

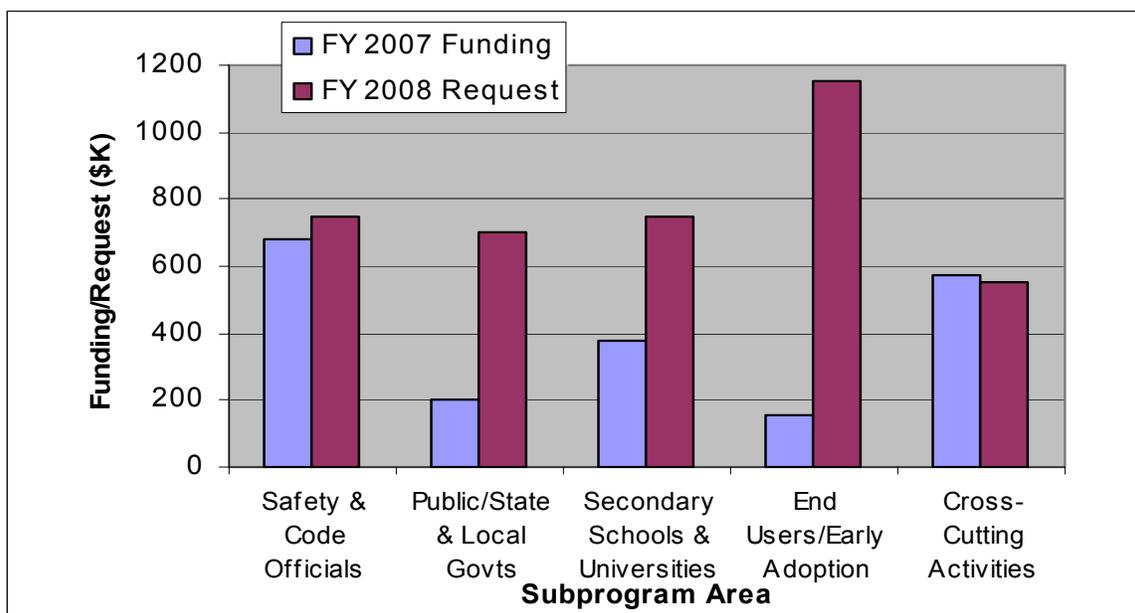
2007 Education Summary of Annual Merit Review Education Subprogram

Summary of Reviewer Comments on Education Subprogram:

Reviewers continue to express the importance of education, raising awareness of hydrogen and fuel cell technology, and correcting false perceptions or misinformation. Overall, the education subprogram structure and focus were judged to be well-defined and appropriate, with projects well-aligned to DOE targets. Reviewer comments underscored the importance of metrics. Reviewers also noted the daunting challenge of educating a largely uninformed public that is often confronted with mixed messages. Although the FY07 education budget was more robust than in previous years, education projects were recognized for their efforts, flexibility, and success despite limited DOE funding. Reviewers specifically commended the strong partnerships that have allowed PIs to leverage resources and cost-sharing to achieve overall project goals and objectives. They also recognized the benefits of approaches to developing educational materials that involve obtaining input from the hydrogen community and pilot testing with the intended target audience.

Hydrogen Education Funding:

Education subprogram efforts are prioritized to focus on the target audiences involved in the near-term use of hydrogen and fuel cell technology. With funding at the request level, the FY07 budget was the highest it has been in three years; this allowed for support of projects across the education portfolio and the restart of previously-awarded projects that had not been funded since FY04. To support the Hydrogen Program's new market transformation efforts, the education subprogram initiated new activities focused on potential end users and early adopters. These efforts will ramp up in FY08, pending Congressional appropriations. FY08 funds will also support ongoing efforts to educate first responders and code officials, local communities, and teachers and students, as well as new efforts specific to state and local government officials and universities.



Majority of Reviewer Comments and Recommendations:

Reviewer scores for the education projects reviewed were average, with scores of 3.4, 3.3, and 3.1 for the highest, average, and lowest scores, respectively. Scores reflect progress made over the last year. Key comments and recommendations are summarized below. DOE will act on reviewer recommendations as appropriate to the overall scope, direction, and coherency of the education effort.

First responders: This target audience is critical to successful market transformation. Reviewers credited efforts to pilot test, review, and validate the material prior to officially launching it, and noted the pairing of hydrogen and first responder communities as essential to the effort. They also recognized the course usage to date as being successful, but recommended additional outreach and planning to better tie together the introductory course with future work. Certification and the development of regional or re-certification centers were recommended future activities.

