



FAB LAB STORE

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FOR IMMEDIATE RELEASE:

MIT FABLAB & Horizon Fuel Cell Launch Crowd-Accelerated Innovation Initiative

Global Alliance combines MIT Fab Lab prototyping lab network, hydrogen fuel cell solutions from Horizon, and open source hardware from Arcola Energy (UK).

San Diego (CA), Singapore, and London – May 18, 2012 – [Fab Lab Store](#) in California and Singapore's [Horizon Fuel Cell Technologies](#) have entered into a worldwide distribution and co-development agreement for a new "Maker Development Kit™" named **H2MDK™** to roll-out via [MIT Fab Labs](#) and available now from Fab Lab Store. Its electronics solution was developed by experts at [Arcola Energy](#), Horizon's [product innovation team](#) based in London.

H2MDK™ is an all-inclusive DIY solution created for product inventors that combines fuel cell system components and hydrogen storage building blocks from Horizon, made compatible with the famous [Arduino](#) Uno "do-it-yourself" robotics micro-controller. This new collaboration brings fuel cells into the exciting world of internet-powered [crowd-accelerated innovation](#), tied together with purpose-designed infrastructure made available by the MIT Fab Lab global network.

Horizon, currently the world's largest micro-fuel cell producer, and [Fab Lab San Diego](#), have been researching ways to adapt the software development toolkit phenomenon present in the PC and mobile industry to any hardware that is electronically controlled or battery powered. Together with the Arcola team in London, we were inspired by the emergence a new and [popular maker movement](#), from which a diversity of new ideas are being generated by simply playing with technologies. Enabled by similar open-source micro-controllers used in MIT's famous robot competitions, all kinds mind-blowing tech projects are rapidly evolving within a global community of enthusiasts, using the viral power of the Internet.

Horizon, Arcola and Fab Labs saw this as an opportunity to accelerate a viral and creative movement with hydrogen at its core. Their plan is to reach out to amateur inventors everywhere to help prototype, build and bring to market new fuel cell powered solutions. "The H2MDK™ open-source tool kit will add to Horizon's existing product innovation capability, that of millions of amateurs working to solve their own particular challenges", said Dr Ben Todd, Founder at Arcola Energy (UK).

"Fab Labs around the world have worked to enable the Maker in all of us, through distributed innovation. We believe that people everywhere can 'make almost anything' – and now we are pleased to announce that we can power almost anything using fuel cells. We are very excited to join forces with Horizon and Arcola on this implementation, notes Katie Rast, Director of Fab Lab San Diego and Co-Founder of Fab Lab Store.

"By combining open source hardware together with Fab Lab's [distributed fabrication and rapid-prototyping concept](#), we have created a socially-accelerated pathway towards clean energy innovation" said Carlos Uranga, co-founder of [Fab Lab Store](#). "We hope to enable a people-driven, grassroots implementation of zero carbon solutions across the globe. Starting with low power products and hydrogen [fuel infrastructure](#) solutions such as those developed by Horizon, we hope to further catalyze the creation of a hydrogen-based economy from the ground up."

"We noticed that some of our products were being disassembled and 'hacked' by garage inventors exploring all kinds of ideas, then sharing their creations virally. So we decided to build a commercial product platform created for the people, and by the people" stated Taras Wankewycz, co-founder of Horizon.

The H2MDK™ kit, available via [FabLabStore.com](#) and selected global partners, will enable the start of a wide variety of hardware hacks and development projects ranging from hydrogen-powered robots to lawnmowers, including cell-phones, laptops, cameras, lighting systems. The possibilities are endless. A special-purpose [video channel](#) has already been set up to spread experience, and the most interesting ideas.



ABOUT **Massachusetts Institute of Technology (MIT) Fab Labs** <http://fab.cba.mit.edu/>

The (MIT) Fab Labs are an international network of laboratories located in a diverse array of communities around the world. The Fab Lab network is designed to promote innovation and entrepreneurship, and provide budding inventors with an open-access infrastructure that help turn ideas into tangible prototypes. Each lab is equipped with the same basic set of digital fabrication machinery and components. Importantly, each lab is a learning ecology that allows for community members of varied skill levels to access the tools for innovation, learn informally from one another, and access acquire formal training. Whether in rural India or cosmopolitan Barcelona, each lab enables a grassroots collection of makers, tinkerers, creators and innovators. Fab Labs is set to expand from 80 to 180 locations in the next 12 to 24 months.

ABOUT **Horizon Fuel Cell Technologies Pte. Ltd.** www.horizonfuelcell.com

Horizon is now the largest producer of micro-fuel cells in the world, and one of the world's pioneers in turning fuel cell products into products for various industries. Its overall vision is a zero carbon society with hydrogen as a clean energy carrier. Horizon began sales in 2005 of several self-designed fuel cell integrated consumer products, while developing larger scale solutions in applications ranging from portable power to electric flight, as well as stationary systems and hydrogen-electric mobility. Having developed a comprehensive enabling platform in fuel cells, hydrogen storage, and hydrogen supply technologies, the company is now a global source of product innovation integrating fuel cells. Horizon expanded internationally with localized efforts in over 50 countries, providing technology education and support, as well as numerous commercial fuel cell products.

ABOUT **Fab Lab Store** www.fablabstore.com

[Fab Lab Store](http://www.fablabstore.com), located in San Diego, CA has been appointed by MIT Fab Lab Global Network to be the designated commercial interface for technologies and kits relating to clean energy, robotics, and education created by MIT Fab Labs and partners. Fab Lab Store is intended to be an avenue for innovation and products created onsite by members of the MIT Fab Lab Global Network, or by its global network or partners. Fab Lab Store hopes to encourage current and new members into the network, by motivating them to post up their creations on Fab Lab Store, thereby rewarding their R&D efforts and encouraging more grassroots innovation.

ABOUT **Arcola Energy** www.arcolaenergy.com

Arcola Energy is a London-based multi-disciplinary developer, manufacturer and retailer of Horizon fuel cell-based low carbon energy solutions. Arcola operates across a wide range of markets with applications in home, construction, education and transport sectors; applying understanding of end-user needs to deliver cost-effective customised solutions to individuals, businesses and OEM clients.

ABOUT **H2MDK™** www.h2mdk.com

These hydrogen implementation kits provide the maker, engineer, inventor, or hobbyist an adaptable and modular complete hydrogen power solution that is remarkably better than lithium-ion/polymer batteries for the environment. These kits make it easy to expand power or longevity (adding hydrogen fuel cells, or adding hydrogen fuel respectively). Included in the kits are **Horizon's HYDROSTIK®** solid state, certified, low-pressure hydrogen storage canisters. With Horizon's advances in miniaturization, affordability, performance of hydrogen fuel cells, solid-state hydrogen storage, and the at-home based **Horizon HYDROFILL®** (hydrogen refueling station), there is now a complete, affordable, "[personal hydrogen supply infrastructure](#)" available for purchase.

ABOUT **Maker Development Kit™ (MDK™)**

The Maker Development Kit™ is to hardware what an API or SDK is to software application development. As pivotal hardware and technologies become cheaper, better, faster, we are reaching a point where ANYONE can create, innovate, and implement nearly anything, thereby democratizing innovation. This is what we see as the potential 3rd industrial revolution; the maker revolution. When properly directed via special kits like these, we believe this to be a powerful catalyst for the advancement of a particular technology; e.g. adopting hydrogen as an energy carrier. Maker Development Kits™ or MDKs™, developed and trademarked by Fab Lab Store, hope to provide the key ingredients to create these crowd-sourced hardware innovation pipelines.