

[www.chfcc.org](http://www.chfcc.org)



## CHFCC Membership Directory



[www.chfcc.org](http://www.chfcc.org)

The Connecticut Hydrogen-Fuel Cell Coalition works to enhance economic growth in Connecticut through the development, manufacture, and deployment of fuel cell and hydrogen technologies and associated fueling systems. The Coalition is comprised of representatives from Connecticut's fuel cell and hydrogen industry, academia, government, and other stakeholders.





The Connecticut Hydrogen Fuel Cell Coalition Membership Directory includes information on organizations and companies that are members of the Coalition. Please use this directory as a reference tool to identify organizations and companies that can provide specialized services and products related to the hydrogen and fuel cell industry.

The information contained in the Connecticut Hydrogen Fuel Cell Coalition Membership Directory has been carefully prepared from the best available sources of data. Every effort has been made to ensure that content is accurate, complete and current, however, it is the responsibility of each individual to use the data appropriately, for general informational purposes, and not as an exclusive basis for decision-making. The information presented herein is accurate at the time of publication, and may change. The images used herein were provided by the individual companies and organizations, or used with their permission.

## **SERVICES**

### **Center for Clean Energy Engineering**

Professional Services - [www.energy.uconn.edu](http://www.energy.uconn.edu)

### **Connecticut Center for Advanced Technology, Inc.**

Non-Profit - [www.ccat.us](http://www.ccat.us)

### **Connecticut Clean Cities**

Government Related - [www.eere.energy.gov/cleancities](http://www.eere.energy.gov/cleancities)

### **Connecticut Department of Economic & Community Development**

Government - [www.decd.org](http://www.decd.org)

### **Connecticut Department of Transportation**

Government - [www.ct.gov/dot](http://www.ct.gov/dot)

### **Connecticut Green Bank**

Government - [www.ctgreenbank.com](http://www.ctgreenbank.com)

### **Connecticut Siting Council**

Government - [www.ct.gov/csc](http://www.ct.gov/csc)

### **CTTRANSIT**

Public Transit - [www.cttransit.com](http://www.cttransit.com)

### **Design By Analysis, Inc.**

Technical Services - [www.dbaworks.com](http://www.dbaworks.com)

### **Fuel Cell Perspectives**

Professional Services

### **People's United Insurance Agency**

Professional Services - [www.peoples.com](http://www.peoples.com)

### **Public Utilities Regulatory Authority / Department of Energy and Environmental Protection**

Professional Services - [www.pullcom.com](http://www.pullcom.com)

### **Pullman & Comley, LLC**

Professional Services - [www.pullcom.com](http://www.pullcom.com)

### **Robinson & Cole, LLP**

Professional Services - [www.rc.com](http://www.rc.com)

## **ACADEMIC**

**Darien High School Fuel Cell Project**



# Center for Clean Energy Engineering



## Focus

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Provide world-class education, research and hands-on training of future scientists and engineers to catalyze and enable the transformation of science to systems in developing a global "Sustainable Energy Economy."

## Key Contacts

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### **Ugur Pasaogullari**

Director

860.486.9024

ugur.pasaogullari@uconn.edu

### **Terry Barber-Tournaud**

Program Director

860.486.8375

terry@engr.uconn.edu

## Address / Web Site

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University of Connecticut  
44 Weaver Road, Unit 5233  
Storrs, CT 06269-5233

[www.energy.uconn.edu](http://www.energy.uconn.edu)

## Description

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The Center for Clean Energy Engineering (formally the Connecticut Global Fuel Cell Center) at the University of Connecticut was founded in 2001 with funding from the Connecticut Clean Energy Fund and Connecticut industry partners. Building upon an established foundation the Center for Clean Energy Engineering (C2E2) is uniquely positioned to provide world-class education, breakthrough research and hands-on training of future scientists and engineers to catalyze and enable the transformation of science to systems in developing a global "Sustainable Energy Economy."

In collaboration with its partners, the Center conducts advanced research and engineering and assists in demonstration activities in the areas of: efficient energy conversion and storage systems, fuels and fuel processing, natural resource conservation, renewable resource utilization, power management and "smart transmission." The C2E2 has singular expertise in the fields of advanced materials development, including materials synthesis and characterization, engineering design and simulation, systems integration and testing. Leveraging core strength and leadership in advanced fuel cell technologies and power generation systems, C2E2 enables students and researchers to address current and emerging global energy and environmental needs.



Connecticut Center for  
Advanced Technology, Inc.

## *Focus*

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CCAT works in partnership with industry, government, and academia to strengthen technology-led economic competitiveness.

## *Key Contacts*

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**Joel M. Rinebold**

Director of Energy Initiative  
860.291.8832  
jrinebold@ccat.us

## *Address / Web Site*

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222 Pitkin Street, Suite 101  
East Hartford, CT 06108

[www.ccat.us](http://www.ccat.us)

## *Description*

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CCAT, a nonprofit organization founded in 2004 and headquartered in East Hartford, Conn., creates and implements bold ideas for applied technologies, energy solutions, STEM education, career development and export and cyber compliance. By leading state, regional, and national partnerships, CCAT helps manufacturers, academia, government and nonprofit organizations to excel.

CCAT's Energy team focuses on developing regional models for sustainable and reliable energy use, and has expertise in energy solutions including supply chain management, industry representation, "Roadmap" development, strategic planning, technical analysis, and business assistance. The Connecticut Hydrogen Fuel Cell Coalition is administered by CCAT, with support from the Connecticut Department of Economic and Community development and its members.



# Connecticut Clean Cities



## Focus

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Clean Cities deploys advanced technology vehicles to decrease petroleum consumption in transportation.

## Key Contacts

### **Craig Peters**

Capitol

860.645.3100

[craig.peters@manchesterhonda.com](mailto:craig.peters@manchesterhonda.com)

### **Daphne Dixon**

Southwestern Connecticut

203-536-4696

[Daphne@livegreenct.org](mailto:Daphne@livegreenct.org)

### **Paul Wessel**

Greater New Haven

203.627.3715

[wessel@nhcleancities.org](mailto:wessel@nhcleancities.org)

## Web Sites

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Greater New Haven Clean Cities:

[www.nhcleancities.org](http://www.nhcleancities.org)

Capital Clean Cities of Connecticut:

[www.ct-ccc.org](http://www.ct-ccc.org)

Norwich Clean Cities:

[www.norwichcleancities.org](http://www.norwichcleancities.org)

## Description

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The Connecticut Clean Cities (CCC) are designated members of the U.S. Department of Energy's National Clean Cities Program. Nearly 100 coalitions nationwide work together by supporting local decisions to adopt practices and procedures that contribute to the reduction of petroleum consumption. The CCC propel policies and practices such as advancing the use of cleaner domestic fuels, idle-reduction measures, fuel economy improvements, and new transportation technologies as they emerge.

The CCC work with public and private entities to reduce mobile source air pollution, promote energy diversity, and to foster new business and economic development opportunities by increasing the use of domestically produced, cleaner burning alternative fuels, including biodiesel, electricity, ethanol, hydrogen, natural gas, and propane. The CCC are also committed to educating the general public, local and state officials, as well as private businesses about the benefits of alternative fuel vehicles and alternative fuels, supporting the enactment of the Clean Fuel Legislation and tax incentives at federal, state, and local levels.

