of perceived issues to be addressed in the Issues Management Program, and develop a position/response for each issue. Because of the changing and evolving nature of fuel cell development, we recommend this list and positions be revisited and, if appropriate, updated, on an annual basis.

We have identified the following issues:

i. Battery / Plug-in Issues

- a. *Battery Expense*—Many consumers fear batteries used in hybrid vehicles are too expensive to be cost effective.
- b. *Increase in Electricity Demand*—Consumers, utility companies, and automotive companies all have different concerns or predictions on the impact of increased electrical demand from the transportation industry shifting to electricity.
- c. *Use of Coal for Electricity Production*—The United States uses primarily coal fired power plants, therefore increased use of electricity will cause more “dirty” coal to be used for energy.
- d. *Energy Used to Produce the Battery*—Consumers realize that an expensive battery means the process requires expensive materials, equipment, and labor. Therefore, consumers speculate the energy used to produce a battery greatly decreases the energy saved by the end product.
- e. *Battery Life*—Consumers buying vehicles continue to demand more and more quality, and hence more life for their money. Therefore, a primary question or concern for consumers is the battery life and replacement cost.

- f. *Battery Disposal*—Environmentalists and consumers both desire hybrid vehicles and batteries for their “green” benefits on the environment, but concerns surround the disposal of the battery packs when they reach the end of their life.

ii. E85 Fuel Issues

- a. *Inefficiencies of Corn Ethanol*—Consumers and environmentalists question that the energy used to make corn ethanol may be greater than the energy produced.
- b. *Decreased Fuel Economy (Less Energy Content)*—Consumers understand lower fuel economy from filling up with E85, but wonder how it can be better for the environment with higher consumption.
- c. *Corrosive Nature of E85*—Manufacturers of E85 vehicles must design vehicles specially to deal with the corrosive nature of E85. This is also true for the distribution network of stations selling E85 that must design holding tanks and equipment to prevent corrosion and leaks when handling E85.
- d. *Poor Cold Starting*—Use of fuels with high concentrations of ethanol can cause problems starting in cold weather; therefore manufacturers have concerns with vehicle cold starts when operating on E85.

iii. Hybrid Technology (in general)

- a. *Complexity*—Consumers fear addition of electrical components on a conventional vehicle to create a hybrid powertrain, due to perception of higher risk for failure.
- b. *Life of Components*—Misperception of how long hybrids will last. (Brakes, transmission, etc. last longer)
- c. *Risk of Failure*—Concerns surround how a failure of an electric motor or battery will leave a hybrid driver stranded.
- d. *Crash Protection*—Concerns surround risks to first responders and passengers with high voltage electrical systems.

iv. Hybrid Vehicle Student Education Programs

- a. *Cost*—Universities and industry often are concerned with starting an intense program like EcoCAR due to the expense and equipment required to maintain a program.
- b. *Safety*—Students and university staff fear the dangers of machinery and components involved with a hybrid program posing dangers to the students working with the project.
- c. *Technology*—Industry lays many restrictions on confidential material or new proprietary material needed by the students and team to succeed in a technology program.
- d. *Prior Knowledge and Experience*—Students often feel intimidated by an intense project that uses new equipment, software, and tools never seen in a classroom.

- b) Positions and responses should openly acknowledge the challenges currently identified at this stage in the development of hybrid and plug-in vehicle technologies, and should explain how research being conducted through OSU EcoCAR will help the industry move toward addressing these challenges. A demonstrated willingness on the part of OSU EcoCAR to discuss such concerns will help mitigate the impact of detractors.
- c) Develop an issues briefing presentation or information sheet for team members who will be interacting with the public about OSU EcoCAR, so these individuals are aware of the issues and the team's position/response.

3. Media Relations

Strategy:

The OSU EcoCAR Project will need to maintain an ongoing relationship with the media to generate widespread support throughout the duration of the project.

