
XV. Project Listings by State

Alabama

- III.1 University of Alabama: Fatigue Performance of High-Strength Pipeline Steels and Their Welds in Hydrogen Gas Service

Arizona

- II.C.1 Arizona State University: High Efficiency Solar Thermochemical Reactor for Hydrogen Production

Arkansas

- V.B.6 University of Arkansas at Little Rock: High Performance Polymer Electrolyte Membrane Fuel Cell Electrode Structures

California

- II.B.8 Palo Alto Research Center: Multi-Scale Ordered Cell Structure for Cost Effective Production of Hydrogen by HTWS
- II.C.1 Sandia National Laboratories: High Efficiency Solar Thermochemical Reactor for Hydrogen Production
- II.C.1 Stanford University: High Efficiency Solar Thermochemical Reactor for Hydrogen Production
- II.D.2 Lawrence Livermore National Laboratory: Wide Bandgap Chalcopyrite Photoelectrodes for Direct Solar Water Splitting
- II.D.2 Stanford University: Wide Bandgap Chalcopyrite Photoelectrodes for Direct Solar Water Splitting
- II.D.3 California Institute of Technology: Tandem Particle-Slurry Batch Reactors for Solar Water Splitting
- II.D.3 Lawrence Berkeley National Laboratory: Tandem Particle-Slurry Batch Reactors for Solar Water Splitting
- II.D.3 University of California, Irvine: Tandem Particle-Slurry Batch Reactors for Solar Water Splitting
- II.F.1 University of California, Irvine: Tailoring Hydrogen Evolution Reaction (HER) Catalysts for Operation at Specific pH Values
- II.F.2 University of Southern California: Hybrid Perovskites and Non-Adiabatic Dynamics Simulations: Catching Realistic Aspects of the Charge Recombination Process
- III.1 Sandia National Laboratories: Fatigue Performance of High-Strength Pipeline Steels and Their Welds in Hydrogen Gas Service
- III.10 Lawrence Livermore National Laboratory: Liquid Hydrogen Infrastructure Analysis
- III.13 Sandia National Laboratories: Metal Hydride Compression
- III.16 Sandia National Laboratories: Reference Station Design, Phase II
- III.3 Structural Integrity Associates, Inc.: Low Cost Hydrogen Storage at 875 bar Using Steel Liner and Steel Wire Wrap
- IV.C.1 Sandia National Laboratories: HyMARC (Core): SNL Effort
- IV.C.2 Lawrence Livermore National Laboratory: HyMARC (Core): LLNL Effort
- IV.C.3 Lawrence Berkeley National Laboratory: HyMARC (Core): LBNL Effort
- IV.C.6 Lawrence Berkeley National Laboratory: HyMARC (Support): LBNL Effort
- IV.C.7 HRL Laboratories, LLC: HyMARC Seedling: Electrolyte Assisted Hydrogen Storage Reactions
- IV.C.7 Liox Power, Inc.: HyMARC Seedling: Electrolyte Assisted Hydrogen Storage Reactions
- IV.C.12 Lawrence Livermore National Laboratory: Improving the Kinetics and Thermodynamics of $\text{Mg}(\text{BH}_4)_2$ for Hydrogen Storage
- IV.C.12 Sandia National Laboratories: Improving the Kinetics and Thermodynamics of $\text{Mg}(\text{BH}_4)_2$ for Hydrogen Storage
- IV.C.14 California Institute of Technology: Design and Synthesis of Materials with High Capacities for Hydrogen Physisorption
- IV.C.17 Ardica Technologies, Inc.: Low-Cost α -Alane for Hydrogen Storage
- IV.C.17 SRI International: Low-Cost α -Alane for Hydrogen Storage

California (Continued)