Local communities: Reviewers expressed that raising public knowledge above the baseline is a daunting challenge; this effort will help direct people to “the truth” about hydrogen and sort out mixed messages. They also felt that “H2IQ” is a catchy tagline and the sample ads presented were of high quality and maintain the DOE message. They noted that the approach is well defined but flexible and recommended paying careful attention to metrics and collaborating/coordinating this effort with other entities seeking to accomplish the same goals.

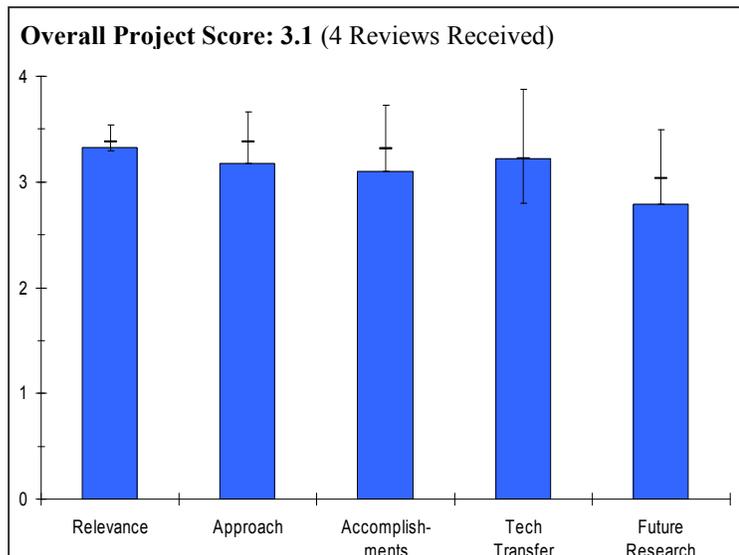
Middle and high schools: Reviewers felt these projects comprise a critical target audience, as students are “technology buyers of the future.” They also noted that the projects had been affected by the limited DOE funding, but commended PIs and their teams for building effective partnerships and leveraging resources to survive major budget reductions and achieve success. In general, reviewers felt that the approaches taken to materials development were effective and suggested that projects pursue an aggressive dissemination strategy to maximize the usage.

Project # ED-01: Hydrogen Technology and Energy Curriculum (HyTEC)

Jim Zoellick; Schatz Energy Research Center

Brief Summary of Project

The purpose of the HyTEC program is to educate high school students and their teachers about hydrogen fuel cells. The objectives of the program are to 1) develop, test and disseminate three curriculum modules and integrate hydrogen into existing Lawrence Hall of Science high school materials; 2) develop and implement a professional development plan for teachers who will use the materials; 3) develop a model for collaboration among school districts, scientists, transportation agencies and other leaders in the field; 4) disseminate the materials to a broad national audience; and 5) evaluate the quality and effectiveness of the curriculum materials and professional development strategies.



Question 1: Relevance to overall DOE objectives

This project earned a score of **3.3** for its relevance to DOE objectives.

- Addresses key target audiences through program.
- It would be a great asset to expand to other categories besides Bay Area – other consortiums or groups could implement some approach / strategy.
- Project is relevant to the program – high school student and teacher education.
- Educating high-school students is important to make them comfortable with hydrogen technology: "children are our future," as others have said.
- Fits with targets for DOE program to improve knowledge for the next generation of technology users.
- Scaled-back objectives are appropriate for funding level but still provide benefit for the hydrogen education program.
- One of the four target audiences for education is students – this project covers high school chemistry and environmental science classes.
- The issue-based approach improves the relevance of the modules – why is a shift being made to hydrogen?

Question 2: Approach to performing the research and development

This project was rated **3.2** on its approach.

- Partnered with organizations that help achieve objectives.
- Modified program due to lack of funding – still addressed key points (standards).
- Completed a significant number of tasks with limited funding from DOE.
- Curriculum tests with varied and diverse group of students are very important.
- Project partners represent complementary capabilities and resources to accomplish the project objectives.
- The original project approach appeared to be well defined but the approach does not appear to have been re-scoped. This project was obviously greatly impacted by the availability of funding.
- High school students are a critical audience; they will be the technology buyers of the future.
- Wide-ranging overview of topics for the curriculum; this ensures good coverage for educating the audience and fits with standard high school chemistry topics.