# Connecticut Department of Economic & Community Development



Department of Economic and  
Community Development

## ***Focus***

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State agency which leads the development and implementation of programs and services that support job creation by Connecticut businesses.

## ***Key Contacts***

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Office of International and Domestic  
Business Development  
860.500.2359  
aaron.knight@ct.gov

## ***Address / Web Site***

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450 Columbus Boulevard, Suite 5  
Hartford, CT 06103  
[www.decd.org](http://www.decd.org)

## ***Description***

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The Department of Economic and Community Development is the state's lead agency responsible for strengthening Connecticut's competitive position in the rapidly-changing, knowledge-based global economy. The agency takes a comprehensive approach to economic development that incorporates community development, transportation, education and arts and culture.



# Connecticut Department of Transportation



## ***Focus***

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Government - Transportation

## ***Key Contacts***

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**Jennifer Reilly**  
Office of Strategic Planning and Projects  
860.594.2143  
Jennifer.Reilly@ct.gov

## ***Address / Web Site***

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Bureau of Public Transportation  
2800 Berlin Turnpike, Room 1130  
Newington, CT 06131

[www.ct.gov/dot/](http://www.ct.gov/dot/)

## ***Description***

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The mission of the Connecticut Department of Transportation is to provide a safe and efficient intermodal transportation network that improves the quality of life and promotes economic vitality for the State and the region.



## ***Focus***

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Strengthening Connecticut's economy, protecting community health, improving the environment and promoting a secure energy supply.

## ***Key Contacts***

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**Bryan Garcia**  
President & CEO  
860.257.2170  
[bryan.garcia@ctgreenbank.com](mailto:bryan.garcia@ctgreenbank.com)

## ***Address / Web Site***

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845 Brook Street  
Rocky Hill, CT 06067  
[www.ctgreenbank.com](http://www.ctgreenbank.com)

## ***Description***

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The Connecticut Green Bank was established by the Connecticut General Assembly on July 1, 2011 as a part of Public Act 11-80. As the nation's first full-scale green bank, it is leading the clean energy finance movement by leveraging public and private funds to scale-up renewable energy deployment and energy efficiency projects across Connecticut. The Green Bank's success in accelerating private investment in clean energy is helping Connecticut create jobs, increase economic prosperity, promote energy security and address climate change. In 2017, the Connecticut Green Bank received the Innovations in American Government Award from the Harvard Kennedy School Ash Center for Democratic Governance and innovation for their "Sparking the Green Bank Movement" entry.

# Connecticut Siting Council



## *Focus*

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State agency with jurisdiction over the siting of telecommunication and public utility facilities.

## *Key Contacts*

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### **Melanie Bachman**

Executive Director

860.827.2951

Melanie.Bachman@ct.gov

### **Lisa Fontaine**

Fiscal Administrative Officer

860.827.2969

Lisa.Fontaine@ct.gov

## *Address / Web Site*

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Ten Franklin Square  
New Britain, CT 06051

[www.ct.gov/csc](http://www.ct.gov/csc)

## *Description*

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The Connecticut Siting Council is responsible for:

- Balancing the need for adequate and reliable public utility services at reasonable costs with the need to protect the environment and to minimize damage to the state's scenic, historic, and recreational values;
- Providing environmental standards for the location, design, construction, and operation of public utility facilities that are at least as stringent as federal environmental standards and that are sufficient to assure the welfare and protection of the people of Connecticut;
- Encouraging research to develop new and improved methods of generating, storing, and transmitting electricity and fuel and of transmitting and receiving television and telecommunications signals with minimal damage to the environment;
- Promoting the sharing of telecommunications towers in order to avoid their unnecessary proliferation; and
- Requiring annual forecasts of the demand for electricity together with the planning for facilities needed to supply the predicted demand.



## *Focus*

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Public Transit.

## *Key Contacts*

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Jennifer Kritzler  
Technical Projects Manager  
860.707.1211  
JKritzler@cttransit.com

**General Information**  
860.522.8101

## *Address / Web Site*

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100 Leibert Rd, PO Box 66  
Hartford, CT 06141  
[www.cttransit.com](http://www.cttransit.com)

## *Description*

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CTTRANSIT provides public transit local and express bus services in the greater Hartford, New Haven, and Stamford, Connecticut metro areas. Serving nearly 27 million passengers per year, CTTRANSIT offers an economical, dependable, and environmentally sound way to reach destinations throughout Connecticut.

CTTRANSIT is a Connecticut Department of Transportation (CT DOT) owned bus service that services the state's major metropolitan centers. Via contract providers, they serve a total of eight different metro areas: Hartford, New Haven, Stamford, Waterbury, New Britain and Bristol, Meriden, and Wallingford.

In April of 2007, CTTRANSIT introduced its first hydrogen fuel cell powered bus. In 2010 they increased this number to five buses making it the second largest hydrogen fuel cell bus fleet in the country. at the time These buses are true zero emission vehicles whose only discharge is warm water vapor.

## *Focus*

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Design By Analysis (DBA) is a full service mechanical engineering consulting business, supporting a myriad of industries including aerospace and fuel cell.

## *Key Contact*

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**Leonard Discenza**  
President  
203.805.4314  
ldiscenza@dbaworks.com

## *Address / Web Site*

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984 Southford Road, Suite 9  
Middlebury, CT 06762  
[www.dbaworks.com](http://www.dbaworks.com)

## *Description*

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Since 1995, DBA has served over 160 customers worldwide, including the leading companies in the development of fuel cells for stationary and portable power generation applications.

As a partner in the fuel cell and hydrogen industry, DBA has helped OEMs in all phases of the product cycle, from concept development through to power plant installation, including the support of fuel cell manufacture.

DBA's Fuel Cell experience encompasses a variety of projects, including:

- Design of SOFC, PEM, Molten Carbonate and Direct Methanol Technologies
- Design and Analysis of Cells and Cell Stacks (including miniature stacks for laptops, cell phones)
- Balance of Plant Configuration
- System Optimization
- Layout, Packaging and Component Sizing and Selection
- Component Design (Blowers, Heat Exchangers, Manifolds)
- Layout of MW Size Plant
- Fixtures and Tooling for Manufacture and Installation





## ***Focus***

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Fuel Cell Perspectives works with industry, government and academia to assist them in identifying attractive fuel cell applications and solutions to technical and policy issues.

## ***Key Contact***

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**John Trocciola**  
860.490.8240  
[john\\_c\\_trocciola@sbcglobal.net](mailto:john_c_trocciola@sbcglobal.net)

## ***Address / Web Site***

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132 Bartlett Hill Road  
Portland, CT 06480

## ***Description***

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Fuel Cell Perspectives is an independent consulting firm specializing in all aspects of fuel cells including: application analysis, stack and gas cleanup design, materials, marketing and sales strategies, and the impact of Public Policy and Utility rate structures on fuel cell market growth. The principal, John Trocciola, has over 45 years of applicable experience in all fuel cell technologies including, AFC, PAFC, PEM, MCFC and SOFC and has been issued 43 US patents in these fuel cell technologies and their applications.

