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Mercedes-Benz

2012-2013 Hydrogen Student Design Contest

Development of a Hydrogen Fueling Infrastructure in the Northeastern United States

OFFICIAL RULES AND DESIGN GUIDELINES

Last updated: October 28, 2012

Any revisions will be posted at www.hydrogencontest.org.

For Questions or Clarifications, contact:

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The Hydrogen Student Design Contest is managed by the Hydrogen Education Foundation, a 501(c)(3) charitable organization. For more information on the Hydrogen Education Foundation, go to www.hydrogeneducationfoundation.org. All donations and sponsorships are tax-deductible.



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**2012-2013 Hydrogen Student Design Contest –
Development of a Hydrogen Fueling Infrastructure in the Northeast United States**

At a Glance

Registration

Register your team via email by contacting the contest manager Emanuel Wagner at ewagner@ttcorp.com by October 15, 2012. Provide the name of your Institution, your name and email, and your faculty advisor's name and email address.

Eligibility

The Contest is open to undergraduate and graduate students worldwide. All team members must have been enrolled in a college or university by October 15, 2012 but do not have to be enrolled full-time.

Important Dates

October 15, 2012	Team Registration and Abstracts Due
December 5, 2012	Submission Deadline for Phase I (Section 3.1)
April 15, 2013	Submission Deadline for Phase II (Full Entry)
June 1, 2013	Announcement of Contest Winners
June 24-27, 2013	Trip to ACT Expo 2013

1 Introduction

Each year, the [Hydrogen Education Foundation's](#) Hydrogen Student Design Contest (“the Contest”) challenges teams of university-level students from around the world to develop and design hydrogen applications for real-world use.

Established in 2004 by the Hydrogen Education Foundation, the Contest showcases the talents of students in many disciplines, including engineering, architecture, urban planning, marketing, and entrepreneurship. Undergraduate and graduate students worldwide are eligible to participate.

1.1 The Challenge

The theme of the 2012-2013 Hydrogen Student Design Contest is **“Development of a Hydrogen Fueling Infrastructure in the Northeast United States.”**

The Contest will challenge undergraduate and graduate students to plan and design a hydrogen fueling infrastructure that facilitates travel within and among metropolitan areas in the Northeast U.S., such as Washington, D.C., Philadelphia, New York and Boston. Student teams should strive to create a model for a reliable, convenient and reasonably priced refueling experience for all hydrogen fuel cell vehicle customers.

For their final entry, teams will identify and analyze possible hydrogen fueling locations; provide an infrastructure development timeline; conduct a cost and economic analysis; analyze regulations, codes and standards pertaining to their hydrogen fuel cell vehicle infrastructure; and develop a marketing and education outreach plan.

1.2 Background

In the United States, the transportation sector accounts for roughly 33% of all greenhouse gas emissions. Furthermore, transportation emissions have been increasing at an average of 1.7% annually since 1990.¹ These emissions must be reduced in order for our global society to meet the challenges of climate change.

The U.S. Department of Energy announced a goal of reducing carbon emissions from the transportation sector by 80% by 2050. According to “The Energy Evolution,” a report issued by the National Hydrogen Association in 2008,² one way to significantly reduce emissions in the transportation sector is to increase the number of hydrogen fuel cell vehicles on the road.

In recent years, several major car manufacturers announced plans to commercially introduce fuel cell vehicles by 2015.³ In concert with this rollout, fueling stations are essential. However, the challenge of infrastructure development remains a critical unresolved issue to advancing hydrogen as a fuel. According to the Electric Power Research Institute, “the primary obstacle to [hydrogen vehicle] implementation is the perceived

¹ <http://www.epa.gov/climatechange/fq/emissions.html>

² <http://www.ttcorp.com/work.asp#industryRpts>

³ <http://www.bloomberg.com/news/2011-01-13/toyota-advances-hydrogen-plans-amid-industry-s-battery-car-push.html>

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infrastructure investment cost associated with building and operating hydrogen fueling stations during the early market penetration years of hydrogen vehicles.”⁴

While California is seeking the most hydrogen investment, planning in other important metro areas will be needed in parallel. The Northeastern U.S. is home to over 50 million people, and features densely populated areas such as New York, Washington, Boston, and Philadelphia. In the Northeast, only half a dozen fueling stations currently exist, and few are publically accessible.⁵ This low number of fueling stations cannot support a hydrogen fuel cell vehicle market. In a recently published report by the California Fuel Cell Partnership, California, with a similar population and area, would require 68 hydrogen stations across the state to guarantee a viable fueling experience for early customers.⁶ California has done significant planning to develop this technology and is on track to provide a functioning hydrogen fueling infrastructure by 2015.

