

Hydrogen Fuel Cell Nexus

December 7, 2016

PI: Alleyn Harned

Virginia Clean Cities

1401 Technology Drive

Harrisonburg, VA 22802



What is this Directory?

<http://www.hfcnexus.com>

Hydrogen Fuel Cell Nexus is a business-to-business directory that helps suppliers connect with buyers.

Hydrogen Fuel Cell Nexus is a joint project of Virginia Clean Cities, Breakthrough Technologies Institute and Birch Studio, and is funded by the Department of Energy's Fuel Cell Technologies Office.

With your help, we will make the US hydrogen and fuel cell supply chain be more robust, more efficient and the most competitive in the world.



The screenshot shows the home screen of the Hydrogen Fuel Cell Nexus website. At the top, the logo features a stylized blue and white fuel cell stack next to the text "HYDROGEN FUEL CELL NEXUS" and "The US Hydrogen and Fuel Cell Directory". Navigation links for "Glossary", "Resources", "Matchmaker", "REGISTER", and "LOGIN" are in the top right. A green navigation bar contains "COMPANY TYPES", "PRODUCTS", "US MAP", and a search box. The main content area is a diagram of the hydrogen supply chain with four stages: "Hydrogen Fuel Cell Vehicle", "Dispensing", "Storage", and "Generation". The "Generation" stage shows a power source connected to a compressor, which feeds into a storage tank. The "Storage" stage shows a rack of hydrogen cylinders. The "Dispensing" stage shows a station with a nozzle connected to a vehicle. The "Hydrogen Fuel Cell Vehicle" stage shows a car with a fuel cell and battery. A small caption below the diagram reads: "Image derived from and inspired by California Fuel Cell Partnership. Used with permission." At the bottom, a blue banner contains the text: "Hydrogen Fuel Cell Nexus is a business-to-business directory that helps suppliers connect with buyers. With your help, we will make the US hydrogen and fuel cell supply chain be more robust, more efficient and the most competitive in the world. Sign up!". The footer includes the logo for "a partner of ENERGY" and "Energy Efficiency & Renewable Energy".

Search by Company Type



The screenshot shows the Hydrogen Fuel Cell Nexus website. At the top, the title "HYDROGEN FUEL CELL NEXUS" is displayed in large, bold letters, with the subtitle "The US Hydrogen and Fuel Cell Directory" below it. Navigation links for "Glossary", "Resource", "Helpdesk", "REGISTER", and "LOGIN" are visible in the top right corner. A green navigation bar contains "COMPANY TYPES", "PRODUCTS", and "US MAP", along with a search bar. A dropdown menu is open under "COMPANY TYPES", listing various roles: Auto Manufacturer, Consulting Service, Developer, Hydrogen Generation/Supply, Integrator, Manufacturer, Research/Demonstration, Retail, Safety, Sales/Marketing, Supplier, and Wholesale. The main content area features a diagram of the hydrogen supply chain with four stages: "Generation" (a power plant), "Compression" (a compressor), "Storage" (hydrogen cylinders), and "Dispensing" (a fueling station). A car is shown being refueled. A green menu bar is overlaid on the diagram, with plus signs indicating expandable sections. At the bottom, a blue banner contains the text: "Hydrogen Fuel Cell Nexus is a business-to-business directory that helps suppliers connect with buyers. With your help, we will make the US hydrogen and fuel cell supply chain be more robust, more efficient and the most competitive in the world. Sign up!". The footer includes the "U.S. DEPARTMENT OF ENERGY" logo and the text "Energy Efficiency & Renewable Energy".



HYDROGEN FUEL CELL NEXUS The US Hydrogen and Fuel Cell Directory


Glossary | Resources | Matchmaker | REGISTER | LOGIN

COMPANY TYPES | PRODUCTS | US MAP

Search


INTEGRATOR

Companies that make or assemble fuel cell systems

 **Air Liquide** Houston, TX


Air Liquide aims to deliver innovative gas solutions and technologies to a wide range of customers, driving their performance and helping them reduce their environmental impact. No matter where, we make sure our solutions are safe, reliable, cost-effective and sustainable.