- IV.D.2 Materia, Inc.: Next Generation Hydrogen Storage Vessels Enabled by Carbon Fiber Infusion with a Low Viscosity, High Toughness Resin System
- IV.D.2 Spencer Composites Corporation: Next Generation Hydrogen Storage Vessels Enabled by Carbon Fiber Infusion with a Low Viscosity, High Toughness Resin System
- IV.D.3 Sandia National Laboratories: Development, Selection and Testing to Reduce Cost and Weight of Materials for BOP Components
- V.A.4 Lawrence Berkeley National Laboratory: Tailored High-Performance Low-PGM Alloy Cathode Catalysts
- V.B.1 Lawrence Berkeley National Laboratory: FC-PAD: Fuel Cell Performance and Durability Consortium
- V.B.2 Lawrence Berkeley National Laboratory: FC-PAD: Components and Characterization
- V.B.3 Lawrence Berkeley National Laboratory: FC-PAD: Electrode Layers and Optimization
- V.B.4 Lawrence Berkeley National Laboratory: Novel Ionomers and Electrode Structures for Improved PEMFC Electrode Performance at Low PGM Loadings
- V.C.7 Lawrence Berkeley National Laboratory: Advanced Ionomers and MEAs for Alkaline Membrane Fuel Cells
- VI.1 Alteryx: Fuel Cell Membrane Electrode Assembly Manufacturing R&D
- VI.1 Lawrence Berkeley National Laboratory: Fuel Cell Membrane Electrode Assembly Manufacturing R&D
- VI.2 National Fuel Cell Research Center: Clean Energy Supply Chain and Manufacturing Competitiveness Analysis for Hydrogen and Fuel Cell Technologies
- VII.A.3 Hydrogenics USA: Fuel Cell Hybrid Electric Delivery Van Project
- VII.B.1 Electricore, Inc.: Innovative Advanced Hydrogen Mobile Fueler
- VII.B.1 Manta Consulting: Innovative Advanced Hydrogen Mobile Fueler
- VII.B.1 Quong & Associates, Inc.: Innovative Advanced Hydrogen Mobile Fueler
- VII.B.3 Linde Gas, LLC: Performance Evaluation of Delivered Hydrogen Fueling Stations
- VII.B.4 Smart Chemistry: Hydrogen Component Validation
- VII.B.5 Linde LLC: Liquid Hydrogen Pump Performance and Durability Testing
- VII.B.5 Lawrence Livermore National Laboratory: Liquid Hydrogen Pump Performance and Durability Testing
- VII.B.5 Spencer Composites Corporation: Liquid Hydrogen Pump Performance and Durability Testing
- VII.C.2 Lawrence Berkeley National Laboratory: Integrated Systems Modeling of the Interactions between Stationary Hydrogen, Vehicles, and Grid Resources
- VII.C.3 Humboldt State University: Dynamic Modeling and Validation of Electrolyzers in Real-Time Grid Simulation
- VII.D.1 Lawrence Berkeley National Laboratory: H2@Scale Analysis
- VIII.2 Sandia National Laboratories: R&D for Safety, Codes and Standards: Materials and Components Compatibility
- VIII.3 Smart Chemistry: Hydrogen Fuel Quality
- VIII.4 Sandia National Laboratories: R&D for Safety, Codes and Standards: Hydrogen Behavior
- VIII.6 City of Santa Fe Springs: Hydrogen Safety Panel, Safety Knowledge Tools and First Responder Training Resources
- VIII.6 Santa Monica Fire Department: Hydrogen Safety Panel, Safety Knowledge Tools and First Responder Training Resources
- VIII.9 Sandia National Laboratories: Compatibility of Polymeric Materials Used in the Hydrogen Infrastructure
- VIII.11 Business Council on Climate Change: Advancing Fuel Cell Electric Vehicles in San Francisco and Beyond
- VIII.11 City and County of San Francisco: Advancing Fuel Cell Electric Vehicles in San Francisco and Beyond
- VIII.11 Frontier Energy: Advancing Fuel Cell Electric Vehicles in San Francisco and Beyond
- VIII.11 Newcomb Anderson McCormick: Advancing Fuel Cell Electric Vehicles in San Francisco and Beyond
- IX.4 Sandia National Laboratories: Hydrogen Analysis with the Sandia ParaChoice Model
- X.3 Sandia National Laboratories: Maritime Fuel Cell Generator Project
- X.6 US Hybrid: Northeast Demonstration and Deployment of FCRx200