In order to prepare for the upcoming commercialization of fuel cell vehicles, hydrogen sourcing and fueling infrastructures must be planned and developed across the United States, especially in densely populated regions like California and the Northeast. Furthermore, the advancement of hydrogen as a transportation fuel will considerably decrease greenhouse gas emissions in the transportation sector.

This Contest will challenge participants to create a plan in which they identify and analyze possible hydrogen sourcing and fueling locations, then use the best locations to create an infrastructure development timeline for the Northeastern United States. The Hydrogen Education Foundation believes that the work done during this Contest will help to implement the development of a successful hydrogen fuel cell vehicle infrastructure in the Northeastern United States.

1.3 About the Contest

Since 2004, the HEF Hydrogen Student Design Contest has challenged multi-disciplinary teams of university students to apply their creativity and academic skills in the areas of design, engineering, economics, environmental science, business and marketing to the hydrogen and fuel cell industries.

Although the Contest designs are concepts when submitted, the Grand Prize winning teams from 2004 and 2005 each attracted the funding necessary for actual development and implementation of a new hydrogen fueling station and power park, respectively. The station designed in 2004 had its grand opening at Humboldt State University on September 9, 2008. The winning design in 2008, which included a back-up and portable power system powered by hydrogen for airports, has generated a great deal of attention at the Columbia International Airport in Columbia, South Carolina.

The Contest is open to undergraduate, graduate and Ph.D. students worldwide. Multiple teams from one institution are permitted, but students may not belong to more than one team, and teams must work independently.

⁴ Rastler, Dan. Feasibility of Electrolyzer Based Home Refueling System for Advanced Plug-In Hydrogen Vehicle Applications. Electric Power Research Institute, April 2008.

⁵ <http://www.fuelcells.org/info/charts/h2fuelingstations-US.pdf>

⁶ <http://cafcp.org/go/CAroadmap>

1.4 Judging

Submissions will be evaluated by a diverse panel of judges that include industry representatives, researchers and officials at the U.S. Department of Energy.

Each phase of the contest will be evaluated by the panel of judges; each judge will be assigned a random set of entries. The scores from the judges' set will then be normalized using standard deviation formulas to account for individual bias. For the final entry, the top 5 entries will be reviewed a second time by a select panel of judges to identify the winning teams.

1.5 Prize Summary

For this Contest, the Grand Prize winning team will receive a travel stipend to attend and present their design at the ACT Expo 2013.⁷

Honorable mentions (awards depend on available funding) will receive waved conference registration, accommodations for the ACT Expo 2013, an invitation to present the design in a poster presentation component of the event.

All winning teams' designs are also planned to be published in the International Journal for Hydrogen Energy (IJHE), a major industry publication. Sponsors may also consider students for internship positions.

For more details on contest prizes, please see Section 2.6.

⁷ Prizes are subject to change and depend on number of sponsors.

2 Rules

2.1 Eligibility and Team Structure

- The Contest is open to undergraduate and graduate (including Ph.D.) students worldwide. Team members must be enrolled in a college or university at the time of abstract submission but do not have to be enrolled full-time. Students who are working or researching part-time in the field or a related field of the Contest topic may participate.
- Students who are enrolled at a university at the time of abstract submission, but will graduate before August 31, 2013, may still participate.
- Given the multi-disciplinary nature of this competition, teams are highly encouraged to include students with various expertise, including: architecture, urban planning, industrial design, engineering (all types), economics, business, environmental science, policy, chemistry, marketing, education, or any other field of study relevant to the team's design. A team with students from diverse backgrounds will help address non-technical sections much better than a homogenous team.
- Each team is limited to a maximum of two faculty advisors. The faculty advisors must be faculty members of a college or university. Adjunct and emeritus faculty are welcome to serve in this capacity. Faculty advisors may give guidance and suggestions but cannot perform actual design work. Faculty advisors can advise more than one team, but they must assist in ensuring that the teams work independently to maintain a fair competitive atmosphere for all participants.
- Multiple teams from one institution are permitted. However, each team must work independently to keep the competition fair for other teams.
- Teams are encouraged to include members from only one school. If collaboration between different schools is desired, the team leader and designated faculty advisor must request approval by submitting the team registration form with a cover letter to the address in Section 2.3 or by email to ewagner@ttcorp.com. Teams with students from more than three schools are not allowed.
- A team of about 8 students is recommended, although teams with no less than 3 or up to 12 students are allowed. **Teams may not exceed 12 students at any time.** In cases where more than 12 students are interested in participating in the Contest, students are encouraged to split into two separate teams.
- Please send an updated team roster to ewagner@ttcorp.com if any changes to your team roster are made during the course of the contest (i.e. additions at the beginning of a new semester).