ALSO LISTED IN: Hydrogen Fuel, Hydrogen Generation/Supply, Hydrogen System Integrator [Edit](#)

 **Air Products & Chemicals, Inc.** Allentown, PA


Air Products is the world's largest supplier of hydrogen. A commercial developer, supplier and operator of turnkey hydrogen on-site plants, Air Products is in the forefront of developing hydrogen fueling stations for clean transportation applications.

ALSO LISTED IN: Hydrogen Generation/Supply, Hydrogen Distribution, Hydrogen Storage, Hydrogen System Integrator [Edit](#)

 **Altery Systems** Folsom, VA

Altery has broken through traditional technology and cost barriers to deliver the most cost-effective and reliable backup power solutions available. Altery's zero-emission proton exchange membrane (PEM) fuel cells deliver the quality on-demand power and ride-through capabilities required for telecommunications, broadband, data centers, traffic signaling, homeland security, and other essential 24/7 operations.

ALSO LISTED IN: Fuel Cell Integrator, Integrator, Distributed Generation [Edit](#)


 **Ardica Technologies, Inc.** San Francisco, CA

Ardica is creating mobile power solutions with our unique technology for the military and consumer markets. Using novel fuel chemistries, fuel cells, and clever engineering, we are designing products that deliver more energy for less weight and volume than ever before.

ALSO LISTED IN: Developer, Fuel Cell Integrator, Hydrogen Generation/Supply, Power Electronics, Research/Demonstration [Edit](#)



The screenshot shows the Hydrogen Fuel Cell Nexus website. At the top, the logo reads "HYDROGEN FUEL CELL NEXUS" with the subtitle "The US Hydrogen and Fuel Cell Directory". Navigation links for "Glossary", "Resources", "Helpdesk", "REGISTER", and "LOGIN" are in the top right. Below the header is a green navigation bar with "CORPORATE TYPES", "PRODUCTS", and "US MAP". A search bar is on the right. The main content area features three large illustrations: "Hydrogen Fuel Cell" (a car), "Dispensing" (a station), and "Storage" (cylinders). A central green sidebar lists product categories: Catalyst, Compressor/Expander, Electrodes, Electrolyzer, Gauges, High Pressure Plumbing, Hydrogen Pumps/Injectors, HCU's, Power Electronics, Reactant Management, Sensors, Testing, Thermal Management, Vehicles, Vessel Lines, and Vessel Manufacturing. A footer section states: "Hydrogen Fuel Cell Nexus is a business-to-business directory that helps suppliers connect with buyers. With your help, we will make the US hydrogen and fuel cell supply chain be more robust, more efficient and the most competitive in the world. Sign up!". At the bottom, it says "an extension of ENERGY | Energy Efficiency & Renewable Energy".


 **HYDROGEN FUEL CELL NEXUS** The US Hydrogen and Fuel Cell Directory

[Glossary](#) | [Resources](#) | [Matchmaker](#) | [REGISTER](#) | [LOGIN](#)

[COMPANY TYPES](#) | [PRODUCTS](#) | [US MAP](#)

ELECTROLYZER

A process that uses electricity, passing through an electrolytic solution or other appropriate medium, to cause a reaction that breaks chemical bonds (e.g., electrolysis of water to produce hydrogen and oxygen).




American Elements

Los Angeles, CA

American Elements is the largest global supplier of electrode and electrolyte materials for the solid oxide fuel cell industry. Many state of the art approaches to SOFC microstructures were first developed by American Elements' facilities.

ALSO LISTED IN: [Electrodes, Electrolyte Supplier](#) [#246](#)




Giner, Inc

Newton, MA

Giner/GES carries out research and development in applied electrochemistry in the fields of hydrogen/air, hydrogen/oxygen, regenerative, and direct methanol fuel cells. Giner also develops advanced prototype PEM-based water electrolysis systems.

