Power+Energy
Fueling the Hydrogen Economy

from:

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Murphy tours Ivyland fuel cell research facilities

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by Peter Ciferri

IVYLAND -- Congressman Patrick Murphy (D-Bucks) toured the facilities of Power+Energy, Inc. in Ivyland August 10, viewing a demonstration exhibiting a process for developing a more efficient hydrogen fuel cell. The new processor, known as a micro-channel membrane reactor, extracts more than 90 percent of available Hydrogen from ethanol and other gases.

A video demonstration explained the reforming process, showing how fuel is sent through the machine, where it is broken down and divided into almost entirely pure Hydrogen and excess waste. The Hydrogen is then sent to a fuel cell to create energy, while the waste products - carbon dioxide and water - are sent back to the reforming machine to be processed again.   "I'm proud that we fought for the $3 million to invest in this," Murphy told reporters.

The device can extract hydrogen from gasoline, methane, propane diesel and E-85 ethanol, among other fuels, according to a press release. Friday's was the first demonstration of the ethanol extraction.

Since a number of fuels can be used in this process, companies are expected to save money by purchasing the cheapest fuels and filter the gas and create energy as it is needed. According to Power+Energy Vice President of Sales and Marketing Al Stubbmann, this means low-cost fuels can be purchased and stored rather than the current, more expensive, methods of buying and storing hydrogen.

Photo by Peter Ciferri
From left, Congressman Patrick Murphy discusses the future of clean energy with Juan Colina, executive vice president of Power+Energy; David N. DeSimone, director of D.N. DeSimone Associates; and Peter Bossard, CEO of Power+Energy.

Stubbmann says these methods will also enable a reduction on foreign oil dependence and promote the development of domestic fuels such as ethanol. He believes it will reduce greenhouse gases by 50 percent.

Murphy said this kind of project will only encourage the growth of what he calls "green-collar jobs" within Bucks County, also stressing the importance of reducing American reliance on foreign oil.

"[Power+Energy] has always been committed to energy independence," Murphy added.

About 20 percent of normal diesel fuel can be converted into energy, with 80 percent becoming waste product; a fuel cell can convert upwards of 50 percent into energy, with some of the waste product able to be recovered and reused.

The firm recently signed a seven-figure contract with the Department of Defense, designing reactors for the Army and Navy. Stubbmann said the Navy showed interest because the non-thermal reactors do not show up on imaging systems.

CEO of Power+Energy Peter Bossard added the system is safer for the Navy because it requires several reactors located throughout the vessel rather than one engine, protecting against total power failures and making ships less vulnerable.

In automobiles, when accompanied by an electric motor, a fuel cell can act as the engine.

Founded in 1993, Power+Energy employs around 20 people in its Ivyland research and development facilities. They also have an office in Japan.

About Power+Energy

Power & Energy, Inc. is headquartered in Pennsylvania, USA. Established in 1993, the company's mission is to enable the hydrogen economy and promote energy efficiency through the application of micro-channel technologies. The company provides a full range of micro-channel hydrogen purifiers to ultra-high purity users across the U.S., Asia and Europe.

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