# People's United Insurance Agency



## Focus

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A full-service insurance agency.

## Key Contact

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**W. Bruce Murray**  
Senior Vice President  
860.524.7602  
[Bruce.Murray@peoples.com](mailto:Bruce.Murray@peoples.com)

## Address / Web Site

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*The Gold Building*  
*One Financial Plaza*  
*Hartford, CT 06103*  
[www.peoples.com](http://www.peoples.com)

## Description

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People's United Insurance Agency is a full-service insurance agency with headquarters in Hartford, Connecticut. As a Top 100 Property and Casualty agency, PUIA has been serving the insurance needs of consumers, businesses and business owners for over 120 years. The Agency also offers group insurance and employee benefit plans, risk control services and a Special Programs division. The Risk Management division provides proactive risk control and claim oversight services and is dedicated to reducing total cost of risk in the hazard lines of property/casualty insurance.



# Public Utilities Regulatory Authority / Department of Energy & Environmental Protection

## *Focus*

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Regulatory Agency

## *Key Contact*

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**Paul E Farrell**

Assistant Director, Planning & Standards  
Bureau of Air Management, DEEP  
860.424.3389  
Paul.Farrell@CT.gov

## *Address / Web Site*

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PURA  
10 Franklin Square  
New Britain, CT 06051

[www.ct.gov/PURA](http://www.ct.gov/PURA)

DEEP  
79 Elm Street,  
Hartford, CT 06106

[www.ct.gov/DEEP](http://www.ct.gov/DEEP)

## *Description*

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The Connecticut Department of Energy and Environmental Protection (DEEP) is charged with conserving, improving and protecting the natural resources and the environment of the state of Connecticut as well as making cheaper, cleaner and more reliable energy available for the people and businesses of the state.

The DEEP is organized into three main branches:

- The Energy Branch includes the Public Utilities Regulatory Authority (PURA) – formerly the Department of Public Utility Control – which reviews rates for electricity, water, cable television and other utilities as well as a Bureau of Energy and Technology Policy;
- The Environmental Quality Branch is comprised of the Bureaus of Air Management, Materials Management and Compliance Assurance, and Water Protection and Land Reuse. These bureaus protect the air, land and water resources of the state by regulating air emissions, wastewater discharges and solid and hazardous wastes; and
- The Environmental Conservation Branch that consist of two bureaus that are charged with managing the state's natural resources and the conservation and management of statewide recreation lands and resources.

## ***Focus***

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Legal counsel for businesses.

## ***Key Contacts***

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### **Main Line**

Pullman & Comley, LLC  
860.424.4300

## ***Address / Web Site***

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90 State House Square  
Hartford, CT 06103-3702  
[www.pullcom.com](http://www.pullcom.com)

## ***Description***

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Pullman & Comley, LLC has played an active and distinguished role in the Connecticut and New England business community since 1919.

The firm is legal counsel to many fast growing businesses and has continued to grow and adapt to meet our clients' changing needs, helping them to address the challenges and opportunities of every economy. We serve major financial institutions, public and private companies of all sizes, health care providers, service businesses, trade associations, manufacturers and emerging growth businesses in the alternative energy and information technology industries, as well as government entities, non-profit organizations and individuals. With offices in Bridgeport, Hartford and Stamford, Connecticut and White Plains, New York, our firm is organized into practice sections that offer clients both depth of experience and the flexibility to team across disciplines for customized, solution-oriented service.



## *Focus*

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Our lawyers serve institutional and industrial clients in a full range of legal disciplines from intellectual property and technology, energy and communications, environmental, land use, and real estate development to corporate, mergers and acquisitions, securities, labor and employment, immigration, contracts, tax, and financial services.

## *Key Contacts*

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**Joshua S. Mirer**  
Attorney  
860.275.8344  
jmirer@rc.com

**Anne L. Elvgren**  
Chief Marketing Officer  
860.541.2739  
aelvgren@rc.com

## *Address / Web Site*

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280 Trumbull Street  
Hartford, CT 06103-3597  
[www.rc.com](http://www.rc.com)

## *Description*

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Robinson & Cole, with over 260 lawyers and 250 nonlegal professional staff, is a premier law firm celebrating over 160 years of exceptional client service. Our geographic reach meets the regional, national, and global nature of our clients' operations and our accessible partners, client-tailored service plans, and electronic communications strategies, all help us manage legal issues more effectively.

# Darien High School Fuel Cell Project



## *Focus*

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Educating students regarding hydrogen and fuel cell technologies.

## *Key Contacts*

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**Iman Onbargi**  
Business Manager  
onbargii@darienps.org  
203.655.3981

**Richard Reynolds**  
Teacher/Advisor  
RReynolds@darienps.org

## *Address / Web Site*

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80 High School Lane  
Darien, CT 06820  
[www.dhsfuelcell.org](http://www.dhsfuelcell.org)

## *Description*

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Founded in 2003, the Darien High School Fuel Cell Project is a unique, student-driven project that aims to explore the field of alternative energy with an emphasis on hydrogen fuel cells. The team competes in the yearly Shell Eco-Marathon, a university dominated competition. In 2016, DHS Fuel Cell placed third in the hydrogen fuel cell prototype division at the Eco-Marathon. The team also hosts the annual Darien High School Energy Symposium, a day long educational event focused on alternative energy.





## **PRODUCTS**

### **Advent Technologies**

Original Equipment Manufacturer - [www.advent-energy.com](http://www.advent-energy.com)

### **Aris Energy Solutions**

Original Equipment Manufacturer /Developer - [www.ariswind.com/fuel-cell-mchp/](http://www.ariswind.com/fuel-cell-mchp/)

### **Dexmet Corporation**

Original Equipment Manufacturer - [www.dexmet.com](http://www.dexmet.com)

### **Doosan Fuel Cell America, Inc.**

Original Equipment Manufacturer - [www.doosanfuelcellamerica.com](http://www.doosanfuelcellamerica.com)

### **FuelCell Energy, Inc.**

Original Equipment Manufacturer - [www.fuelcellenergy.com](http://www.fuelcellenergy.com)

### **Infinity Fuel Cell and Hydrogen, Inc.**

Original Equipment Manufacturer - [www.infinityfuel.com](http://www.infinityfuel.com)

### **Nel Hydrogen**

Original Equipment Manufacturer - [www.nelhydrogen.com](http://www.nelhydrogen.com)

### **Precision Combustion, Inc.**

Original Equipment Manufacturer - [www.precision-combustion.com](http://www.precision-combustion.com)

### **R&D Dynamics Corporation**

Original Equipment Manufacturer - [www.rddynamics.com](http://www.rddynamics.com)

### **Skyre, Inc.**

Original Equipment Manufacturer - [www.skyre-inc.com](http://www.skyre-inc.com)

### **US Hybrid Corporation**

Original Equipment Manufacturer - [www.ushybrid.com](http://www.ushybrid.com)



## Focus

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*Advent Technologies is an international technology company that develops new materials and systems for energy applications based on its proprietary technology.*

## Key Contacts

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**Vasilis Gregoriou Ph.D.**

Chief Executive Officer

+30 2610 911 580 (Greece)

Email: [vgregoriou@advent-energy.com](mailto:vgregoriou@advent-energy.com)