EDUCATION

- Good hands-on activities: the heat energy of fuels is an interesting addition that will probably serve these students when they hear about all alternative fuels, not just hydrogen. CO₂ calculations are good additions too; they get students thinking about impact of fuels on climate change.
- Issue-oriented science makes information relevant; not just theory that high school students may not think is valuable.
- Having a replacement for existing science curriculum ensuring core subjects are covered is key to fitting into a very crowded field of science topics.

Question 3: Technical accomplishments and progress toward project and DOE goals

This project was rated **3.1** based on accomplishments.

- Developed very relevant and important curriculum activities.
- Hands-on approach is very important – kids respond much more when they are involved.
- Stack in a box – key tool for program – shows fuel cell potential.
- Video segment – great way to reach young audience.
- While it is not clear what phase I objectives were, the curriculum modules developed appear to be extensive and rigorously tested and reviewed.
- Accomplishments are extensive, especially given the funding issues.
- Modules developed appear interesting and practical for students.
- Hands-on lab activities are important.
- Physical "puzzle" model of redox is interesting approach for what can be a difficult-to-understand chemical theory.
- Good linkage of lab-scale fuel cells (single cell) up to full-scale fuel cells for improved understanding.
- We are looking forward to a final chemistry module on the market with kit. Wish it was further along.

Question 4: Technology transfer/collaborations with industry, universities and other laboratories

This project was rated **3.2** for technology transfer and collaboration.

- Contractor is contributing a significant portion of funding to keep program going.
- Great outreach with AC transit.
- Classroom curriculum trials at 3 high schools is a good start with defined metrics, i.e. 3 high schools ~300 students.
- Curriculum trials are based in California. Future work might include a more national scope.
- Very effective partnership between the curriculum testing and AC Transit "real world" applications of hydrogen and fuel cells.
- Having a real-world operator of fuel cell technology (AC Transit) as partner is a good addition; should bring a practical focus to the educational materials.
- Professional videographer is a good addition as well.
- Good to have a partner (Lab-Aids) with a focus on widespread distribution of materials.
- Good approach to team effort and roles – a complete path to market.
- Science teacher outreach via SEPUP system is a strong conduit to use.
- Obtaining matching funds was a major help to keep project moving.
- Science teacher conference presentations are a good outreach tool.

Question 5: Approach to and relevance of proposed future research

This project was rated **2.8** for proposed future work.

- Program expansion likely.
- Making videos and curriculum available to others would be extremely useful – online would make it cheap to do.

- Project next steps are not clear – status was focused on lack of funding. Perhaps this is being addressed as funding becomes available.
- Field testing outside California is good; should provide an interesting contrast to the fuel-cell friendly California environment.
- Ambitious future research plan; funding will hopefully fit the ambitions.
- Timelines for completion of module and kit are needed.

Strengths and weaknesses

Strengths

- Key partners.
- Accomplished a lot with little money.
- Video teaser is a very effective communication tool.
- Issue-oriented approach gives practical experience (vs. dry and "uninteresting" theory).
- Hands-on focus with practical applications is good.
- Testing with variety of student groups – makes it more applicable for audiences the curriculum will reach.
- This project survived with a two year break in funding – kudos.
- It also weathered a major budget reduction – again kudos.

Weaknesses

- Limited range (Bay Area).
- Although the project has been significantly underfunded they have moved forward with their project partners in some areas – there didn't seem to be a defined completion for the curriculum development.
- Funding issues have limited the reach of this program.
- The pathway to completion needs to be strengthened.

Specific recommendations and additions or deletions to the work scope

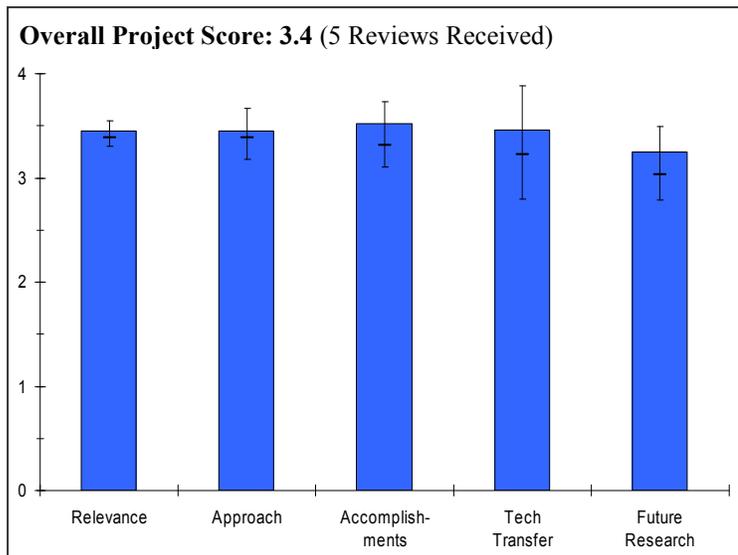
- Project scope needs to be redefined with a phased approach with DOE and project partners so the project can demonstrate accomplishments as funding is available.
- Video teaser should be shared with other DOE-sponsored education activities.
- Nothing specific.
- None.