Tactics:

- a) Develop a targeted list of campus and local media to correspond with on announcements, events and story ideas.
- b) Develop a media kit that includes a backgrounder, Frequently Asked Questions document, team member bios, sponsor list, and technology overview and updates.
- c) Conduct a media training session for all team members. Media training prepares members to speak with the media in a concise and cohesive manner. The training focuses on responses to frequently asked questions, mannerisms, and speaking practice.
- d) Develop a quarterly e-newsletter to be sent to the sponsors, students and the community, and the media. The e-newsletter includes all progress the team has made, as well as upcoming events.
- e) Monitor media coverage and correct inaccuracies and unbalanced stories. Develop a “set the record straight” procedure for inaccurate and unfair coverage.
- f) Create a press release for each major upcoming event to inform media of potential stories.

4. School/Education Program

Strategy:

Since the industry is anticipating plug-in hybrid electric vehicles to reach commercialization by 2010, children in grade school (K-12) could be the first generation of regular PHEV users. As such, the OSU EcoCAR team will develop a program targeted at educating youth on hybrid and plug-in hybrid vehicles and alternative fuels.

Tactics:

- a) Establish an education team to visit local schools, talking to students and faculty about hybrid technology, green energy, and specifically how OSU EcoCAR relates to the topics.
- b) Develop age-appropriate educational programs for visits to local schools. For example:
 - a. *Grade School Students:* Develop a program for younger students consisting of games and activities to engage students on a level they are capable of understanding.
 - b. *High School Students:* Create educational pamphlets explaining the OSU EcoCAR vehicle design and related information.
- c) Participate in Earth Day activities.
- d) Invite high school students and college students to the Ohio State University's Center for Automotive Research to tour the facilities, emphasize the benefits of being involved in a student project team, and discuss alternative vehicle technologies.
- e) Provide opportunities for a high school "intern" to work with the OSU EcoCAR team.
- f) Involve parents.
 - a. A simple letter will be given to elementary and middle school students to take home to share with their family members. The letter will include a more-basic breakdown of how the car works with contact information. The parents will be able to sign up for the e-newsletter to find out about upcoming community events.
- g) Involve educators.
 - a. Develop a mini-curriculum focused on energy and alternative vehicle technologies for teachers to use as a teaching module for their class.

b. Invite teachers to sign-up for the e-newsletter.

5. Vehicle Usage Plan

Strategy:

While the primary objective of the OSU EcoCAR Project is to develop and test a plug-in hybrid electric vehicle from a research perspective, a second and equally important objective is to build public support for the adoption of PHEVs. To achieve this goal, the OSU EcoCAR team's vehicle, once functional, can be used strategically and in high profile placements.

Tactics:

- a) Ensure the OSU EcoCAR vehicle is easily identifiable on the roads, increasing the visibility of the program by using a unique, eye-catching color or design.
- b) Develop informational material to be kept in the vehicle for distribution to inquiring influencers (a "lighter version" of what would be distributed to media). The package could include background information on OSU EcoCAR and its partners, the OSU EcoCAR vehicle design, and a FAQ sheet about the technology and environmental issues pertaining to E85 and plug-in hybrid electric vehicles.
- c) Develop a vehicle user's manual to provide necessary information about vehicle operation and safety.
- d) Develop a "quick reference" guide, with vehicle start-up procedure and other information vital to any user of the vehicle, to be placed in an easily accessible location in the vehicle (e.g. dashboard or driver visor).

6. Government Awareness

Strategy:

All levels of government can play a major role in the further development of plug-in hybrid electric vehicle technology in Ohio. The OSU EcoCAR Project provides an excellent opportunity to educate governments about PHEV technology. Therefore, OSU EcoCAR aims to:

- i. Identify key influencers in state, municipal and federal levels of government, particularly those who have expressed past interest in alternative energy and hybrid vehicle technology, and work to build relationships and further educate these individuals so that they become advocates within government;
- ii. Educate other government officials, both elected and non-elected, about the plug-in hybrid electric vehicle industry and research, and the role that government can play to bring it to reality.