**Emory De Castro, Ph.D.**

Chief Technology Officer

857.264.7035

[EmoryDeCastro@advent-energy.com](mailto:EmoryDeCastro@advent-energy.com)

## Address / Web Site

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One Mifflin Place  
119 Mt. Auburn St, Suite 400  
Cambridge, MA 02138

Patras Science Park  
Stadiou Str, Platini  
GR 26504 - Greece

[www.advent-energy.com](http://www.advent-energy.com)

## Description

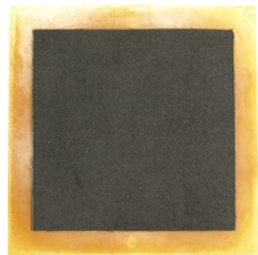
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Advent Technologies is the leader in the design, development and production of polymers, membranes, and membrane electrode assemblies (MEAs) for high temperature proton exchange membrane (PEM) fuel cells. The high temperature PEM fuel cell allows for co-generation of heat and power, high tolerance to fuel impurities, fuel flexibility, and simpler system design; factors that will help in cost reduction and mass adoption of the fuel cell technology. Advent Technologies' high temperature membrane & MEA are based on a proprietary polymeric material that enhances the mechanical, thermal, chemical and oxidative stability which are critical for high temperature operation. Advent Technologies' products are available under the brand name Advent TPS® and have the distinction of performing at the highest temperature recorded for high temperature PEM MEA to this date worldwide.

## Product / Process Info

### Product

**Membrane Electrode Assemblies.** The Advent portfolio of high temperature MEAs includes both our TPS® and PBI based assemblies. The TPS family is known for the highest operating temperature (180 °C to 200 °C) and good acid management. The PBI technology has been licensed from BASF and was formerly known as the P1100W MEA. The PBI platform has the highest acid loading and proven lifetime of approximately 20,000 hrs. Both MEAs operate without additional water and with impure hydrogen containing 1-3% CO.

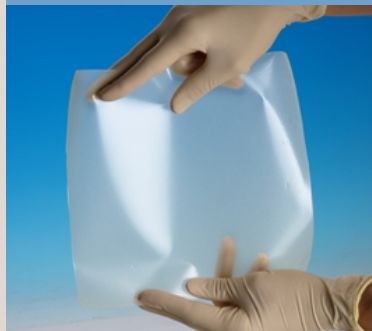


Commercially Available

### Product

#### **Components for Membrane Electrode Assemblies.**

Advent manufactures and markets the TPS membrane, used in high temperature membrane electrodes assemblies. We also make and market gas diffusion electrodes, which are found in a wide variety of applications such as in components for membrane electrode assemblies, sensors, hydrogen generation, and industrial processes.



Commercially Available

### Product

#### **Conjugated dyes for organic photovoltaic arrays.**

As an offshoot of the chemistry developed for our TPS membrane, Advent has a series of compounds with outstanding characteristics for use in OPVs.



In development - Inquire for samples



## Focus

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Develops and manages renewable energy projects that integrate energy solutions, including solid oxide fuel cells.

## Key Contacts

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Dan Connors  
Chief Operating Officer  
203-516-8631 cell  
914-663-2747 x-349 office  
dconnors@aris-re.com

## Address / Web Site

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135 North Street  
Middlebury, CT 06762

506 South 9th Avenue  
Mount Vernon, NY 10550

[ariswind.com/fuel-cell-mchp/](http://ariswind.com/fuel-cell-mchp/)

## Description

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Aris Energy Solutions is an industry leader in renewable, sustainable and efficient energy solutions for a wide range of Commercial, Industrial, Institutional and Residential Energy Projects. We supply advanced micro Combined Heat & Power solutions for building power using both solid oxide fuel cells and reciprocating engines, as well as an innovative and resilient wind/solar powered off-grid product for exterior lighting and telecom applications. Aris Energy Solutions develops and manages renewable energy projects that integrate our energy solutions with others' technologies for best results. The company was founded in 2013 and includes experienced executives from the digital economy, fuel cell & chemical engineering, world class logistics, and retail construction specialties. Aris Energy Solutions has established a CT sales office as a satellite to its NY headquarters/warehouse.

## Product / Process Info

### Product

#### **BlueGen Fuel Cell**

*BlueGEN is a micro CHP system (combined heat and power), based on fuel cell technology and optimised for maximum use and benefit of electricity, to supply small businesses, private households or public buildings with highly efficient power and heat.*

*Highest net electrical efficiency, up to 61% (AC output)*

*85% Total mCHP efficiency*

*Indoor, simple installation*

*Uses low pressure gas*

*Load following capabilities*



Commercially Available

## Focus

*Dexmet Corporation manufactures precision expanded metals, foils and polymers with exacting mechanical and electrical properties to meet very tight conductivity, weight and dimensional tolerances needed in electrochemistry applications. Our proprietary expansion process ensures high reproducibility leading to more consistent cell production and lower cost of quality. Dexmet Quality System is joint AS9100D & ISO 9001:2015 certified.*

## Key Contacts

**Steve Tucker**

Product Manager, Power Technologies  
203.294.7866  
s.tucker@dexmet.com

**John Hart**

Business Development Manager - Power  
203.294.7864  
j.hart@dexmet.com

**Ken Burt**

Sales and Marketing Director  
203.294.7862  
k.burt@dexmet.com

**Eric Toro**

Marketing Specialist  
203.294.7882  
e.toro@dexmet.com

## Address / Web Site

22 Barnes Industrial Road South  
Wallingford, CT 06492  
[www.dexmet.com](http://www.dexmet.com)

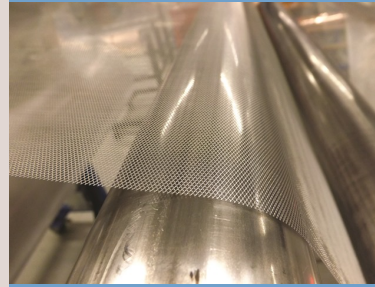
## Description

Dexmet is the premier manufacturer of MicroGrid® and PolyGrid® precision metal foils and polymers. Dexmet specializes in producing Ultra-thin, lightweight expanded materials available in a wide variety of sizes and patterns to meet electrical, strength, and bonding characteristics required in both fuel cell and battery technologies. Our specifically built expanding machines are designed to provide an open area product from .001" (.025 mm) thickness up to .060" (1.5 mm) with opening sizes ranging from .020" (.50 mm) up to .500" (13 mm). Dexmet's expanding process minimizes scrap and yields more material output than any other method of producing an open area product. This makes it more efficient and more cost effective than perforated foils, woven, and chemically etched materials when working with expensive materials like Niobium, Zirconium, Titanium, Silver and Nickels. Dexmet can also provide value added processing which include die cutting, solid intersperse, annealing, specialty coating. We have also developed a new corrugation process which provides a 3-D effect to the material. This process creates more surface area, increased strength, and increased overall thickness from thin raw material stock. This feature is great for anode or cathode materials, flow field, or support for gas diffusion layers.