Project # ED-02: H2 Educate!

Rebecca Lamb; NEED

Brief Summary of Project

The overall objective of H2 Educate is to develop, design, and deliver a first-class comprehensive middle school hydrogen education program including: training, classroom materials, technical and best-practices exchange, and evaluation. The objectives for fiscal year 2007 are to 1) deploy materials via teacher training and professional development opportunities; 2) provide technical support for schools that previously entered the program, and collect data for revisions; and 3) work to expand the reach of the program with new partners able to support training workshops at the local level.



Question 1: Relevance to overall DOE objectives

This project earned a score of **3.5** for its relevance to DOE objectives.

- Middle school students and teachers are a key audience.
- Able to expand in NY to also reach general public.
- Relevant to the MS target audience as identified by the program.
- Project goes beyond the DOE program objectives to address teacher/education requirements and standards ensuring the interest in and use of the curriculum.
- Middle school education project will fit well with the associated high school project; these should be complementary activities.
- Well-linked to the need to address information and education barriers.
- This project fits the student target audience – middle schools.

Question 2: Approach to performing the research and development

This project was rated **3.5** on its approach.

- Partnered with numerous organizations to complete goals.
- Utilized existing network of NEED teachers to accomplish goals.
- The defined curriculum is national in scope accomplishing both the DOE objectives as well as addressing value to the teacher audience.
- Wise approach to "ask before doing" to understand needs of the target audience and users.
- Focus on deployment of the curriculum to actual users is useful; materials do not teach anyone if they don't reach anyone.
- Good mix of states that have active interest in hydrogen programs and states that don't have as much interest.
- Good idea to have modular and flexible approach to fit within time available in the classroom.
- Impacts due to funding.
- Kits should be standardized between all the different funded activities so one agency or organization can get quantity discounts.
- Advisory board used.
- Pilots, workshops, and feedback.

Question 3: Technical accomplishments and progress toward project and DOE goals

This project was rated **3.5** based on accomplishments.

- Ensured program complied with national standards.
- Expand project in NY to reach general public.
- NEED has done an exceptional job responding to the funding impacts, the scope of work was revised and creative options were obviously pursued to accomplish both the curriculum development and deployment.
- Deployment activities appear to have been effective (good to have it online).
- Online print availability of materials provides flexibility to meet teacher needs.
- Development of these materials in less than the time estimated is quite an achievement.
- The "demonstration car" will keep interest up with the students.
- NEED initiative to find local funding for maintaining deployment efforts when DOE funding was not available is important.
- Impacts due to funding.
- Not much impact this year with DOE funding, more with state or local funds.
- Project is in final dissemination stage.
- Curriculum finished early.
- Good connection with EIA kids page.

Question 4: Technology transfer/collaborations with industry, universities and other laboratories

This project was rated **3.5** for technology transfer and collaboration.

- Diverse group of funders and contributors.
- NEED's access to teachers makes project successful.
- Partnering with groups that will help expand and sustain program.
- Important metrics defined and measured – reach teachers and students on a national level.
- Excellent metric – over 4000 teachers.
- Project goes beyond MS teachers and students to general public, even EIA.
- Very effective deployment strategy.
- Curriculum design is extremely flexible for teachers.
- Good list of partners (NHA, NYSERDA, PG&E, BP).
- Working with EIA to demonstrate hydrogen to analysts is an interesting side project to increase their [analysts] practical understanding of hydrogen.
- Variety of workshops to present the program to teachers are important.
- Good, more DOT involvement would be helpful.
- Targeted workshops used.
- 4,000 teachers reached.
- Website downloads used.

Question 5: Approach to and relevance of proposed future research

This project was rated **3.3** for proposed future work.