Tactics:

- a) Identify and prioritize potential government influencers and contacts on local, state and federal levels. This will include special interests for competitive technologies and companies.
- b) Establish a panel of representatives to speak with government officials.
- c) Develop a standard information and briefing package for use in education sessions and other presentations. The materials should include: fact sheets, background, key messages, questions and answers about related issues, etc. A package should also be created for use by government communications staff and should include press releases, photos, and OSU EcoCAR communications contacts.
- d) Attend local governmental meetings (e.g. Columbus City Council, school board meetings, etc) to give a presentation about OSU EcoCAR and possibly provide members with the opportunity to test-drive the vehicle.

7. Cross Promotion

Strategy:

Partner with companies and organizations with goals similar to or compatible with the OSU EcoCAR Project to develop mutually beneficial events that will increase both parties' chances of garnering positive media coverage and increasing public exposure to the OSU EcoCAR Project. Collaborating with partners will also allow the OSU EcoCAR Project to broaden the variety of opportunities it pursues at reduced costs through cost sharing.

Tactics:

- a) Identify and collaborate with companies and organizations to develop project materials that can be used to educate media and team members (i.e.: a fact sheet, backgrounder, FAQ, etc.). These materials should be used by all partners on their websites and in other communications. Potential partners include:
 - The MathWorks
 - dSPACE
 - American Electric Power (AEP)
 - OSU Center for Automotive Research
 - Smart@CAR

- b) Liaise with other student organizations to determine mutually beneficial opportunities to collaborate and increase media attention of the projects. Such teams may include:
 - Other university teams participating in the EcoCAR Challenge
 - OSU Motorsports student project teams
 - OSU Solar Decathlon team

- c) Showcase the OSU EcoCAR vehicle at partner events and locations, such as:
 - i) Annual General Meetings
 - ii) Presentations or events
 - iii) Local dealership events

8. Public Awareness and Education

Strategy:

To support the media relations program aimed at increasing public awareness of the OSU EcoCAR Project and the benefits of plug-in hybrid electric vehicles in general, we recommend creating opportunities for the public to see PHEVs in operation within their communities. The more people have an opportunity to see and touch and learn about such vehicles, the more tangible and real the technology will become to them.

Tactics:

- a) Develop a list of industry and environmental trade shows and events to participate in, to demonstrate the vehicle to an interested public audience. The nature of the participation could range from discussions with other experts on a panel to simply having a presence at a booth to inform the public with communications material.
- b) Build a thorough Web site for the project that would include public communications, FAQs, progress reports, photos, video clips, an events calendar, contact information for project partners and participants, and offer an email subscription to an e-newsletter. The Web site could also be used to enable viewers to submit comments and questions.
- c) Develop and promote an online community on various social networks such as Facebook with applications to help facilitate the spread of our message in an engaging way.

9. Crisis Response Plan

Strategy:

The OSU EcoCAR Project has the potential to influence the public's acceptance of plug-in hybrid electric vehicles as a viable alternative to conventional internal combustion engine vehicles. Should a crisis occur that in any way relates to or reflects on the vehicles or the technology, the impact on the budding reputation of the industry could be devastating. However, if the crisis response is swift, professional, and organized, we can minimize damage to the credibility of the project and the technology.

Tactics:

The procedures outlined in this section will be made known to all involved members and the appropriate staff and university leaders. Furthermore, the people that will be responsible for these procedures will be readily available and prepared to respond upon realization of a crisis.

- Three members of the team will be designated as a member of the crisis response team. These members will be highly knowledgeable of the technology of our vehicle.
- These members will have a large understanding of all current issues that are defined in the Issues Management section of this plan.
- The three members of the response team will select a main spokesperson for OSU EcoCAR.
- This spokesperson will be responsible for all media relations, and in the event of a crisis, the contact information for this person will be released.
- The members of the response team will be required in the event of a crisis to convene daily and decide upon a responsible course of action for the entire team.
- In the event of a crisis, the members of this team will also be responsible for contacting The Ohio State University and informing the university of any decisions made, so that any statements may be unilaterally supported.
- Ensure that information regarding OSU EcoCAR and relevant hybrid technology is current and ready for release.
- Mandate that only a member of the response team may contact and/or release information to the media.
- Ensure that every member of the OSU EcoCAR team is familiar with these protocols.