## Product / Process Info

### Product

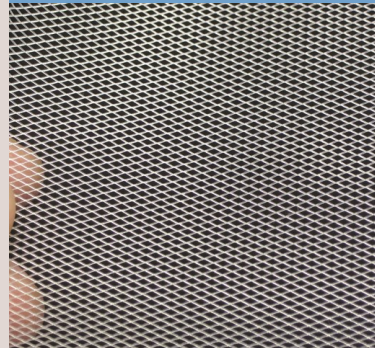
**Expanded Metals** - MicroGrid® precision expanded foils from Dexmet are used in fuel cells, batteries, ultra-capacitors and other electrochemical applications where an open area mesh, with high precision, mechanical and electrical properties are required. The expansion process can be conducted on most ductile metals, including Titanium, Nickel, Niobium, Stainless Steels, or we can work with your proprietary materials. Typical applications for this material are anode substrates, cathode collectors, flow fields, or as a support for a gas diffusion layer. Our corrugated products can be utilized in these areas to increase surface area, strength, thickness to provide better multi-directional flow.



Commercially Available

### Product

**Expanded Plastics** - PolyGrid® precision expanded polymers from Dexmet are used in applications requiring a polymer support layer with an open area. Other uses encompass the renewable energy market, or where a polymer mesh with high precision openings, mechanical strength, or physical compatibility is required. Expanded polymers are used as an alternative to a woven or extruded product where overall thickness and uniformity is critical when combining it with a membrane layer. Dexmet PolyGrid® is available in most polymers or we can work with proprietary materials. Dexmet produces the expanded polymers in a Class 10,000 Clean Room to ensure cleanliness.



Commercially Available



# Doosan Fuel Cell America, Inc.



## *Focus*

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Fuel cells, systems and applications - stationary

## *Key Contacts*

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### **David Giordano**

Government Relations and Business Development  
david.giordano@doosan.com

**Main Number:** 860.727.2200

**Sales:** 860.727.2253

## *Address / Web Site*

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195 Governors Hwy  
South Windsor, CT 06074  
[www.doosanfuelcellamerica.com](http://www.doosanfuelcellamerica.com)

## *Description*

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Doosan Fuel Cell America, Inc. is a fuel cell company founded on the strength of the people and technology developed at United Technologies over the past fifty years. In July 2014, Doosan Corporation acquired the assets of ClearEdge Power (formerly UTC Power). Doosan Fuel Cell America, Inc. is a global leader in providing clean, continuous-duty, cost-competitive stationary fuel cell energy systems. Our PureCell® systems operate 24/7 with high efficiency and ultra-low emissions, allowing our customers to generate their own electricity and heat onsite while reducing their utility expenses and environmental emissions. With over 11 million fleet operating hours, PureCell® systems have demonstrated unparalleled durability and reliability.

Doosan Fuel Cell America, Inc. is a subsidiary of Doosan Corporation, a global leader in infrastructure support and power generation equipment with annual revenues exceeding \$21 billion. Doosan Group companies include Bobcat Company (construction equipment), Doosan Skoda Power (steam turbines), and Doosan Babcock (engineering and services). Doosan employs over 3000 people in the United States, and 43,000 people in 38 countries worldwide.

## Product / Process Info

### Product

#### **PureCell Model 400 System**

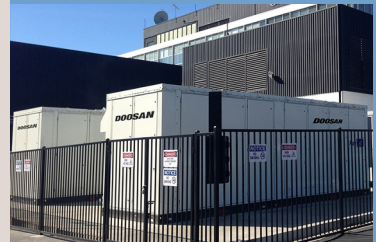
The scalable Doosan PureCell® Model 400 operates on natural gas, generating 460 kW of clean electricity and 1.7 million BTU/hour of useable heat. From single fuel cell applications for commercial buildings, to multi-fuel cell installations for data centers, industrial facilities, and microgrids to multi-unit installations, Doosan technical experts collaborate with clients and partners to produce efficient energy solutions.

Doosan Fuel Cell engineers, manufactures and tests each PureCell® System at its headquarters in Connecticut to ensure the utmost quality. The result is a remarkable 98% operational up-time and an unmatched fuel cell stack life of 10 years. Collectively, this means facilities can run cleaner, more efficiently and more reliably with Doosan Fuel Cells than with nearly any other energy alternatives.

Typical market sectors include supermarkets, hospitals, data centers, industrial, bottling plants, pharmaceutical, educational institutions, prisons, mixed-use office/residential, food-processing facilities, and other energy-intensive facilities with continuous baseload power and thermal energy requirements.



Commercially Available





**FuelCell Energy**

Ultra-Clean, Efficient, Reliable Power

## *Focus*

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FuelCell Energy, Inc. (NASDAQ: FCEL) is a global leader in delivering clean, efficient and affordable fuel cell solutions configured for the supply, recovery and storage of energy.

## *Key Contacts*

---

**Derek Phelps**

Director - Market /Project Development

860.982.6512

DPhelps@fce.com

## *Address / Web Site*

---

3 Great Pasture Rd.

Danbury, CT 06810

[www.fuelcellenergy.com](http://www.fuelcellenergy.com)

## *Description*

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FuelCell Energy, Inc. provides comprehensive turn-key solutions for our customers that include everything from the design and installation of a project to the long-term operation and maintenance of the fuel cell system. The global fleet of SureSource™ power plants spans three continents and is leading the industry with millions of megawatts of ultra-clean power produced. Utilizing state-of-the-art fuel cells, our SureSource plants provide environmentally responsible solutions for various applications such as utility-scale and on-site power generation, carbon capture, local hydrogen production for both transportation and industry, and long duration energy storage.

The complete line of carbonate SureSource™ products from FuelCell Energy delivers ultra-clean distributed power – efficiently and economically. These fuel cell solutions provide distinct advantages over other forms of distributed power generation. FuelCell Energy's SureSource™ products are providing ultra-clean baseload distributed generation to utilities, industrial operations, universities, municipal water treatment facilities, government installations and other customers around the world. The Company's power plants have generated more than one billion kilowatt hours of ultra-clean power using a variety of fuels including renewable biogas from wastewater treatment and food processing, as well as clean natural gas.

## Product / Process Info

### Product

#### **SureSource 1500™ – 1.4 Megawatts of Clean & Affordable Power**

*This solution is ideal for on-site power generation for large installations requiring continuous power and value high-quality heat for facility heating and/or absorption chilling. The system is suitable for a wide range of applications, including wastewater treatment plants, manufacturing facilities, hospitals and universities. Featuring ultra-low emissions, quiet operation and minimal space requirements (about the size of a tennis court), the SureSource 1500 is suitable for locations where combustion-based traditional power generation technologies are not feasible or desirable such as next to buildings or in space-constrained urban locations*



Commercially available

### Product

#### **SureSource 3000™ – 2.8 Megawatts of Continuous Power**

*Comprised of two 1.4 megawatt (MW) modules, the SureSource 3000 generates 2.8 MW of ultra-clean power. Similar to the SureSource 1500, the system is well-suited for on-site applications and caters to customers with an even greater power load requirement. Ideal applications include large universities, manufacturing facilities, wastewater treatment plants, or for multi-plant fuel cell parks to support the electric grid.*

*Benefits*

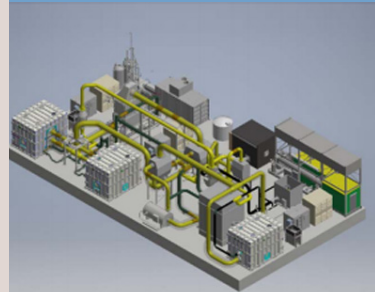


Commercially available

### Product

#### **SureSource 4000™ – 3.7 Megawatts of Highly Efficient Power**

*The SureSource 4000 is the largest in the SureSource power plant fleet and generates 3.7 megawatts (MW) of ultra-clean power with an industry-leading electrical efficiency of approximately 60%. This enhanced-efficiency fuel cell system is designed for utilities, large industrial users, data centers, and other customers focused on clean and affordable power driven by the benefits and economics of high system electrical efficiency. This 3.7 megawatt configuration adds a third module that utilizes unused fuel from the other two modules that would normally generate heat and converts this fuel to electricity to produce additional power.*



Commercially available

## Focus

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Fuel cell systems for demanding aerospace, defense and commercial applications.