ALSO LISTED IN: [Catalyst, Developer, Electrolyzer, Reactant Management, Research/Demonstration](#) [#245](#)




Heraeus

Heraeus Circuits and Components

West Conshohocken, PA

Heraeus Materials Technology LLC is a manufacturer of thick film pastes for SOFC's. Heraeus manufactures anode, cathode, electrolyte and current collector pastes for SOFC's. Heraeus also manufactures pastes according to customer specific formulas.

ALSO LISTED IN: [Electrodes, Electrolyte Supplier](#) [#244](#)



ITM Power

Anaheim, CA

ITM Power specialize in the manufacture of integrated hydrogen energy systems and state of the art PEM electrolyzers. Founded in June 2001, the company floated on the Alternative Investment Market (AIM) in 2004 and was the first United Kingdom-based fuel cell company to go public. ITM Power operates out of two premises in Sheffield, UK with further offices in Germany, France the USA and Canada. ITM has a network of hydrogen refueling stations around the world and also is a world leader in the design, construction and operation of hydrogen energy storage systems. Our systems absorb excess electricity in a fast, efficient and reliable manner for use in fuel cells, direct injection into gas pipelines, synthetic methane production and liquid fuel synthesis. Our systems are rapid response meaning they can be used for grid ancillary services such as demand response frequency regulation and renewables integration.

Clean Cities / 7



[Glossary](#) | [Resources](#) | [Manufacturer](#) | [REGISTER](#) | [LOGIN](#)

HYDROGEN FUEL CELL NEXUS

The US Hydrogen and Fuel Cell Directory

[COMPANY TYPES](#) | [PRODUCTS](#) | [US MAP](#) |

[← Doosan Fuel Cell America](#) | [WATT Fuel Cell →](#)

AIR LIQUIDE

Company Type: Hydrogen Generation/Supply
Description: Air Liquide aims to deliver innovative gas solutions and technologies to a wide range of customers, driving their performance and helping them reduce their environmental impact. No matter where, we make sure our solutions are safe, reliable, cost-effective and sustainable.
Products: Other

Contact
Roy Bant
Business Development Manager - Northeast (Hydrogen Fuel)
roy.bant@airliquide.com

8007 Katy Freeway, Suite 300
Houston, TX 77024
United States
215-749-8008
roy.bant@airliquide.com
www.airliquide.com

of US Employees: 500-1000

Last updated: July 12, 2016

[← Doosan Fuel Cell America](#) | [WATT Fuel Cell →](#)

U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

Fuel Cell Nexus is a joint project of Virginia Clean Cities, Breakthrough Technologies Institute and BioStudio, and is funded by the Department of Energy's Fuel Cell Technologies Office.

[Find a bug?](#) [Have a feature request?](#) Email Us Here



HYDROGEN FUEL CELL NEXUS

The US Hydrogen and Fuel Cell Directory

[Directory](#) | [Resources](#) | [Help/FAQ](#) | [REGISTER](#) | [LOGIN](#)

[COMPANY TYPES](#) | [PRODUCTS](#) | [US MAP](#)

US MAP

The map below shows the locations of organizations in the Hydrogen and Fuel Cell Database across the US. You can zoom in and click on pins to navigate.



#600

U.S. DEPARTMENT OF **ENERGY** | Energy Efficiency & Renewable Energy

Fuel Cell Nexus is a joint project of Virginia Clean Cities, Breakthrough Technologies Institute and Rock Studio, and is funded by the Department of Energy's Fuel Cell Technologies Office.

Find a bug? Have a feature request? [Email us here.](#)

HYDROGEN FUEL CELL NEXUS The US Hydrogen and Fuel Cell Directory

Glossary | Resources | Newsletter | REGISTER | LOGIN

COMPANY TYPES | PRODUCTS | US MAP

Search

US MAP

The map below shows the locations of organizations in the Hydrogen and Fuel Cell Database across the US. You can zoom in and click on pins to navigate.