2.2 Citations and Questions

- Teams may use any source of data or materials: journals, computers, software, references, web sites, books, etc. All sources used **MUST** be cited using common citation styles.
- Teams may contact professionals in the hydrogen and fuel cell industry as desired, and are encouraged to do so. If information from industry experts is used to develop the design, teams **MUST** cite all sources. Only open source data are allowed. No proprietary or confidential information should be included in any design or presentation.
- Teams may submit any questions about the contest by email (info@hydrogencontest.org)

2.3 Team Registration

- Each team must register by sending in the name of their institution, primary contact information (student) and faculty advisor to ewagner@ttcorp.com by October 15, 2012. Please include “**Hydrogen Contest Registration – [Your school name]**” in the subject line of the email.
- We encourage students to submit an abstract of their approach in .pdf format of 300 words. This abstract should provide a basic overview of the team’s ideas, considerations, and goals of its plan. The abstract does not need to be included in the final submission and will not be graded. This information will help the contest organizers understand different perceptions of teams.
- Teams are not yet required to submit a member list. This shall encourage interested teams to develop their abstract without having firm commitment from all participating students. Please see Section 2.4 for details on the team member list submission date.
- Registered teams will be made public on the contest website and may be included in contest announcements.

2.4 Team Member List

- Teams must submit their complete member roster when submitting their Phase I entry. The list needs to be in an Excel spreadsheet format. This list shall include the following:
 - Name and email address of Faculty Advisor(s)
 - Name and email address of Team Leader, alternative Team Leader and all participating students
- Teams are encouraged to submit additional information that could be shared via social media, e.g. team photos, short team description or even motivational videos. This information will be posted on the Hydrogen Student Design Contest Website and/or the HEF Facebook site (www.facebook.com/Hydrogen.Education.Foundation). Students agree that the information that the Contest receives may be shared in the ways described above (excluding name and email address).

2.5 Report Format Submission and Scoring

All submissions must be in English. The **metric system** must be used throughout the entry. Currency must be U.S. dollars. Where conversions are required, the exchange rate from October 15, 2012 shall be used.⁸

Phase I

- A 15-page identification and analysis of potential hydrogen sourcing and fueling locations (Section 3.1) must be submitted **by 11:59 PM ET December 5, 2012**. Late entries will not be considered. Each evaluation will be shared with the respective team and added to the final score.

Phase II

- Your team’s final entries (including the Phase I entry) must be submitted **by 11:59 PM (ET), April 30, 2013**. Late entries will be penalized.
- The entire report, including graphics and citations, should appear as a single PDF file. The electronic copy of the report must be emailed to ewagner@ttcorp.com. Please include “**Hydrogen Contest Entry –**

⁸ Students shall use www.xe.com for currency conversions.

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[Your school name]” in the subject line of the email. Please be cautious about the file size of the document.

- You may set up a Dropbox account or FTP site if the attachments exceed 2MB. Teams who decide to choose this option must send clear download instructions to the email above.
- If you would like to mail a data storage medium, please send a CD/DVD/Thumbdrive with the electronic files to:

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ATTN: Emanuel Wagner

Hydrogen Education Foundation

1211 Connecticut Ave. NW

Suite 600

Washington, DC 20036

United States of America

- The following page limits have been recommended for each section. You may distribute the pages as you see fit provided that the final report does not exceed 44 pages, not including references and citations. Report pages must include 1 inch (2.5 cm) margins and be written using Calibri font, 11 point size, single spaced.