- Expanding in VA, adding markets and module will ensure continued success.
- Continued deployment strategy has excellent promise both to the MS as well as general public.
- Maintaining up-to-date information is critical, especially for a fast-changing field such as hydrogen. Annual updates are a good idea.
- Would have liked more information on future research. (This may be a function of the lack of funding).
- Need more aggressive strategy to expand the materials and link to all the projects.
- Further outreach workshops needed.
- Project moving to completion.

EDUCATION

Strengths and weaknesses

Strengths

- Able to achieve goals with limited funding.
- High demand.
- Educating more than students and teachers.
- Project is very well defined; curriculum was developed with a defined national scope of implementation goal.
- This project is a fantastic investment by the DOE Hydrogen Education Program.
- Modular curriculum allowing teacher flexibility in amount of time needed.
- Collaboration and cooperation among several states, including key "fuel cell states" like California.
- Good initial effort.
- Good products.
- This project survived with two years of no funding – kudos.
- Obtaining matching funds to dissemination materials and kit information has helped.
- Flexible training times used.

Weaknesses

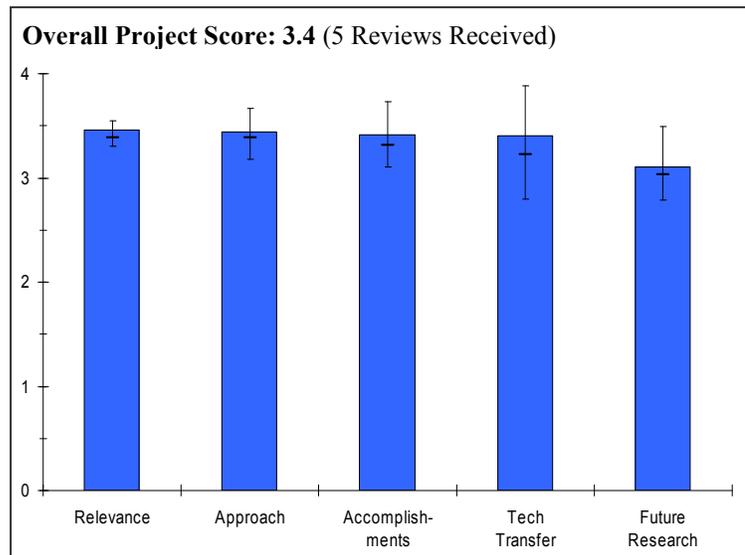
- No weaknesses are evident – except for the funding component but it was addressed and overcome by the project team.
- Lack of funding limited some of the reach of the program.
- Cost of the materials can be an issue for teachers.
- Project modules are expensive due to toys.
- More linkage of all the funded projects to limit FC modules, toy vehicles or electrolysis to a single design or manufacturer to get large buy reductions in cost.
- Kit is \$500 which may be beyond reach of some teachers.

Specific recommendations and additions or deletions to the work scope

- None specific.
- Fully fund project and conduct more state education activities.
- None.

Project # ED-03: First Responder Education*Marylynn Placet; PNNL***Brief Summary of Project**

The long-term objective of this project is to support the successful implementation of hydrogen and fuel cell demonstration projects and market transformation by providing technically-accurate and objective information about hydrogen to first responders. The focus is on first responders such as fire, law enforcement, and emergency medical personnel who must know how to handle potential incidents. The objective for fiscal year 2007 is to develop and disseminate education materials that pertain to hydrogen safety, aimed at the first-responder audience.

Question 1: Relevance to overall DOE objectives

This project earned a score of **3.5** for its relevance to DOE objectives.

- Well-reasoned approach to education for emergency professionals.
- Long overdue effort within the program, progressing at an excellent pace.
- First responder education is important to successful technology deployment; education gaps for this group have caused issues with other technologies (e.g., hybrid vehicles, natural gas vehicles).
- Critical to get first responder buy-in for technology projects; this education will help greatly.
- Critical need to develop training materials for first responders.
- Linked to safety codes and standards.
- This training hit a key target audience need.
- It will also help with permitting by fire departments – this gives a double impact.
- First responder education is critical to the success of hydrogen market transformation.
- Feedback from users of Task 1 awareness course (and number of users) indicates that the activity is very relevant to first responders.
- The PI did not address specifically the tie-in between the goals of the Hydrogen program and the work done under this activity.

Question 2: Approach to performing the research and development

This project was rated **3.4** on its approach.

