

# **HELP**

## **Hydrogen Executive Leadership Panel**

### **Hydrogen Executive Leadership Panel Summer 2006 Meeting**

Washington, DC  
August 12, 2006

### **Meeting Minutes**

#### **Attendees, by Category:**

##### **Industry**

Buehler, John – Plug Power, Inc.  
Gratzke, Jim – Toyota Motor Sales, USA, Inc.  
Joseph, Jay – American Honda Motor Co., Inc.  
Serfass, Patrick – National Hydrogen Association  
Steiner, Peter – Air Products & Chemicals

##### **Government**

Bresland, John – Chemical Safety and Hazard Investigations Board  
Bucco, Anthony – New Jersey State Senator  
Chernicoff, William – US Department of Transportation  
Cooper, Christy – U.S. Department of Energy  
Davis, Patrick – U.S. Department of Energy  
Sargent, Dave – U.S. Department of Transportation  
Tucillo, Robert – U.S. Department of Transportation  
Yang, Jiann – National Institute of Standards and Technology

##### **Emergency Responders**

Doucette, John – Connecticut Bureau of State Fire Marshal  
Hendricks, Robert – Kentucky State Fire Chief's Association  
McCullough, Rick – Saskatchewan, Canada, Fire Commissioner  
Miller, George – New Jersey Division of Fire Protection  
Moore, Ronald – McKinney, TX Fire Department  
Mosher, Chuck – Washington State Citizens' Committee on Pipeline Safety  
Postel, Frederick – West Sacramento, CA Fire Department  
Romero, Reyes – New Mexico Firefighters Training Academy

## **General**

Davis, William – National Alternative Fuels Training Consortium, WVU  
Ebron, Al - National Alternative Fuels Training Consortium, WVU  
Gromis, Adam – California Fuel Cell Partnership  
Hamilton, Jennifer – California Fuel Cell Partnership  
Williamson, R. Paul – University of Montana

## **Staff and Consultants to the National Association of State Fire Marshals (NASFM)**

Callan, Mike – Callan & Company  
Lyons, Dennis – S.D. Lyons  
McLaughlin, Pat – McLaughlin Associates  
Sparber, Peter – NASFM  
Tucker, Elizabeth – NASFM

## **Opening Session**

### ***George Miller - Introduction***

George Miller announced that the Hydrogen Executive Leadership Panel (HELP) has successfully become an American National Standards Institute (ANSI) accredited American National Standards (ANS) developer. In addition to the stringent requirements for balance and fairness required in ANSI approved operating procedures, HELP places emphasis on the development of science-based recommendations. The accepted ANSI procedures can be found on the HELP website.

The most significant barrier to HELP's mission continues to be a lack of credible emergency responder training. HELP hopes to have a standard developed on training within one year. Additionally, there is a lack of credible code language; HELP will provide interim guidance for code officials. HELP's auto fire safety committee is searching for the causes of hundreds of thousands of auto fires unrelated to collisions and arson. HELP's community communications committee is working on a consensus approach to community acceptance of alternative fuels.

## **Program Presentations and Discussions**

### ***Fred Postel – Moderator***

Mr. Postel announced that the next HELP meeting will be held November 1 and 2 of 2006 in Washington, DC. More information is available on the website or from Elizabeth Tucker. At the next meeting the panel will nominate and choose the HELP voting members. Email Elizabeth Tucker at [etucker@firemarshals.org](mailto:etucker@firemarshals.org) if you are interested in becoming a voting member of HELP. The next meeting will also review the HELP 2007 budget.

## **Firefighter Education and Training**

### ***Mike Callan – Presenter***

### ***Powerpoint and handouts available***

Mr. Callan said that there is both a short-term and long-term approach to firefighter education and training. The format of the training program will follow the format of the National Association of State Fire Marshal's (NASFM) pipeline emergency training program. In addition to the three scenarios adopted by HELP last fall, Paul Buehler has developed a fourth scenario involving a fixed fuel cell emergency. Ron Moore, a well-recognized expert who specializes in extrication techniques, developed a fifth scenario that was distributed to those in attendance. Mr. Moore reviewed his findings, saying that emergency response to alternative fuel vehicles (specifically hybrids) is similar to 'normal' emergencies, but responders must do a few unique things. Mr. Moore developed a seven-step process for emergency responders dealing with incidents involving hybrid vehicles. Jay Joseph asked how the seven step process is different than regular emergency responder procedures. Mr. Moore stated that hybrids can enter a 'sleep' mode and be energized even if they seem like they're off – responders must know how to disable these systems. Also of concern are keyless ignitions and auxiliary batteries because they may pose a special threat to emergency responders. Educators spend more time dispelling myths than training emergency responders; this is a major barrier to emergency responder training.