<u>Section</u>	<u>Page Max (Recommended)</u>
Cover Page	(Not included in page count)
Executive Summary	1
Criteria Development	5
Evaluation of Locales	10 (including visuals)
Development Timeline	10 (including visuals)
Cost and Economics	5
Regulations, Codes and Standards	5
Marketing and Education Outreach Plan	3 (including visuals)
Appendix	5
References/Citations	As necessary (not inc. in page count)

Max. No. Pages

44 plus references/citations

- Entries that exceed the maximum total page limit will be deducted **5 POINTS** for **each page** that exceeds the limit, excluding references and citations.
- Entries that are received after the official deadline will be deducted **5 POINTS** for **each day** that it is late. However, the Hydrogen Education Foundation reserves the right to not accept late entries.
- The final submission must include an executive summary that reviews the main features of the project in language that a general audience can understand. For the other sections, keep in mind that the judging panel will include both technical and non-technical experts.
- Each section of the final project plan should concisely and completely fulfill the specific requirements in the design guidelines (Section 3) and provide any other relevant information.

- Judging criteria:

Points	
60	Identification of Possible Locations
60	Infrastructure Development Timeline
30	Cost and Economic Analysis
30	Regulations, Codes and Standards
20	Marketing and Education Outreach Plan
200	TOTAL

- Teams are encouraged to copyright their submissions. By submitting a design in this contest, however, teams agree to allow their papers to be published professionally in participating media partners' publications and archived on the Contest website. The Hydrogen Education Foundation and Contest sponsors assert the right to publicize the design concepts for their own purposes. All work will be given due credit to its authors.

2.6 Prizes

General Information

- **All prizes are dependent on available funding and may change accordingly throughout the Contest.**
- One grand prize winning team and honorable mention teams will be selected.
- The Hydrogen Education Foundation will notify winning teams around **June 1, 2013. Teams are required to refrain from publicly announcing their achievements until the award ceremony.**
- Contest winners will be announced publicly at the ACT Expo 2013. All winning teams will receive awards at the conference.
- Winning designs will be published online at www.HydrogenContest.org and potentially in a leading industry trade publication.
- For winning teams outside of the United States, passport and visa arrangements must be made by the individual team members to attend the ACT Expo.
- Depending on the opportunities provided and availability of team members, one or all of the winning teams may be invited to present their design and/or meet sponsors or decision makers at events not identified in the prize description.

Grand Prize

The grand prize winning team will receive:

- An invitation to present their design to industry leaders in a session of the ACT Expo 2013
- A stipend of up to \$5,000 to cover airfare, meals, accommodation and incidental trip expenses (must be documented) and ACT Expo 2013 registration for up to eight team members and their faculty representative
- Priority consideration for summer internships at sponsor organizations

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Important Information:

1. The winning team must send at least one representative to present the team’s design at the ACT Expo 2013. However, the team is **strongly** encouraged to use the stipend to allow the maximum number of team members to attend and participate in the conference.
2. The team must send a 15-minute PowerPoint presentation (maximum of 15 slides) with highlights of the project plan, to be given by the team representative(s) during a session of the ACT Expo 2013. Presentation is due via email to ewagner@ttcorp.com by **June 15, 2013**.

Honorable Mentions

The honorable mention teams will receive:

- An invitation to give a poster presentation at the ACT Expo 2013
- Conference registration for up to four team members and their faculty representative ACT Expo 2013
- Priority consideration for summer internships at participating sponsor organizations

Amazing Undergrads

If the winning team includes graduate students, the Hydrogen Education Foundation may also award a prize to the highest scoring team that is made up solely of undergraduate students to recognize their achievement.

2.7 Contest Schedule

Initial Announcement of Contest Theme	June 3, 2012
<u>DUE:</u> Team Registration Ends/Abstracts (see Section 2.3)	October 15, 2012
<u>DUE:</u> Phase I (see Section 3.1)	December 5, 2012
<u>DUE:</u> Final Entries	April 15, 2013
Announcement of winners to winning teams	June 1, 2013
<u>DUE:</u> Grand Prize team presentation for ACT Expo 2013 to HEF Staff	June 15, 2013
Grand Prize Winners Present at the ACT Expo 2013	June 24-27, 2013

2.8 Tips

Recruiting your team

The Contest is a two-semester long project, requiring expertise in many different disciplines. When recruiting team members, the team leader needs to be conscious about their ability to contribute to the team, as well as their available time throughout the Contest. If too many students are interested in participating, the team can split into two teams and compete with each other.