Crisis Response Protocols for non-crisis team members:

At no time should any member of the team speak to the media about the current situation or release any statements not pre-written or pre-released by the crisis team.

In the event that a non-crisis team member finds themselves confronted by a media source this person should do the following;

- State that the person is not qualified to release any information, yet they will put the reporter in contact with the spokesperson for the team.
- If possible this person will take note and record all relevant information pertaining to the media representative, including, but not limited to, name, name of media outlet, deadlines, and the information being requested.
- Contact the spokesperson, or a member of the crisis team.
- In the event that any type of photographer is present, escort them into an area where there is none or very limited access to any visual or other people to interview.

Timeline:

To demonstrate the OSU EcoCAR team’s plan for “phasing in” the various tactics outlined in this communications plan, the team has developed a timeline illustrating its plan for setting forth and sustaining an ambitious, yet reasonable, communications effort. This timeline is outlined in Figure 1 and Figure 2.

OSU EcoCAR Timeline for Three-Year Communications Plan

	Year 1				Year 2				Year 3			
	Autumn	Winter	Spring	Summer	Autumn	Winter	Spring	Summer	Autumn	Winter	Spring	Summer
1. Research-Based Communications Approach												
Surveys:												
Develop survey		■										
Distribute to OSU students			■				■				■	
Distribute to the public			■	■	■	■	■	■	■	■	■	■
Focus Groups			■				■				■	
2. Issues Management												
Develop issues briefing sheet or presentation					■							
3. Media Relations												
Build a list of campus and local media	■	■	■									
Develop media kit			■		■							
Media training for team members					■	■			■	■		
E-Newsletter					■	■	■	■	■	■	■	■
Monitor media coverage	■	■	■	■	■	■	■	■	■	■	■	■
Create press releases for major events			■	■	■	■	■	■	■	■	■	■
4. School/Education Program												
Establish Education Team			■		■				■			
Visits to schools	■	■	■	■	■	■	■	■	■	■	■	■
Participate in Earth Day activities			■				■				■	
Tours of the OSU Center for Automotive Research	■	■	■	■	■	■	■	■	■	■	■	■
High School "Intern"	■	■	■	■	■	■	■	■	■	■	■	■
Letters home to parents						■	■		■	■	■	
Teaching module for educators						■	■	■	■	■	■	■

Figure 1: Three-Year Communications Timeline

	Year 1				Year 2				Year 3			
	Autumn	Winter	Spring	Summer	Autumn	Winter	Spring	Summer	Autumn	Winter	Spring	Summer
5. Vehicle Usage Plan												
Make vehicle easily identifiable												
Informational materials to be kept in vehicle												
Develop vehicle user's manual												
"Quick Reference" placard for user												
6. Government Awareness												
Establish panel of representatives to communicate with government												
Identify and prioritize government influencers												
Develop information and briefing packet												
Attend local government meetings												
7. Cross Promotion												
Identify and collaborate with industry partners												
Identify and collaborate with other student organizations												
Showcase OSU EcoCAR vehicle at partner events												
8. Public Awareness												
Identify potential events												
Develop Website												
Use social networking sites												
9. Crisis Response Plan												
Identify crisis response team and spokesperson												
Ensure team members understand crisis response protocol												

Figure 2: Three-Year Communications Timeline, continued

As shown in this timeline, the OSU EcoCAR team recognizes that our communications efforts will take time and planning to implement. Year 1 has involved a significant amount of learning and strategic planning for our communications efforts and has also taken our team time to recruit, develop our vision for outreach, and develop our Business/Outreach Team organization. As we gain momentum, our team will be able to tackle more of our stated tactics.