## Key Contacts

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**William Smith**  
President  
860.688.6500  
wsmith@infinityfuel.com

**Bob Byron**  
Business Development  
860.688.6500  
rbyron@infinityfuel.com

## Address / Web Site

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431A Hayden Station Rd  
Windsor, CT 06095  
www.infinityfuel.com

## Description

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Since our founding in 2002, Infinity has focused many years of combined military and space fuel cell experience designing the next generation of air-independent fuel cells and regenerative fuel cells. With the support of NASA and several other US government agencies, we have achieved key breakthroughs in fuel cell design that have significantly reduced the complexity of these systems and dramatically improved performance and reliability.

Infinity's core technology for fuel cells, electrolyzers, and regenerative systems is Proton Exchange Membrane (PEM) technology. The technology employs a solid polymer membrane as the system electrolyte. This unique material works like battery acid but is inert and safe to touch while functioning to transport hydrogen ions or protons to enable either electrolysis or fuel cell reactions.

Complementing our Power At Any Altitude® paradigm will be the introduction of ultra lightweight fuel cell systems for low altitude unmanned aircraft, including small drones. This lightweight, high power density approach can also be utilized in powering high intensity non-traditional weapons systems.

## Product / Process Info

### **Product - Fuel Cell Power** **XPS Extreme Power System**

Infinity's award-winning Advanced Passive Water Removal (APWR) fuel cells are a major breakthrough in air-independent fuel cell design and performance. Passive water removal enabled NASA to fit a compact and simple balance of plant directly to the cell stack end plates. Each of the patented all-metal bonded cells in this stack has four integrated chambers joined into a single leak-tight assembly.

**XPSL Extreme Power System Lightweight**  
Infinity's newest power solution builds upon the achievements of the standard XPS series while reducing overall mass and volume.



Commercially available

### **Product - Hydrogen Generation** **HyGen**

Infinity's High pressure PEM electrolyzers have been developed for integration into XStorra® regenerative fuel cell systems or other applications requiring hydrogen fuel. Employing Infinity's patented all-bonded metal cell structure concept, stacks have been developed to generate hydrogen at greater than 2,000 psi (138 bar). Stacks are designed for differential pressure operation with oxygen generation at ambient pressure for safety and simplification of the balance of plant. ed high pressure storage systems for the US military.



Commercially available

### **Product - Regenerative Energy** **XStorra® Extreme Energy Storage and Power Delivery**

Infinity's XSTORRA® Regenerative Fuel Cell System combines power generation and energy storage for remote locations. This system consists of one module housing a hydraulically actuated fold-out solar array and a second module containing a hydrogen generator, fuel cell, and hydrogen storage. The solar array produces 5 kW of power output while leveraging excess solar power production to generate hydrogen via electrolysis. This hydrogen is stored for later use in the fuel cell, providing 5 kW of power during cloudy or nighttime periods. In addition, hydrogen can be utilized for automotive refueling/recharging as well as refilling hydrogen powered drones.



Commercially available





## *Focus*

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Nel Hydrogen is a global leader in hydrogen production equipment and integrated hydrogen system solutions.

## *Key Contacts*

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**Stephen Szymanski**  
Director of Business Development  
203.678.2338  
sszymanski@nelhydrogen.com

**Main:** 203-678-2000  
**Customer Service:** 203-949-8697

## *Address / Web Site*

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10 Technology Drive,  
Wallingford, CT 06492  
[www.nelhydrogen.com](http://www.nelhydrogen.com)

## *Description*

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Nel Hydrogen is a global, dedicated hydrogen company, delivering optimal solutions to produce, store and distribute hydrogen from renewable energy. We serve industries, energy and gas companies with leading hydrogen technology. Since its foundation in 1927, Nel has a proud history of development and continual improvement of hydrogen plants. Our hydrogen solutions cover the entire value chain from hydrogen production technologies to manufacturing of hydrogen fueling stations, providing all fuel cell electric vehicles with the same fast fueling and long range as conventional vehicles today.

With more than 3,500 reliable and cost effective electrolyzers installed around the globe, Nel Hydrogen is the recognized industry leader in PEM and alkaline water electrolyzers. Nel's sustained R&D efforts have contributed to continual improvement of electrolyzer technology, setting performance benchmarks in the markets we serve. Our electrolysis technology today is widely respected for its robustness, reliability, and energy efficiency. Our equipment solutions offer a superior choice for power plants, material processing, and various power-to-gas applications, in a range of product configurations, from kW to multi-MW in power capacity.



## Product / Process Info

### Product

#### **H Series and C Series Proton PEM® Electrolyzers**

The H Series and C Series electrolyzers utilize Proton PEM® Technology to produce ultra high purity hydrogen consistently on-site. With efficiency by design, they sense demand and adjust production accordingly. Replacing the need for tube trailers, the generators are space-saving solutions that maintain quiet and steady operation. They can provide a range of hydrogen outputs from 2 to 30 Nm<sup>3</sup>/hr.



Commercially available

### Product

#### **M Series Proton PEM® Electrolyzers**

The M Series systems utilize Proton PEM® Technology to produce high volume hydrogen consistently on-site. These electrolyzers provide fast response times and production flexibility for both variable process demands and dynamic power profiles. Featuring a scalable modular design, these systems are turnkey solutions that are well-suited for a variety of industrial and renewable energy applications for outputs from 100 to 4000 Nm<sup>3</sup>/hr.

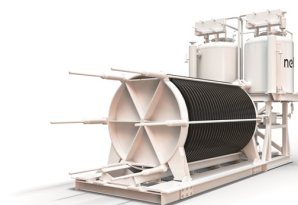


Commercially available

### Product

#### **A Series Alkaline Electrolyzers**

The A Series represents the most reliable and efficient electrolyzers in the world. Our modular concept enables us to deliver customized indoor hydrogen solutions for any application, configuration and size – anywhere. Nel tailors each delivery to any customer requirement, from complete installation of the entire electrolyzer plant, to delivery of specific modules according to customer preferences. The A Series enables grid scale applications in the 10's to 100's of MW of power capacity.