Time management

It is important for your team to start Contest work early to be able to adhere to the deadlines of the Contest. Previous teams found the most challenging part of the Contest to finish on time. Connect with researchers and industry from the start; they can help you to refine your approach and ideas and help save time. Be aware that many companies may not give you all the information you may need.

Learn from winning teams

Review previous winning entries and see how they approached the contest. All winning entries are archived on the Contest website.

3 Guidelines

For this year's Contest, student teams are challenged to plan and design the elements of a hydrogen sourcing and distribution infrastructure for the Northeastern United States. Your team will identify possible hydrogen sourcing and fueling locales, devise an infrastructure rollout scheme, address safety and code compliance, conduct an economic analysis, and develop marketing and public education plans for the new hydrogen infrastructure.

The technologies and systems participating teams select for their project plan must be commercially available and feasible to implement for practical, real-world use by October 15, 2012. Participants should clearly state any assumptions used in their entries.

3.1 Analysis and Identification of Possible Hydrogen Fueling Locales

This section serves to develop a comprehensive list of possible fueling locales and their source of hydrogen. In order to accomplish this goal, student teams must first develop criteria that will be used to weigh the viability of a specific locale and then use those criteria to evaluate an extensive list of potential hydrogen fueling locations.⁹

Criteria Development

Students should develop separate criteria for hydrogen fueling locales. Specific rationale and the relative importance for each criterion must be provided. Students are encouraged to use some sort of numerical representation in order to specify criterion importance. Some example criteria include:

- Population density
- Traffic density
- Cost factors
- Land availability

Evaluation of Possible Fueling Locales and Hydrogen Sources

Teams will evaluate a large number of possible hydrogen fueling locations using their criteria.¹⁰ Each location requires details regarding the sourcing of the hydrogen, using delivered hydrogen (gaseous or liquid), electrolysis, on-site reformation or other commercially available technologies. Furthermore, teams need to detail any commercially available technology for storage, dispensing and fueling. Students are welcome to use their criteria to evaluate multiple different technological approaches for hydrogen production, storage or fueling at the same locale. It is highly recommended that this list be as inclusive as possible.

After locating and analyzing as many locations as possible, the students should create visual representations highlighting location and the technologies used. There should be one map for each urban hub (DC, Philadelphia,

⁹ The location of merchant hydrogen production sites is deemed confidential information by the NSA and cannot be provided.

¹⁰ Consistency data pertaining to population, traffic density, and prices for delivered hydrogen will be provided to students. How that data is used to evaluate the locale is left to the students' discretion.

Boston and New York) as well as one large map showing possible hydrogen sourcing and fueling locations to connect each urban hub.

Final submissions for this section must include:

- Lists of weighting criteria as well as rationale and relative importance of each criteria
- Lists of all possible sourcing and fueling locales along with analyses of each location based on previously developed criteria
- Visual representations displaying all locales that include labels to differentiate fueling locations and technologies used for providing hydrogen

It is recommended that teams utilize a mapping tool for best results.

3.2 Infrastructure Development Timeline

After completing a comprehensive review of possible hydrogen sourcing and fueling locations, the next step is to develop a timeline for the northeastern United States fuel cell vehicle Infrastructure. Students will be provided with estimates of hydrogen fuel cell vehicle market sizes for metropolitan areas.¹¹ After utilizing the provided market information along with the previous study of possible hydrogen fueling locations, student teams will plan a hydrogen infrastructure development scheme. This plan will either meet or exceed the demand for hydrogen in three different time-periods:

- 2013-2015 – Early adoption
- 2015-2020 – Growing market penetration
- 2020-2025 – Beginning of mass commercialization

It is important to keep costs in mind, as they are a critical issue facing the development of a hydrogen fuel cell vehicle infrastructure in the Northeastern United States. Furthermore, we encourage students to use their criteria developed in section 3.1, along with additional metrics, such as the maximum distance traveled to reach a refueling station, when developing their hydrogen vehicle infrastructure. Keep in mind; the goal is to provide hydrogen vehicle customers with a relatively economical, convenient and reliable refueling experience that allows customers to travel comfortably between residential and commercial areas (both work and retail related regions). Furthermore, the infrastructure must allow for travel among all four major cities in the Northeastern United States – Boston, New York, Philadelphia, and Washington D.C.