Since this plan involves a broad range of focus areas, successful implementation of this plan will also require more deliberate recruitment in Years 2 and 3 to seek team members that are interested and skilled in these areas. For example, our team has already recruited business majors with a concentration in market research to conduct our surveys and focus groups this year, as well as education majors for our educational outreach efforts. To expand our team in the next year, we will seek students in other majors, such as political science majors to be involved in our government awareness efforts.

In addition, it is noteworthy that certain efforts involve the use of our EcoCAR vehicle. Since our team will not have a working plug-in vehicle until Spring 2010, we will plan accordingly, and this is reflected in our timeline.

Communications Materials:

The following is a list of tools and materials that will be used to execute the communications strategies and tactics:

- Media Advisories / News Releases
- Media Kits
- Web site
- Photos
- Meetings/Events
- Emails
- E-newsletters
- Events Calendar
- Feedback Forms
- Interview Request Forms
- Surveys
- List of Potential Conferences and Events

Evaluation:

The following list outlines ways to measure the success of the program:

1. A survey of target audiences, including public opinion research, conducted at the beginning, during, and at the conclusion of the OSU EcoCAR Project to collect data on awareness and understanding of the project, hybrid vehicle technology, and related topics.
2. Conduct a content analysis of media coverage for placement of key messages and accuracy.
3. Monitor website activity by tracking website hits, most commonly requested page, number of requests for information, number and content of feedback forms.
4. Track anecdotal feedback through annual focus groups with members of the target audiences.
5. Solicit expert assessments/opinions on the activities within the scope of the project, the overall initiative, the technologies used, etc.
6. Measure public attendance at events as well as receptiveness to attending future similar events.

Budget:

The OSU EcoCAR team has developed an estimate of the costs that this proposed communication plan entails. This analysis encompasses costs for all three years of the OSU EcoCAR Project, and is summarized in the table below.

Description	Estimated Cost
Informational sheets (pamphlets FAQs, media kits, etc.)	\$500
Letters and communications to partners and potential partners	\$150
Surveys	\$300
Focus groups (1 per year)	\$600
Educational activities and materials	\$500
Transportation costs	\$1,000
Media training for vehicle drivers	\$100
Vehicle body wrap or paint design	\$4,000
Promotional items (posters, flyers, buttons, t-shirts, etc.)	\$500
Year 1 trade show display	\$500
Outreach activities / events	\$ 7,000
Total Estimated 3-Year Cost	\$15,150

Although an estimated cost of over \$15,000 to execute this communications plan seems to be a large sum at first glance, it is important to note that (1) this is a three-year estimated budget, and (2) the team is in the process of investigating and obtaining sponsorship opportunities for many of these costs. The greatest amount in the OSU team's budget is allocated toward outreach activities and events. This amount is based on the events outlined in the team's Three-Year Work Plan, which is provided in the following pages. However, the team has been seeking funding opportunities to support these costs. For example, during Year 1, the team's OSU-Penn State tailgate event was partially sponsored by the OSU College of Engineering, and the OSU Motorsports Open House event is to be partially sponsored by the OSU SOURCE.

The budget also shows transportation costs, accounting for costs that would be incurred by the team due to travel for outreach and communications purposes. The team has obtained financial support in the past and plans to continue to investigate opportunities for support of these costs as well. For example, when the team travelled to Washington DC Auto Show to be involved in an exhibit with the Green Car Journal in February 2009, their travel costs were defrayed through support from the Dean for Research at the OSU College of Engineering.

In addition, the team recognizes the significance of having an identifiable vehicle and has included an estimated cost of vehicle body painting in this budget. The team has

made initial contacts with local companies that do vehicle body wrap designs and vehicle painting jobs and is investigating the possibility of full or partial sponsorship for this cost. Also, the OSU EcoCAR team plans to apply for EcoCAR-funded grants to use for educational materials and the Year 1 Trade Show Display. Furthermore, the team continues to find funding opportunities through our university and other sources for the outreach events. Therefore, the OSU EcoCAR team anticipates this budget to be reasonable for the team to accomplish.