Commercially available

### Product

#### **H2Station®**

H2Station® is the new generation fast 70MPa fueling of Fuel Cell Electric Vehicles (FCEV). Compared with its market leading predecessor, fueling capacity is up three times greater, at one third of the space, enabling installation at even compact gas stations. The peak dispensing capacity of up to 100kg in 3 hours, allows a flexible scaling of capacity as demand grows. Storage can be dimensioned to address a fueling demand of up to 200kg per day for cars, up to 500kg per day for buses and trucks, and configurable for any hydrogen supply source.



Commercially available

# Precision Combustion, Inc.



## *Focus*

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Develops and manufactures catalyst-based clean energy products and systems, including ultra-compact high efficiency fuel processors and components for fuel cells, engines and distributed hydrogen production.

## *Key Contacts*

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### **Kevin Burns**

President

203.287.3700 ext. 213

[kburns@precision-combustion.com](mailto:kburns@precision-combustion.com)

### **Tony Anderson**

Marketing and Business Development

203.287.3700 ext. 290

[aanderson@precision-combustion.com](mailto:aanderson@precision-combustion.com)

## *Address / Web Site*

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410 Sackett Point Road

North Haven, CT 06473

[www.precision-combustion.com](http://www.precision-combustion.com)

## *Description*

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Precision Combustion, Inc. (PCI) is an energy innovator developing and manufacturing components and systems for clean and efficient power generation, combustion, emissions control and chemical manufacturing applications. The company is developing ultra-compact, high efficiency Microlith® catalytic reactors for a range of applications, including fuel reforming, fuel processing, fuel cell systems, burners, engine efficiency improvement and exhaust cleanup, and specialty applications and we have world-leading technology for ultra-low NOx catalytic combustors for gas turbine engines and steam generation applications.

We put the fuel in fuel cells®

## Product / Process Info

### Product

#### **Microlith® Fuel Processor and Fuel Reformer Systems**

PCI is developing integrated fuel processor systems to enable fuel cells to operate using a wide range of available fuels ranging from gases (e.g. methane and propane) to conventional liquid fuels (diesel, gasoline and military logistics fuels including JP-8, JP-5, and Jet A) to alternative and unconventional liquid fuels such as biofuels and waste hydrocarbons recovered from industrial processes (e.g. paint solvents).

PCI is developing a range of reactors for its fuel processor systems and the fuel cell industry which have been tested in prototype integrations with fuel cell stacks. These include fuel reforming reactors (e.g. autothermal reforming, partial oxidation, steam reforming reactors (for methane and desulfurized diesel), water gas shift reactors, selective CO preferential oxidation reactors (PROX), desulfurizers, and anode gas oxidizers.

### Product

#### **Fuel Cell System Oxidizer**

PCI has developed three different oxidation technologies to add value to fuel reformers and fuel cell systems. Our inerting burners ensure that hydrogen left in the system is safely oxidized prior to startup to prevent potentially dangerous system startup failure. PCI's fuel reformer start burners use unique catalytic technology to effectively provide appropriate levels of preheat for efficient fuel reforming. This technique can be extremely effective when preparing more traditional fuels such as diesel for fuel cell use. PCI's anode gas oxidizer safely and reliably oxidizes the remaining fuel from the anode exhaust of a fuel cell stack. The heat from this burner can then be used to preheat air entering the system, maximizing efficiency.

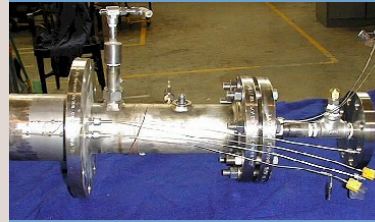
### Product

#### **RCL® Technologies**

Rich Catalytic Lean (RCL®) burn catalytic combustion is PCI's patented Solution for a near single digit ppm NOx combustor approach for gas turbines. Our systems enable high combustion stability over a wide operating range And from micro turbine operating conditions up through F-class firing temperatures. The rich reactor chemistry enables start-up and operation at relatively low temperatures. The lower operating temperature and rich kinetics supports long catalytic surface life, leads to controllable catalytic reactions, and enables broad fuel flexibility with even highly reactive hydrogen-containing fuels.



Customized to optimize performance for a customer's fuel cell system



Customized to optimize performance for a customer's fuel cell system



Commercially available

# R&D Dynamics Corporation



## *Focus*

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Designs, develops and manufactures oil/-free, foil air/gas bearing supported turbomachinery and associated systems for cutting edge applications.

## *Key Contacts*

---

Niraj Hundiwale  
Business Development  
860.726.1204 ext 347  
nirajh@rddynamics.com

John Vandermeer  
Business Development  
860.726.1204 ext 310  
johnv@rddynamics.com

Customer Support: 860.726.1204

## *Address / Web Site*

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R&D Dynamics Corporation  
49 West Dudley Town Road  
Bloomfield, CT 06002

[www.rddynamics.com](http://www.rddynamics.com)

## *Description*

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R&D Dynamics Corporation is a world class center for research and the design, development and production of reliable, affordable, energy efficient, oil-free turbomachinery supported by foil air/gas bearings, and associated systems for various aerospace and commercial applications. R&D Dynamics Corporation's line of oil-free, foil air/gas bearing supported turbomachinery offers unsurpassed reliability and efficiency. Affordable, compact, and light-weight, R&D Dynamics machines are ideal for aerospace, automotive, energy production, and a variety of industrial applications.

## Product / Process Info

### Product

#### **ThermoGen Organic Rankine Cycle System**

The ThermoGen ORC system generates emission free electricity from low grade waste heat. At its heart is an oil-free, reliable, high efficiency, foil gas bearing supported turboalternator. The high technology ThermoGen ORC converts waste heat from gas turbine exhaust, commercial ovens, diesel engines, fuel cells, and other industrial processes into valuable electric power. These systems are versatile and are designed to handle many different heat sources and have less than 4 years of payback.



Commercially available

### Product

#### **Turbocompressors**

R&D Dynamics designs, develops and manufactures oil-free, foil air bearing supported turbocompressors that are turbine-driven for various applications, including fuel cell system pressurization, aircraft turbochargers, and turbochargers for automobiles and trucks.



Commercially available

### Product

#### **Motor Driven Blowers and Compressors**

R&D Dynamics designs, develops, and produces high speed motor driven compressors and blowers for a variety of applications. Blower (pressure ratio  $<2.0$ ) and compressors (pressure ratio  $>2.0$ ) range in size from 700 watts to over 700 kW, all using oil-free foil air/gas bearings for a long service life.

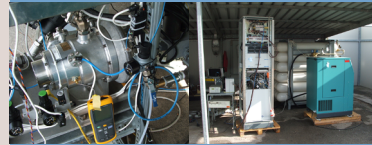


Commercially available

### Product

#### **Turboalternators**

R&D Dynamics designs, develops and manufactures a line of high speed, foil air/gas supported turboalternators, ranging in size from less than 5 kW to 400 kW, for a variety of applications. Turboalternators enable the efficient conversion of the stored energy in a process gas to electric power.



Commercially available

### Product

#### **Wastewater Treatment Blowers**

R&D Dynamics designs, develops and manufactures a line of high speed, foil air/gas supported turboblowers, for wastewater treatment aeration system. The Turboblowers are 25% more efficient than traditional blowers enabling lower operating costs for the treatment plants and have less than 2 years of payback.