Colorado

- II.A.1 National Renewable Energy Laboratory: Analysis of Advanced H₂ Production Pathways
- II.B.1 National Renewable Energy Laboratory: Renewable Electrolysis Integrated Systems Development and Testing
- II.B.1 Spectrum Automation Controls: Renewable Electrolysis Integrated Systems Development and Testing
- II.B.2 National Renewable Energy Laboratory: High-Performance, Long-Lifetime Catalysts for Proton Exchange Membrane Electrolysis
- II.C.1 Colorado School of Mines: High Efficiency Solar Thermochemical Reactor for Hydrogen Production
- II.C.2 National Renewable Energy Laboratory: Flowing Particle Bed Solarthermal Redox Process to Split Water
- II.C.2 University of Colorado Boulder: Flowing Particle Bed Solarthermal Redox Process to Split Water
- II.D.1 National Renewable Energy Laboratory: High-Efficiency Tandem Absorbers for Economical Solar Hydrogen Production
- II.D.2 National Renewable Energy Laboratory: Wide Bandgap Chalcopyrite Photoelectrodes for Direct Solar Water Splitting
- II.E.1 National Renewable Energy Laboratory: Biomass to Hydrogen (B2H₂)
- II.F.4 National Renewable Energy Laboratory: Mechanistic Investigations on Hydrogen Catalysis by [FeFe]-Hydrogenase
- II.F.5 National Renewable Energy Laboratory: Bioenergetics of Photosynthetic Energy Transduction: Control of Pathways through Redox Biochemistry
- III.5 National Renewable Energy Laboratory: Improved Hydrogen Liquefaction through Heisenberg Vortex Separation of para- and ortho-hydrogen
- III.7 National Renewable Energy Laboratory: 700 bar Hydrogen Dispenser Hose Reliability and Improvement
- III.7 Spectrum Automation Controls: 700 bar Hydrogen Dispenser Hose Reliability and Improvement
- III.8 National Renewable Energy Laboratory: Cryogenically Flexible, Low Permeability H₂ Delivery Hose
- III.11 National Renewable Energy Laboratory: Electrochemical Compression
- III.14 National Renewable Energy Laboratory: Advancing Hydrogen Dispenser Technology by Using Innovative Intelligent Networks
- III.15 National Renewable Energy Laboratory: H₂FIRST Consolidation
- IV.B.1 National Renewable Energy Laboratory: Hydrogen Storage System Modeling: Public Access, Maintenance, and Enhancements
- IV.C.4 National Renewable Energy Laboratory: HyMARC (Support): NREL Effort
- IV.C.4 Thesis Corporation: HyMARC (Support): NREL Effort
- IX.5 National Renewable Energy Laboratory: Sustainability Analysis: Hydrogen Regional Sustainability (HyReS)
- IX.6 National Renewable Energy Laboratory: Hydrogen Financial Analysis Scenario Tool (H2FAST) Updates with Analysis of 101st Station
- IX.7 National Renewable Energy Laboratory: Regional Supply of Hydrogen
- IX.11 National Renewable Energy Laboratory: Resource Availability for Hydrogen Production
- V.A.1 National Renewable Energy Laboratory: ElectroCat (Electrocatalysis Consortium)
- V.A.6 ALD Nanosolutions: Extended Surface Electrocatalyst Development
- V.A.6 Colorado School of Mines: Extended Surface Electrocatalyst Development
- V.A.6 National Renewable Energy Laboratory: Extended Surface Electrocatalyst Development
- V.A.6 University of Colorado Boulder: Extended Surface Electrocatalyst Development
- V.A.8 National Renewable Energy Laboratory: Highly Accessible Catalysts for Durable High-Power Performance
- V.A.10 National Renewable Energy Laboratory: Regenerative Fuel Cell System (SBIR Phase II)
- V.A.15 Forge Nano: Highly Robust Low PGM MEAs Based upon Composite Supports (SBIR I)
- V.B.1 National Renewable Energy Laboratory: FC-PAD: Fuel Cell Performance and Durability Consortium
- V.B.2 National Renewable Energy Laboratory: FC-PAD: Components and Characterization
- V.B.3 National Renewable Energy Laboratory: FC-PAD: Electrode Layers and Optimization

Colorado (Continued)