← Tony Carbon Fibers America, Inc. →

Company
Tony Carbon Fibers America, Inc.

Address
700 Parker Square, Suite 270 Flower
Mound TX 78028

Phone
772-899-2200

Website
<http://www.tony-carbon-fibers-america.com/>

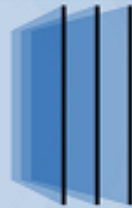


#Eco

a division of ENERGY Energy Efficiency & Renewable Energy

Fuel Cell News is a joint project of Virginia Clean Cities, Breakthrough Technologies Institute and EcoStudio, and is funded by the Department of Energy's Fuel Cell Technologies Office

Find a bug? Have a feature request? [Email us here.](#)



HYDROGEN
FUEL CELL
NEXUS

The US Hydrogen and
Fuel Cell Directory

[Glossary](#) | [Resources](#) | [REGISTER](#) | [LOGIN](#)

[COMPANY TYPES](#) | [PRODUCTS](#) | [US MAP](#) | [MATCHMAKER](#)

Q Search ...

SEEKING

This page lists organizations that are seeking products, goods, services, etc in hydrogen and fuel cell markets.

X COMPANY

High-pressure valves

10,000 high-pressure valves by November 2016 or December 2016

Last updated: September 20, 2016




TRIPLE MEMBRANE CO

Heavy duty membranes with 2000 hour life cycle and high efficiency coefficient

12,000 membranes per month for the next year and the year after that.

Last updated: September 20, 2016





HYDROGEN FUEL CELL NEXUS
The US Hydrogen and Fuel Cell Directory

[Glossary](#) | [Resources](#) | [REGISTER](#) | [LOGIN](#)

[COMPANY TYPES](#) | [PRODUCTS](#) | [US MAP](#) | [MATCHMAKER](#)

[← Seeking: Heavy-thick membranes](#) [Consulting →](#)

Matchmaker

The information below was submitted to Hydrogen Fuel Cell Nexus in search of a match.

High-pressure valves

SEEKING
I am seeking: 10,000 high-pressure valves by November 2016 or December 2016
Specifications: High-temp operation, plated, fancy-finish.

Fuel Cell Type: All
Categories: High Pressure Plumbing

CONTACT
Company: X Company
Name: David Robinson
My role is Sales

[Reply to this Matchmaker Request](#)

[← Seeking: Heavy-thick membranes](#) [Consulting →](#)


U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

Fuel Cell Nexus is a joint project of Virginia Clean Cities, Breakthrough Technologies Institute and Birch Studio, and is funded by the Department of Energy's Fuel Cell Technologies Office.

[Find a bug? Have a feature request? Email us here.](#)



The screenshot shows the Hydrogen Fuel Cell Nexus website. The header includes the site logo and navigation links: Glossary, Resources, REGISTER, and LOGIN. A green navigation bar contains links for COMPANY TYPES, PRODUCTS, US MAP, and MATCHMAKER, along with a search bar. The main content area is titled "OFFERING" and includes a sub-header "HYDROGEN PROS CONSULTING" with a large green heading "Consulting". Below this is a description of consulting services and a "Last updated" date of September 21, 2016. A second listing is titled "TEST WAREHOUSE TESTER" with a large green heading "Warehouse space", a description of warehouse space, and a "Last updated" date of September 20, 2016. The footer features the U.S. Department of Energy logo and text: "U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy" and "Fuel Cell Nexus is a joint project of Virginia Clean Cities, Breakthrough Technologies Institute and Birch Studio, and is funded by the Department of Energy's Fuel Cell Technologies Office."



HYDROGEN
FUEL CELL
NEXUS

The US Hydrogen and
Fuel Cell Directory

Glossary | Resources | REGISTER | LOGIN

COMPANY TYPES | PRODUCTS | US MAP | MATCHMAKER

Search ...

