



US Fuel Cell Council

Fuel Cell Summit IV

May 11, 2000

Washington, DC

Gregory A. Dolan

Deputy Executive Director

Mission Statement

- ◆ The **U.S. Fuel Cell Council** is an industry association dedicated to fostering the commercialization of fuel cells in the United States. Membership is open to anyone with a commercial interest in fuel cells in the U.S., including manufacturers, suppliers, and end users. Members need not be U.S. based. Our membership encompasses all fuel cell types and major market segments.

Members

- ◆ 3M
- ◆ American Methanol Institute
- ◆ Avista Labs
- ◆ Ballard Generation Systems
- ◆ Chicago Transit Authority
- ◆ Conti Enterprises
- ◆ DaimlerChrysler
- ◆ Dana Commercial Credit
- ◆ Delphi Automotive Systems
- ◆ DuPont Fluoroproducts
- ◆ Energy Partners
- ◆ Ford Motor Company
- ◆ Freudenberg-NOK
- ◆ FuelCell Energy Inc.
- ◆ GE Micro Generation
- ◆ H-Power
- ◆ Honeywell
- ◆ Hydrogenics Corporation
- ◆ IdaTech

Members cont.

- ♦ International Fuel Cells/ONSI
- ♦ Motorola Labs
- ♦ Nextek Power Systems, Inc.
- ♦ Nissan Technical Center
- ♦ Plug Power
- ♦ Renewable Fuels Association
- ♦ SGL Carbon Corp.
- ♦ Siemens Westinghouse
- ♦ Texaco Energy Systems
- ♦ W.L. Gore
- ♦ World Fuel Cell Council
- ♦ Abacus Controls
- ♦ California Air Resources Board
- ♦ Dow Corning Corp.
- ♦ Eaton Corporation
- ♦ Enable Fuel Cell Corp.
- ♦ Elf Autochem North America
- ♦ Exergy Inc.
- ♦ Houston Advanced Research Center
- ♦ National Fuel Cell Research Center
- ♦ SOCA
- ♦ South Coast Air Quality Management District

Working Group 2000 Activities

- ◆ Codes and Standards
- ◆ Transportation
- ◆ Power Generation
- ◆ Education and Outreach
- ◆ Portable Power

Codes and Standards

- ◆ Transportation Codes & Standards Work -
 - SAE Fuel Cell Standards in Progress
 - USFCC Glossary used as a basis document
- ◆ ANSI Z21.83 Update Revision
 - Led by Kelvin Hecht
 - Draft Due Out by June
- ◆ IEC TC105 Participation
 - USFCC Glossary used as a basis document
- ◆ NES Evaluation Protocol being pursued by Dave Conover
 - Members encouraged to comment

Codes and Standards

- ◆ NFPA 853
 - Approval Expected in May
- ◆ IEEE P1574 - Interconnection Standards
 - Draft out in 2001 (or earlier)
- ◆ NEC / NFPA 70 Proposed Article 691
 - Submitted by Ken Krastins and Plug Power
 - Out for Public Comment through October
- ◆ ASME PTC50
 - Draft Possible by November

Codes and Standards

- ◆ NARUC Distributed Generation Study
 - Report Issued “in a vacuum”.
 - Did not consider re-regulated utilities.
- ◆ California PUC DG Rulemaking
 - Interconnection Standard Being Written
 - Final Draft Due in June
- ◆ State Interconnection Standards
 - New York, Texas
- ◆ Consider Interconnect-4 in 2000
 - Inverter Issues
 - “Getting the word out” on IEEE P1547

Transportation

- ◆ SAE Standards - Automotive FC Systems
- ◆ Automotive Fuel Cell Glossary
 - Fuel Cell Glossary Starting Point
 - Completed by Bob Wichert and provided to SAE
- ◆ USFCC Transportation Brochure
- ◆ Tour Del Sol participation

Power Generation

- ◆ **First Market Characterization Studies**
 - **Developer Owned Fuel Cell Business Case**
 - **Residential Systems of approximately 3 - 50 kW**
 - **Commercial Systems of approximately 200 - 350 kW**
 - **Commercial Systems of approximately 1,000 - 2,500 kW**
 - **48 Volt DC Systems for powering telephone systems, fiber optic systems, and switchgear at up to 250 kW**
 - **????? Volt DC Lighting Systems for Commercial and Industrial Use**
 - **Utilize Life-Cycle Costing**
 - **Take all costs into account**

Power Generation

- ◆ Second Market Characterization Study
 - Developer Owned Distribution Systems
 - ◆ **Similar analyses could be applied to distribution systems, with fuel cell power. This might be a second study.**

Power Generation

- ◆ **Third Potential Market Characterization Study**
 - **Marine Based Power Systems**
 - ◆ **Power Generation Working Group met with the Maritime Administration Agency on August 27, 1998, following the U.S. Fuel Cell Council Board of Directors meeting.**
 - ◆ **There is a marine applications market study underway sponsored by the US Maritime Administration Agency and funded by the U.S. Coast Guard.**

Education and Outreach

- ◆ Develop and Disseminate Education & Outreach Tools
 - Glossary and Common Terms Guidebook
 - Joan Bartelt (Codes & Standards Working Group)
 - Fuel Cell Workshops and Strategic Briefings
 - Denver, Colorado
 - Educational Web Pages
 - Kim Bergland
 - Media Guide
 - Greg Dolan, Kristy Paulsen

Education and Outreach

◆ Identify Key Audiences

- Key Contact Data Base
 - Listing of who has called and questions asked
- University/National Lab Leaders
 - Dennis Curtin / Pinakin Patel
- Government/Regulatory/NGO Opinion Leaders /
News Media / General Public

Education and Outreach

- ◆ 2000 Conferences (Goal was four)
 - Houston Energy Expo - March
 - National Rural Electric Cooperative Annual Meeting - March
 - Earth Day (Shared with Fuel Cells 2000) – April
 - Waste Water Forum (WEFTEC) - October
 - 2000 Fuel Cell Seminar (Portland, OR) - October
 - DOE Fuel Cell Seminar - November

Education and Outreach

- ◆ 2000 Conferences (Goal was four)
 - California Alliance for Distributed Energy Resources
 - Tour Del Sol – Washington - May
 - Tour Del Sol – Maryland - May



Portable Power



- 
- ◆ Definition of Portable Power Systems
 - ◆ Fuel Feasibility Studies
 - ◆ Fuel Transportation Issues

Contact

Gregory A. Dolan
Deputy Executive Director
US Fuel Cell Council
202-293-5500
Gdolan@usfcc.com
www.usfcc.com