Three-Year Work Plan:

The OSU EcoCAR team has developed the following Three-Year Work Plan as an outline for the team's communications efforts during the course of the competition. This work plan serves as a tool for the team to plan in advance and continue to develop its communications strategy. This list is not meant to be exhaustive and will be updated as the team continues to generate and develop innovative ideas.

Matrix for EcoCAR Teams Communications Three Year Work Plan						
YEAR ONE						
ACTIVITY	COMMUNICATIONS GOAL	AUDIENCE	MESSAGES	BUDGET	EVALUATION METHOD	STATUS (Include Start and Finish Dates)
OSU-Penn State Tailgate	1. Increase public understanding 2. Increase public acceptance	College Students Faculty and Educators Families and Communities	1. Environmental benefits 2. U.S. commitment to technology, innovation, and job creation 3. Viability of PHEVs coming to market	\$350	6. Public attendance	Completed: 10/25/2008
High School "Intern" Program	1. Increase public understanding 2. Increase public acceptance 3. Clear understanding of issues	K-12 Students (High school) Educators Families	1. Environmental benefits 2. U.S. commitment to technology, innovation, and job creation 3. Viability of PHEVs coming to market	\$10	3. Website hits 7. Feedback forms	Started: 9/30/2008 To be completed: June 2009
Visits to local schools	1. Increase public understanding 2. Increase public acceptance	K-12 Students Educators Families	1. Environmental benefits 3. Viability of PHEVs coming to market	\$0	1. Surveys 3. Website hits	Ongoing from 9/30/2008 to 6/30/2009
COSI Polar Year Event	1. Increase public understanding 2. Increase public acceptance 3. Clear understanding of issues	K-12 Educators Families and Communities	1. Environmental benefits 2. U.S. commitment to technology, innovation, and job creation 3. Viability of PHEVs coming to market	\$0	3. Website hits 4. Focus groups 6. Public attendance	Completed: 2/28/2009
OSU Student Organization Summit	1. Increase public understanding 2. Increase public acceptance	College Students	1. Environmental benefits 2. U.S. commitment to technology, innovation, and job creation 3. Viability of PHEVs coming to market	\$0	2. Media coverage 3. Website hits 4. Focus groups	Completed: 3/7/2009
OSU Motorsports Open House	1. Increase public understanding 2. Increase public acceptance 3. Clear understanding of issues	College Students Faculty and Educators Government Companies and Local Businesses	1. Environmental benefits 2. U.S. commitment to technology, innovation, and job creation 3. Viability of PHEVs coming to market	\$1,000	2. Media coverage 3. Website hits 6. Public attendance 7. Feedback forms	To be completed: 4/25/2009

YEAR TWO						
ACTIVITY	COMMUNICATIONS GOAL	AUDIENCE	MESSAGES	BUDGET	EVALUATION METHOD	STATUS
Vehicle Arrival / Year 2 Kick-off Event	1. Increase public understanding 2. Increase public acceptance	K-12 Students College Students Faculty and Educators Government Companies and Local Businesses Families and Communities	1. Environmental benefits 2. U.S. commitment to technology, innovation, and job creation 3. Viability of PHEVs coming to market	\$1,000	1. Surveys 2. Media coverage 3. Website hits 6. Public attendance 7. Feedback forms	Intended Completion: Aug 2009
OSU EcoCAR Billboard	1. Increase public understanding 2. Increase public acceptance	K-12 Students College Students Faculty and Educators Government Companies and Local Businesses Families and Communities	1. Environmental benefits 2. U.S. commitment to technology, innovation, and job creation 3. Viability of PHEVs coming to market	\$200	1. Surveys 2. Media coverage 3. Website hits 4. Focus groups	Ongoing from 9/30/2009 to 6/30/2011
High School "Intern" Program	1. Increase public understanding 2. Increase public acceptance 3. Clear understanding of issues	K-12 Students Faculty and Educators Families and Communities	1. Environmental benefits 2. U.S. commitment to technology, innovation, and job creation 3. Viability of PHEVs coming to market	\$10	3. Website hits 7. Feedback forms	Intended Start: Sept 2009 Intended Completion: June 2009
Boy Scouts "Hybrid" Soap Box Derby Car Event	1. Increase public understanding 2. Increase public acceptance	K-12 Students Faculty and Educators Families and Communities	1. Environmental benefits 3. Viability of PHEVs coming to market	\$200	1. Surveys 3. Website hits 6. Public attendance 7. Feedback forms	Intended Completion: Winter 2010
Earth Day Event	1. Increase public understanding 2. Increase public acceptance 3. Clear understanding of issues	K-12 Students Faculty and Educators Families and Communities	1. Environmental benefits	\$100	1. Surveys 2. Media coverage 3. Website hits 6. Public attendance 7. Feedback forms	Intended Completion: April 2010
Good Day Columbus Morning Show	1. Increase public understanding 2. Increase public acceptance 3. Clear understanding of issues	K-12 Students College Students Faculty and Educators Government Companies and Local Businesses Families and Communities	1. Environmental benefits 2. U.S. commitment to technology, innovation, and job creation 3. Viability of PHEVs coming to market	\$0	2. Media coverage 3. Website hits 5. Expert opinions	Intended Completion: May or June 2010