← Seeking: 1000 Blower Fans Needed

Seeking: Micro-thin membranes →

Matchmaker

The information below was submitted to Hydrogen Fuel Cell Nexus in search of a match.

Warehouse space

OFFERING
I am offering: I have 12,000 feet of warehouse space and fulfillment
Capabilities: We can fulfill orders for you, or provide access to our secure facility.
Can produce custom orders: No

Fuel Cell Type: Other
Categories: Compressor/Expander

CONTACT
Company: Test Warehouse Tester
Names: David Robinson
My role is: Distribution

Reply to this Matchmaker Request

Creating a Matchmaker Post



- Dashboard
- Organizations
- Matchmaker**
- All Matchmakers
- Add New
- Media
- Pages
- Comments
- Appearance
- Plugins
- Users
- Profile Builder
- Permissions
- Tools
- Settings
- Custom Fields
- Notifications
- Security
- Secret Security
- All Export
- All Import
- Collapse menu

Enter title here

Welcome to the HFCaeros Matchmakers

The forms below will help us to help you, and help create a stronger supply chain at the same time.

Please click the blue Submit for Review (or Update) button in the right column to submit this Matchmaker request. After you submit, we will review your post and process accordingly. You can edit it again any time you wish.

MATCHMAKER

Post Title *
Give your Matchmaker request a title.

Seeking or Offering? *
 Seeking Offering

Enter how much you need, of what, by when.

Please provide the specifications that you require.

Fuel Cell Type *
For the purposes of this post, which fuel cell type(s) do you work with?

PEMFC SOFC All Other

Publish

Save Draft Preview

Status: Draft [Edit](#) [Customize](#)

Visibility: Public [Edit](#)

[Publish immediately](#) [Edit](#)

Publish

Creating a Matchmaker Post



Matchmaker

All Matchmakers
Add New

Media
Pages
Comments

Appearance
Plugins
Users
Profile Builder
Permissions
Tools
Settings
Custom Fields
Notifications
Security
Social Security
All Export
All Import
Collaboration

Fuel Cell Type *
For the purposes of this post, which fuel cell type(s) do you seek rent?
 H2/LFC SOFC All Other

Relevant Categories
For things you couldn't find in the directory...
 Catalyst Compressor Engine Electrode Electrolyte Oxygen High Pressure Fueling Hydrogen Pump Ejector MEAs Power Electronics Fuel Cell Management Fuelizer Sensors Testing Thermal Management
 Vehicle Vehicle Lease Vehicle Manufacturing Other

GENERAL INFO

First Name *

Last Name *

Company

Logo
700 files with no background color seek best .PNG and GIF files are acceptable
No image selected [Add Image](#)

Phone *

Email *

My role is *
 Distribution Executive Finance Manufacturing Policy Procurement Project Management Research Sales Testing Other

LinkedIn Profile

DATA SHARING

Submitting Data *

[Glossary](#) | [Resources](#) | [Hotlines](#) | [REGISTER](#) | [LOGIN](#)

HYDROGEN FUEL CELL NEXUS

The US Hydrogen and Fuel Cell Directory

[COMPANY TYPES](#) | [PRODUCTS](#) | [US MAP](#)

Register

Users can register themselves or you can manually create a user here [»](#)

Username *

First Name *


Last Name *

Email *

Password *

Strong passwords are upper and lower case letters, numbers and special characters like @ and ! and avoid outside words. [Get Password](#) can help. (Minimum length of 8 characters)

Repeat Password *

Spam Prevention * I'm not a robot 

[#346](#)

a division of
ENERGY Energy Efficiency & Renewable Energy

Fuel Cell Nexus is a joint project of Virginia Clean Cities, Breakthrough Technologies Institute and TechSparks, and is funded by the Department of Energy's Fuel Cell Technologies Office.

Find a bug? Have a feature request? [Email us here.](#)



Virginia Clean Cities

Matthew Wade

4051

mwade@vacleancities.org