- Appropriate technical level for this specific audience.
- Easy-to-use web-based format, with additional formats also made available.
- Well-tested prior to launch, thus ensuring accuracy of information and understandability.
- Project appears to address major barriers outlined.
- Web-based tools are an excellent way to distribute information widely.
- Focus on basic information is appropriate; want to avoid assuming people know things they don't necessarily know.
- Pilot testing to refine curriculum with HAMMER is useful: improves final product.
- Project has addressed both the curriculum and the distribution of the course to the audience.
- Good approach.
- Process for workshops to develop and validate materials was good.

EDUCATION

- Certification process requires more focus.
- The web based training with CDs for train the trainer has worked very well.
- Very strong ties to the first responder community through HAMMER. This was a major key to success.
- This project built on strong prior work (pilots with comments and feedback).
- Performer has completed 1 of 3 Tasks (Awareness-Level Course Development); other two Tasks are 60% and 5% complete at this time.
- Review of pilot awareness course was completed very comprehensively, ensuring high accuracy.
- Unclear how the course could be made mandatory (through State regulations, etc.) to increase the number of first responders who are trained by web.
- Task 2 Outreach approach is satisfactory to achieve a large number of users.
- Task 2 seems to target a number of vehicles for awareness (conferences, etc) without PI explaining why those vehicles were chosen.

Question 3: Technical accomplishments and progress toward project and DOE goals

This project was rated **3.4** based on accomplishments.

- Good progress, especially considering relatively low funding.
- Development of props will require increased funding, which should be provided.
- Awareness-level online course appears clean, concise, and well-done. It delivers short educational messages, and avoids clutter and confusion.
- Combination of static slide text and video in web-based course is a good idea to maintain viewer interest and show real-world activities (such as vehicle refueling).
- What is done with quiz results from online courses? They probably show the effectiveness (or lack of effectiveness) of the online course for a given audience quite well.
- Good use of up-to-date Web tools (particularly Flash animation), which provide more interesting visuals.
- Excellent response on course.
- Need more products for reinforcing info.
- This project has come a long way since last year.
- 240 people taking course weekly online is fantastic outreach achievement.
- PI did not present any performance indicators (effectiveness in particular) that are measurable, aside from number of users of awareness course, which does not explicitly link to improved first responder actions.

Question 4: Technology transfer/collaborations with industry, universities and other laboratories

This project was rated **3.4** for technology transfer and collaboration.

- Good integration with HAMMER facility.
- Excellent use of Hydrogen Safety Panel expertise, and the expertise of the hydrogen community.
- Good distribution effort to the target audiences.
- HAMMER collaboration is useful and provides credible link for this project to the first-responder community. Good use of a local resource.
- Wide-ranging review process for online course with major stakeholders is a plus. Careful addressing of comments shows in the final product.
- Good coordination across program and agencies.
- Very strong outreach ties to first responders – broad multi-state.
- Good partnership with the HAMMER Institute, which possesses the skills needed to complement PNNL.

Question 5: Approach to and relevance of proposed future research

This project was rated **3.1** for proposed future work.

- Props will be a great addition to first responder training.

- Hands-on prop-based course should be effective for this practical, pragmatic audience. Hope sufficient funding will be available from various sources to develop high-quality props, as this will enhance project credibility with the audience.
- Conference and magazine article outreach should continue.
- Need more validation.
- Complete FC vehicle and implement its use.
- Prop-based mobile training fills the needed hands-on requirement for fire departments.
- Further outreach is essential.
- The CDs help "train the trainers."
- Continuous improvement for Task 1 awareness course is valuable effort.
- PI did not present an actual plan that includes future events that would show the rationale for choosing future events, such as prop-based work.

Strengths and weaknesses

Strengths

- Materials are being developed at the appropriate level for the target audience.
- Large community of experts is being called upon to review materials, ensuring accuracy and understandability.
- Ability to interact on web course with the users through comments page is a plus.
- Well-done Web visuals.
- Good targeting of an important audience.
- Range of information, from basic hydrogen information through to more complex information (hydrogen vehicle refueling, etc.).
- Summary poster for first responder facilities.
- Good team.
- Well linked to application.
- Experienced in critical training.
- Superb work!
- This project pre-positions HFCITP for early markets and permitting efforts.
- Good statement of barriers that are addressed through this activity.

Weaknesses

- Funding needs to be higher and sustained for the prop development and use phase.
- Nothing specific.
- Need to focus on certification.
- Develop regional training or re-cert centers.
- Wallet card on key facts.
- PI did not present an actual plan showing the criteria for how Tasks are selected or how future Tasks will be tied into the project.