YEAR THREE						
ACTIVITY	COMMUNICATIONS GOAL	AUDIENCE	MESSAGES	BUDGET	EVALUATION METHOD	STATUS
OSU Welcome Week	1. Increase public understanding 2. Increase public acceptance	College Students Faculty and Educators	1. Environmental benefits 2. U.S. commitment to technology, innovation, and job creation 3. Viability of PHEVs coming to market	\$200	1. Surveys 3. Website hits 6. Public attendance	Intended Completion: September 2010
Energy Workshop for K-12 Educators	1. Increase public understanding 2. Increase public acceptance 3. Clear understanding of issues	Faculty and Educators	1. Environmental benefits 2. U.S. commitment to technology, innovation, and job creation 3. Viability of PHEVs coming to market	\$500	1. Surveys 2. Media coverage 3. Website hits 4. Focus groups 5. Expert opinions 6. Public attendance 7. Feedback forms	Intended Completion: Fall 2010
OSU EcoCAR Billboard	1. Increase public understanding 2. Increase public acceptance	K-12 Students College Students Faculty and Educators Government Companies and Local Businesses Families and Communities	1. Environmental benefits 2. U.S. commitment to technology, innovation, and job creation 3. Viability of PHEVs coming to market	\$200	1. Surveys 2. Media coverage 3. Website hits 4. Focus groups	Ongoing from 9/30/2009 to 6/30/2011
High School "Intern" Program	1. Increase public understanding 2. Increase public acceptance 3. Clear understanding of issues	K-12 Students Faculty and Educators Families and Communities	1. Environmental benefits 2. U.S. commitment to technology, innovation, and job creation 3. Viability of PHEVs coming to market	\$10	3. Website hits 7. Feedback forms	Intended Start: Sept 2009 Intended Completion: June 2009
Governmental Awareness Event (Link to K-12 Outreach, such as having posters designed by students displayed at the event).	1. Increase public understanding 2. Increase public acceptance 3. Clear understanding of issues	K-12 Students Faculty and Educators Government Families and Communities	1. Environmental benefits 2. U.S. commitment to technology, innovation, and job creation 3. Viability of PHEVs coming to market	\$300	1. Surveys 2. Media coverage 3. Website hits 5. Expert opinions 6. Public attendance 7. Feedback forms	Intended Completion: Within Sept 2010 to June 2011 (dependent on availability and scheduling of governmental officials)
Send-off to Competition / Ride-n-Drive	1. Increase public understanding 2. Increase public acceptance 3. Clear understanding of issues	K-12 Students College Students Faculty and Educators Government Companies and Local Businesses Families and Communities	1. Environmental benefits 2. U.S. commitment to technology, innovation, and job creation 3. Viability of PHEVs coming to market	\$3,000	1. Surveys 2. Media coverage 3. Website hits 6. Public attendance	Intended Completion: May or June 2011