Commercially available

Focus

*Developer and manufacturer of innovative products based on a proprietary, low-cost, large format electrochemical platform, that transforms waste gases and power into higher value forms.*

Key Contacts

**Dr. Trent Molter**  
President & CEO  
860.652.9690  
tmolter@skyre-inc.com

**Nancy Selman**  
VP Business Development  
860.652.9690  
nselman@skyre-inc.com

Address / Web Site

111 Roberts St., Suite J  
East Hartford, CT 06108  
[www.skyre-inc.com](http://www.skyre-inc.com)

Description

Skyre , Inc. was founded in 2007 by Dr.Trent Molter to develop and manufacture innovative clean energy products that deliver breakthrough efficiency and are socially responsible, to the economic benefit of companies and ongoing sustainability of the world. Skyre's proven and patented, electro-chemical technology recycles H<sub>2</sub> and upcycles CO<sub>2</sub> into high-value fuels and chemicals.

Skyre (formerly Sustainable Innovations), is a company taking a world smart approach to securing our future by catalyzing change in global energy usage. As a prime mover of the next resource and energy movement, we build and sell products for H<sub>2</sub>, energy and CO<sub>2</sub> transformation markets, reducing emissions by 50% and saving customers 50% over competitive methods and products.



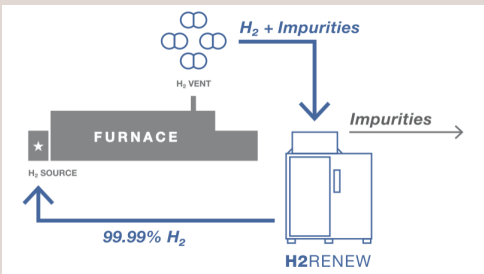
# Product / Process Info

## Product

**H2RENEW™** is an advanced electrochemical hydrogen separator and compressor (EHS&C) that can purify low quality hydrogen from process waste and other sources and compress it to high pressures for convenient, compact storage. This is done using Skyre's proprietary electrochemical cell architecture that can be constructed in modular form to address a variety of required capacities.

## Applications:

- Hydrogen Recycling
- Hydrogen Compression
- Hydrogen-Helium Separation



Commercially Available

## Product

**CO2RENEW™** produces hydrocarbon fuels and commodity chemicals from waste carbon dioxide electrochemically. Our process generates alcohols and organic acids, on-site, from waste carbon dioxide, at one-half of the cost of conventional means. Skyre's carbon-neutral system will derive carbon dioxide from waste gas and create high value products using electricity from renewables.

## Applications:

- Carbon Capture/Utilization
- CO<sub>2</sub> to Fuels
- CO<sub>2</sub> to Chemicals



In Development



## Focus

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US Hybrid specializes in the design and manufacturing of zero emission powertrain components for electric, hybrid, and fuel cell medium and heavy-duty municipality vehicles, commercial trucks, buses, and specialty vehicles throughout the world.

## Key Contacts

---

**Abas Goodarzi, Ph.D., P.E.**

President, CEO  
310.212.1200  
Abas@ushybrid.com

**Michael Harrington**

Chief Engineer  
860.338.4392  
michaelharrington@ushybrid.com

## Address / Web Site

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175 Governor's Hwy  
South Windsor, CT 06074

445 Maple Ave  
Torrance, CA 90503-3807

[www.ushybrid.com](http://www.ushybrid.com)

## Description

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US Hybrid's products have been used in many OEM commercial vehicles worldwide, including transit systems and trucks with millions of accumulated kilometers of operation. US Hybrid's powertrain powers battery and fuel cell drayage trucks for the Port of Los Angeles and Long Beach, fuel cell powered street sweepers for Caltrans, transit buses in California and Hawaii, monorails, mining trucks, and hybrid street sweepers for the New York Department of Sanitation, and many vehicles globally for the US military.

US Hybrid has been developing and deploying electric, hybrid, and fuel cell vehicles over decades, as well as designing, developing and manufacturing electric powertrain and fuel cell engines for medium and heavy-duty fuel cell commercial buses and trucks OEM. US Hybrid powertrain components are designed for commercial MD/HD vehicle operation environments and are incorporated to simplify vehicle integration, operation, diagnostics, service and maintenance, and are J1939 CAN command, control and diagnostics compliances. US Hybrid is at the forefront of the zero emission transportation industry providing the most value to our customers and partners globally.

US Hybrid is an ISO 9001:2015 and ISO 14001:2015 registered company. US Hybrid products are designed to meet customer's application requirements and standards, including: ISO, SAE, UL, FCC, NEBS, and MIL-STD compliance.



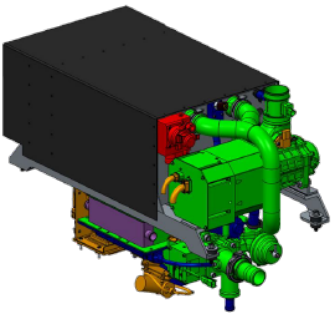
# Product / Process Info

## Product

### FCe™ 40 Fuel Cell Engine

The 40kW Fuel Cell engine is our most robust engine with 20 kW/sec transient power capabilities offering a fully integrated freeze capable system with a rapid startup design and industry leading power density specifically designed for medium duty, shuttle bus, port trucks, GSE, ports and logistics equipment and off-road applications.

Power	5-40 kW
Efficiency†	56.9 to 46.3% (10% to full power)
Fuel Type	SAE J2719 Hydrogen
Inlet Temperature	-30 C to 57 C (50/50 WEG)
Dimensions	993 x 534 x 692 mm
Weight	160 kg



Commercially Available

## Product

### FCe™ 80 Fuel Cell Engine

The 80 kW Fuel Cell engine is our most robust engine with 40 kW/sec transient power capabilities offering a fully integrated freeze capable system with a rapid startup design and industry leading power density specifically designed for medium and heavy duty, transit bus, drayage trucks, ground support equipment, ports and logistics equipment and off-road applications.

Power	80 kW
Efficiency†	56.9 to 46.3% (10% to full power)
Fuel Type	SAE J2719 Hydrogen
Inlet Temperature	-30 C to 57 C (50/50 WEG)
Dimensions	916 x 879 x 614 mm
Weight	248 kg



Commercially Available

## Product

**FCe™ 150 Fuel Cell Engine** - The 150kW fuel cell engine is purposed-built for medium and heavy-duty fuel cell vehicles. The fast power transient capabilities make this electric engine ideal for transit, articulated buses, streetcars, light rail, drayage and specialty vehicles, Logistics equipment and off-road applications with industry leading durability of over 20,000 hours.

Peak Power	150 kW
Efficiency†	54 to 46% (10% to full power)
Fuel Type	SAE J2719 Hydrogen
Inlet Temperature	2 C to 72 C (50/50 WEG)
Dimensions	1465 x 890 x 506 mm
Weight	474 kg



Commercially Available



***Connecticut Center for  
Advanced Technology, Inc.***

*For more information, please contact:*

Connecticut Center for Advanced  
Technology, Inc.

222 Pitkin Street - Suite 101

East Hartford, CT 06108

860.291.8832

[www.ccat.us](http://www.ccat.us)

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**Connecticut<sup>®</sup>**

Department of Economic and  
Community Development

