



MEMBER NEWS

Fuel Cells Overcome Hydrogen Siting Hurdle

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Fuel cells have emerged as an alternative or complement to batteries for a variety of backup power applications. When these fuel cell systems operate on hydrogen, they produce zero emissions, a clear environmental benefit that supplements other benefits such as longer life and lower maintenance requirements.

As recently as last year, however, hydrogen was actually an obstacle in deploying fuel cells. Even though it is analogous to other, more common flammable fuels – and safer than many – hydrogen was subject to a patchwork of inconsistent regulations varying widely from region to region, even from town to nearby town. These inconsistencies, which were also often out of date, made it difficult for power system designers to adopt fuel cells on a broad scale.

Much has changed, however. The newest editions of two major codes – NFPA 55, Standard for the Storage, Use and

Handling of Compressed and Cryogenic Fluids in Portable and Stationary Containers, Cylinders and Tanks and the International Fire Code – each include, for the first time, a chapter devoted exclusively to hydrogen, thereby standardizing regulations across municipalities.

While the codes themselves are now up to date and easy to apply to backup power applications, there is still a strong need to educate code officials, many of whom have not had any experience with hydrogen as a practical fuel. Organizations such as the Hydrogen Executive Leadership Panel of the National Association of State Fire Marshals (NASFM) and the Safe Buildings Coordinating Committee, also associated with the NASFM, are working to educate appropriate authorities and others on the safe and effective nature of hydrogen-powered fuel cells.

Beyond this necessary educational component, facilitating hydrogen siting

is a simple matter of practicing, or encouraging, good engineering judgment. The use of sound judgment can go a long way in making hydrogen as commonplace as changing the propane cylinder on a gas grill or gassing up a lawnmower.

There has been a great deal of conversation and resulting publicity around the shift to a hydrogen economy. If such a development is to occur, hydrogen siting must become more streamlined and easy to apply to a diverse array of situations. Code revisions and standardizations have accelerated our progress towards reaching this goal; it is up to us to continue on the path of realizing a robust, sustainable environment for hydrogen power, spanning fuel cells and beyond.

About Plug Power: Plug Power Inc. (NASDAQ: PLUG), an established leader in the development and deployment of clean, reliable, on-site energy products, currently integrates fuel cell technology into backup and primary power products for telecommunications, material handling, utility and uninterruptible power supply applications. The Company is actively engaged with private and public customers in targeted markets throughout the world, including North America, Europe, the Middle East, Russia, South Africa and South America. For more information about how to join Plug Power's energy revolution as an investor, customer, supplier or strategic partner, please visit www.plugpower.com.

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