Another discussion topic was badging on hybrid vehicles. Badging is very important for responders because it indicates to them that they are dealing with a non-traditional system – manufacturers should adopt Toyota's model (badging on the sides and the front of the vehicle). Color standardization was also mentioned as a possible solution to badging.

Original equipment manufacturers (OEM) should produce product-specific information for the fire service. For instance, Daimler-Chrysler produces an emergency responder guide for all European automobiles - this is a model that could be used for American hybrids. Product-specific guides could help to lessen the tremendous amount of misinformation that the fire service receives. OEM's should be given due credit for safe system design, but they should provide emergency responders with more product-specific information so that they can effectively deal with incidents. In turn, firefighters should have confidence that the systems are designed with safety in mind.

### **Community Communications**

***Peter Sparber – presenter***

***Powerpoint Available***

There are many barriers to community acceptance of a hydrogen station. "Hydrogen Highway" projects have been scaled back or ended because of a lack of community acceptance. There are also protests against "black hydrogen." Hydrogen is beginning to receive the same public reaction as nuclear power, pipelines, and liquefied natural gas (LNG).

It is now time to re-think the hydrogen concept. Hydrogen projects should fulfill specific needs and facilitate research and development in real-world settings and applications. Projects should be supported by private and public investors. These

projects should be more deeply rooted in communities than hydrogen highways. In other words, they should involve more than just transportation. Local communities should benefit from the hydrogen infrastructure. Hydrogen projects should center on a single community instead of being spread across hundreds of miles of highway – this will facilitate permitting and allow the community to more deeply benefit from the project.

With just one incident, the battle for community acceptance could be lost immediately. Thus, permitting and standards are a key element in fostering community acceptance – communities must feel as though the new technology is safe. Hydrogen has a negative word association – “bomb”. Emergency Responders and those facilitating community acceptance, should be aware of that. The media is not helpful in this, so it is an uphill battle.

Several participants commented that best practices for fostering community acceptance should be formulated. Partnerships are key to community acceptance – to this end, NASFM has a role in creating and sustaining those partnerships. NASFM also has a role in making sure that information from various alternative energy players gets to emergency responders and fire marshals. The comment was made that more rural communities should be used for hydrogen/alternative fuel development programs. Communities in Missouri have voiced excitement about being involved in alternative energy trials. Finally, there should be a website that combines Department of Transportation and Department of Energy information on hydrogen and alternative fuels.

A task group will be formed to develop these concepts further in 2007.

### **ICC Code Proposals**

***William Chernicoff – presenter***

***Powerpoint Available***

The code proposals were initiated by industry participants:

F175 – liquid hydrogen: There are questions here on the degrees of containment required. The code specifies that Hydrogen must be confined to the extent possible without creating a hazard. The change to the code is needed because of the new, differing applications of hydrogen energy (for example, urban and suburban applications). Everyone with an interest is invited to participate in the code development process. A member of the audience noted that there are concerns from industry on the types of retention devices required.

F229 – home fueling language developed by an ad-hoc committee to provide guidance for code officials. These are new applications and are different from industrial applications. Patrick Serfass noted that there are serious industry concerns about the ‘shall use retention’ clause. He also commented that his organization had not had the opportunity to fully participate in the code discussions. Mr. Sparber offered to provide evidence that the National Hydrogen Association and the U.S. Fuel Cell council was invited to participate in those discussions.

### **Air Products Modeled Spill**

***Pete Steiner – presenter***

***PowerPoint Available***

Mr. Steiner presented the results of hydrogen spill tests with different standard techniques. This PowerPoint is available at [www.nasfmhydrogen.com](http://www.nasfmhydrogen.com)

**Hydrogen Code Proposals from the National Hydrogen Association and HIPOC**

*Patrick Serfass – presenter*

*PowerPoint Available*

Mr. Serfass introduced the National Hydrogen Association (NHA) and the Hydrogen Industry Panel on Codes. Mr. Serfass gave a brief overview of the Hydrogen code proposals made by the National Hydrogen Association and the Hydrogen Industry Panel on Codes (HIPOC). He reviewed the codes on the powerpoint (his description of the codes did not vary from the powerpoint). The codes information is available on the PowerPoint or at the NHA website, <http://www.hydrogenandfuelcellsafety.org>.

**The meeting adjourned at 5:00pm.**