Final submissions for this section must include:

- Visual representation of the proposed hydrogen fueling infrastructure for each of the four cities (Boston, New York, Philadelphia, Washington D.C.). Make sure to clearly label whether the location is for sourcing or fueling, the technology used at the location, and the time-period (2013-2015, 2015-2020 and 2020-2025) the station is to be developed.
- A description of the sourcing and refueling stations to be added during each of the time-periods described above, as well as the rationale behind these choices.

¹¹ Data will be provided for fuel cell electric vehicles demand and their associated average daily consumption of hydrogen, for three separate time-periods 2013-2015, 2015-2020 and 2020-2025.

3.3 Cost and Economic Analysis

In this section, students will estimate the costs associated with each phase and the cumulative cost of their proposed hydrogen sourcing and fueling infrastructure. This comprehensive analysis should include all fixed and operating costs associated with the team's infrastructure design.¹² Additionally, students will set a price of hydrogen (\$/kg) and perform a return on investment analysis based on this price and the associated costs of their infrastructure. The price of hydrogen can be constant or vary over the course of the infrastructure development. Students should be aware that for a project of this scale, reasonable timeframes for return on investment can be assumed to be roughly 20-30 years.

Final submissions for this section must include:

- Visual representation and accompanied explanation of all operating costs and fixed costs associated with the student's infrastructure. These should be broken down by station for each time phase. Cumulative data should also be provided. The type of visual (graph, table ...) is left to the team's discretion.
- Visual representation and accompanied explanation for hydrogen price.
- Return on investment analysis with visual representation and accompanied explanation.

3.4 Regulations, Codes and Standards

This section should contain an overview of all regulations, codes and standards that apply to the student team's design. The team must also explain how their design meets all pertinent regulations, codes and standards.

The majority of hydrogen codes and standards are safety related, such as National Fire Protection Association (NFPA) codes 2 and 55, as well as the Society of Automotive Engineers (SAE) codes relating to connections between dispenser nozzles and fuel cell electric vehicles. However, not all codes, standards and regulations relate to safety, e.g. standards relating to hydrogen fuel quality¹³.

Resources for hydrogen related codes and standards are:

- Hydrogen and Fuel Cell Safety - <http://www.hydrogenandfuelcellsafety.info/>
- Fuel Cell Standards - <http://www.fuelcellstandards.com/>
- National Fire Protection Association - <http://www.nfpa.org/>
- International Code Council - <http://www.iccsafe.org/>

Other good resources include the DOE Hydrogen Permitting website,¹⁴ SAE hydrogen standards, and the corresponding regulatory agencies for the states and counties in which the students plan to construct hydrogen sourcing and refueling stations.

¹² Discount rates for all hydrogen production technologies will be provided by the Hydrogen Education Foundation.

¹³ Ensuring fuel quality is of particularly high importance to the reliability of PEMFC technology.

¹⁴ <http://www.hydrogen.energy.gov/permitting/index.cfm>

If local applicable codes and standards are outdated or overly restrictive to the deployment of hydrogen sourcing and fueling stations, students are required to provide options to improve the existing regulatory environment, while remaining committed to ensuring the safest of operations.

Once again, the goal of this section is to show that the team's infrastructure design meets all the necessary codes, standards and regulations. Ensuring these codes, standards and regulations are met will demonstrate a high level of reliability, safety and quality of your design.

3.5 Marketing and Education Outreach Plan

In this section, students will develop a marketing and education plan. The goal of this section is to help increase the fuel cell vehicle customer base in the Northeast, dispel myths about hydrogen, and promote a hydrogen fuel cell vehicle culture.

To address the issue of developing a hydrogen fueling infrastructure, teams must create a realistic marketing plan and a one-page ad (scaled to fit on a 8.5" x 11" page) for inclusion in a local publication or as an on-site poster at fueling stations. The plan should:

- Build support for your design and understanding of hydrogen technologies;
- Alleviate public safety fears or reduce potential resistance; and
- Raise awareness of the benefits of hydrogen technologies so the plan can be implemented with maximum acceptance.

Students are welcome to use any advertising method they see fit as long as it meets the assigned page limits.

This section will be graded for clarity, creativity, quality and thoughtfulness of the advertising message and design.

4 Additional Resources

For links to informative websites, presentations, and publications that may help with your project, please visit our website: www.hydrogencontest.org/resources.asp. We will update this page throughout the course of the Contest.

Liability:

The Hydrogen Student Design Contest, the Hydrogen Education Foundation and any sponsoring or supporting organization assume no liability or responsibility for accidents or injury related to the Contest.