Specific recommendations and additions or deletions to the work scope

- Some of the modules might be interesting for audiences beyond first responders: how might DOE get other users to take advantage of these well-designed modules. How can this complement the other education programs?
- Add the "certification tools" that were discussed (if funding available).
- Fully fund.
- Complete more modules.
- None.

Project # ED-04: Increasing “H2IQ”: A Public Information Program

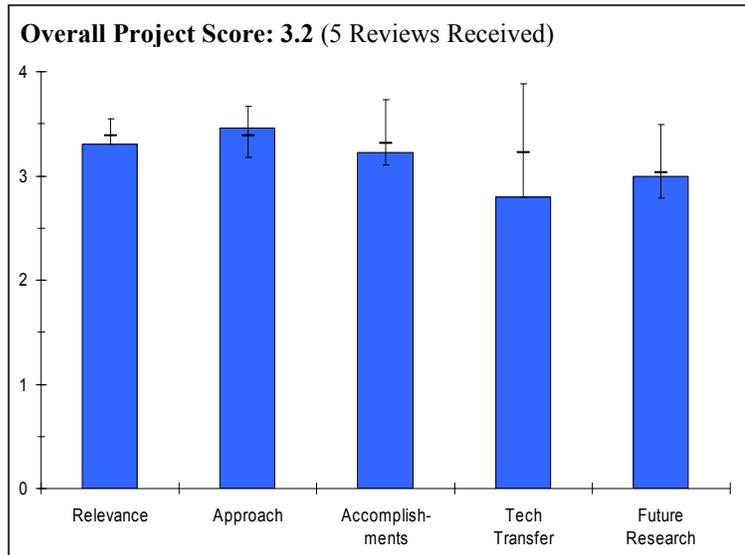
Henry Gentenaar; The Media Network

Brief Summary of Project

The objectives of this project are to:

- Transmit our message via the communications channels that audiences use;
- Develop and disseminate resonant messaging that communicates to the general public basic facts about –
 - Hydrogen as a fuel/form of energy
 - Fuel cells as an alternative to traditional power technologies
 - The DOE Hydrogen Program;
- Generate interest and increase public requests for more information;
- Give the Hydrogen Program a communications mechanism with a flexible framework for reasons of timing and budget;
- Support the DOE brand;
- Help position the Program in the mind of the public;
- Build recognition of hydrogen and fuel cell technologies;
- Make the most of DOE resources and provide a gauge of success.

These objectives are planned to be accomplished using print, radio, television, satellite, and new forms of media. The project will coordinate closely with the Technology Validation Sub-Program and focus initially on Hydrogen Learning Demonstration project areas/locations. The primary target audience is the general public.



Question 1: Relevance to overall DOE objectives

This project earned a score of **3.3** for its relevance to DOE objectives.

- General public is a key audience that needs to learn more about hydrogen.
- Public can influence law makers, media, companies in area to move toward hydrogen.
- Project has direct relevance to the general public audience.
- Reaching the general public with up-to-date, non-biased information on hydrogen is critical to meeting the ultimate goal to deploy hydrogen technology; if the general public isn't comfortable, they won't adopt the technologies.
- Important to sort out mixed messages to provide the "truth" about hydrogen.
- The general public is as broad a target audience as you can get. It is a daunting challenge to raise the baseline knowledge, but one has to start somewhere. A solid beginning.
- PI is raising awareness by introducing hydrogen to the general public, a clear component of the hydrogen program.
- PI did not clearly link the project's efforts to the hydrogen plan.

Question 2: Approach to performing the research and development

This project was rated **3.5** on its approach.

- Not sure if radio is most effective way to go – a lot of people have satellite radio or listen to own source of music while in car (CDs, iPods).
- How do you know this specific program is leading to increase in knowledge when there are so many other conduits of fuel cell information and hydrogen resources (NHA, USFCC)?

- The project approach is well defined and addresses a broad scope of communication methods.
- Project products can be applied to every target audience defined by the program.
- Excellent understanding of the audience, technologies, and messages.
- "Positive message" is important, and DOE needs to do more of this (vs. negative "energy hog").
- Delivery of basic hydrogen information to a tech-savvy market through unconventional media outlets is a good approach; the audience most familiar with these vodcast/podcast technologies also likely to be interested in (and to purchase) hydrogen fuel cell technology.
- H2IQ is a catchy tag line.
- Flexible structure for the media tactics.
- Addresses fragmented nature of traditional media (especially television).
- Coordination with locations where hydrogen validation projects are underway: targets the message.
- Addressing quick targeted messages is a key and strategic approach.
- Non-traditional media approaches being used.
- Tied to tech validation and market transformation.
- The Communications Blueprint is very important to structure the range of the task. The homework was essential.
- Solid identification of barriers.
- Performer's phased plan for messaging allows good flexibility, which is important given the complexity of the hydrogen subject.
- PI demonstrated sophisticated understanding of the subject matter and how it applies to hydrogen.
- Clearly stated target audience for the performer's work and how to reach them.
- Strategic approach is well-defined and explained.

Question 3: Technical accomplishments and progress toward project and DOE goals

This project was rated **3.2** based on accomplishments.

- Budget was out; tailored the project to focus on less expensive ways to distribute the message.
- Products developed – radio and podcast strategy promises to be very successful.
- Defined message and understanding the method of communication is well done.
- Clear blueprint of "what do people think now" and how can we facilitate change?
- Clear, concise messages (hydrogen is safe, meets energy independence and cleaner environment needs).
- Good mix of audio and video deliverables, good use of web as a wide-ranging broadcast medium.
- Maintains the DOE message (energy independence, environment) among the radio and podcast materials.
- Sample ads were high quality.
- Steady progress made.
- Wish we were further along.
- "Communications Blueprint" is confusing – unclear what the slide is trying to convey since it is mixing both target objectives with deliverables and other information.
- PI presents the ability to successfully carry out the planned work.
- PI did not present clear indicators or other ways of measuring success (or effectiveness, efficiency, cost or benefits), except for brief mention of number of log-ins to the H2IQ website.
- Performer has made progress in navigating the DOE bureaucracy in getting radio spots and podcasts/vodcasts approved.

Question 4: Technology transfer/collaborations with industry, universities and other laboratories

This project was rated **2.8** for technology transfer and collaboration.

- Program partnering with iTunes – key to distribute to large audience.
- Collaborating with states with demonstrations – need to make sure everyone has access.
- Products developed – radio and podcast deployment strategy promises to be very successful.
- Expanded use of these products hold great promise if they can be used throughout hydrogen outreach community.

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- It is early in the project but the strategy of deployment is planned and metrics will be available next year. (It is too early to evaluate deployment success.)
- Not much collaboration now, not much detail on potential collaborators. Hope more detail will be available at next meeting to better gauge collaboration.
- Will auto manufacturers/energy companies be approached as collaborators?
- How about major media networks, AOL, etc.?
- Good to involve EERE OTA0 as a planning partner.
- We are looking forward to roll out of podcasts and vidcasts.
- No information presented about collaboration in presentation.
- Coordination with states, as mentioned during the discussion period, will be very important to try to leverage state and city resources, both financial and institutional (existing communication channels) but currently does not exist.

Question 5: Approach to and relevance of proposed future research

This project was rated **3.0** for proposed future work.

- Deepening markets is key to reach audience.
- Metrics are defined and the future plans are designed to respond to successes and changing opportunities.
- Future plans seem appropriate.
- Measurement of success is critical to quantify success of message delivery (iTunes statistics, web traffic hits/time spent).
- This is an important fit to early markets.
- PI did not present any substantive information about future activities except continuing existing activities.

Strengths and weaknesses

Strengths

- Radio spots are clear.
- Focusing on areas with demonstrations.
- Excellent defined scope – defined to be flexible and responsive to both priorities and leverage funding.
- Great understanding of different communication technologies.
- Excellent project and a great value.
- Looking at new media outlets for the message (vs. standard website/print ads/etc.).
- Flexible campaign to fit local needs and budgets.
- Effective concise message fitting DOE needs (energy independence).
- Focused, targeted campaign that doesn't waste time on areas without hydrogen activity.
- The Communications Blueprint provides key structure to this effort.
- Documenting downloads will be an important metric.
- Performer had significant familiarity with the various communications methods and how to provide outreach to the general public.

Weaknesses

- How do you tell if it is working?
- How do you ensure people will hear message?
- At present, lack of visible collaboration could be a weakness, but this appears to be a topic to address in FY07.
- As with other education projects, budget appears to limit progress to some extent.
- Unclear how this activity will progress without a proposed plan that includes, for instance, the sequential introduction of radio spots into specified markets for XX reasons.

Specific recommendations and additions or deletions to the work scope

- Formalize the processes to distribute podcasts and vidcasts to interested stakeholders.
- None.