- V.B.4 National Renewable Energy Laboratory: Novel Ionomers and Electrode Structures for Improved PEMFC Electrode Performance at Low PGM Loadings
- V.C.2 Colorado School of Mines: Advanced Hybrid Membranes for Next Generation PEMFC Automotive Applications
- V.C.2 National Renewable Energy Laboratory: Advanced Hybrid Membranes for Next Generation PEMFC Automotive Applications
- V.C.5 National Renewable Energy Laboratory: Highly Stable Anion Exchange Membranes for High-Voltage Redox-Flow Batteries
- V.C.7 Colorado School of Mines: Advanced Ionomers and MEAs for Alkaline Membrane Fuel Cells
- V.C.7 National Renewable Energy Laboratory: Advanced Ionomers and MEAs for Alkaline Membrane Fuel Cells
- V.D.3 National Renewable Energy Laboratory: Advanced Catalysts and Membrane Electrode Assemblies (MEAs) for Reversible Alkaline Membrane Fuel Cells
- V.E.3 National Renewable Energy Laboratory: Fuel Cell Technology Status: Degradation
- V.E.5 National Renewable Energy Laboratory: Fuel Cell Vehicle Cost Analysis
- VI.1 Colorado School of Mines: Fuel Cell Membrane Electrode Assembly Manufacturing R&D
- VI.1 National Renewable Energy Laboratory: Fuel Cell Membrane Electrode Assembly Manufacturing R&D
- VI.2 National Renewable Energy Laboratory: Clean Energy Supply Chain and Manufacturing Competitiveness Analysis for Hydrogen and Fuel Cell Technologies
- VI.6 National Renewable Energy Laboratory: In-line Quality Control of PEM Materials
- VI.7 National Renewable Energy Laboratory: Manufacturing Competitiveness Analysis for Hydrogen Refueling Stations
- VII.A.1 National Renewable Energy Laboratory: Fuel Cell Electric Vehicle Evaluation
- VII.A.2 National Renewable Energy Laboratory: Technology Validation: Fuel Cell Bus Evaluations
- VII.B.2 National Renewable Energy Laboratory: Hydrogen Station Data Collection and Analysis
- VII.B.4 National Renewable Energy Laboratory: Hydrogen Component Validation
- VII.B.4 Spectrum Automation Controls: Hydrogen Component Validation
- VII.B.6 National Renewable Energy Laboratory: Hydrogen Meter Benchmark Testing
- VII.B.6 Spectrum Automation Controls: Hydrogen Meter Benchmark Testing
- VII.C.1 National Renewable Energy Laboratory: Optimal Stationary Fuel Cell Integration and Control (Energy Dispatch Controller)
- VII.C.1 University of Colorado Boulder: Optimal Stationary Fuel Cell Integration and Control (Energy Dispatch Controller)
- VII.C.2 National Renewable Energy Laboratory: Integrated Systems Modeling of the Interactions between Stationary Hydrogen, Vehicles, and Grid Resources
- VII.C.3 National Renewable Energy Laboratory: Dynamic Modeling and Validation of Electrolyzers in Real-Time Grid Simulation
- VII.D.1 National Renewable Energy Laboratory: H2@Scale Analysis
- VIII.1 National Renewable Energy Laboratory: National Codes and Standards Development and Outreach
- VIII.7 Bloomfield Automation: NREL Hydrogen Sensor Testing Laboratory
- VIII.7 Element One: NREL Hydrogen Sensor Testing Laboratory
- VIII.7 National Renewable Energy Laboratory: NREL Hydrogen Sensor Testing Laboratory

Connecticut

- II.B.3 Proton OnSite: High Performance Platinum Group Metal Free Membrane Electrode Assemblies through Control of Interfacial Processes
- II.B.5 FuelCell Energy, Inc.: Solid Oxide Based Electrolysis and Stack Technology with Ultra-High Electrolysis Current Density (>3 A/cm²) and Efficiency

Connecticut (Continued)

- II.B.6 Proton OnSite: Economical Production of Hydrogen through Development of Novel, High Efficiency Electrocatalysts for Alkaline Membrane Electrolysis
- II.B.7 Proton OnSite: New Approaches to Improved PEM Electrolyzer Ion Exchange Membranes
- III.12 Sustainable Innovations, LLC: Hybrid Electrochemical Hydrogen/Metal Hydride Compressor
- V.A.15 Center for Clean Energy Engineering: Highly Robust Low PGM MEAs Based upon Composite Supports (SBIR I)
- V.A.3 eT2M: Innovative Non-PGM Catalysts for High-Temperature PEMFCs
- V.B.3 United Technologies Research Center: FC-PAD: Electrode Layers and Optimization
- V.B.6 United Technologies Research Center: High Performance Polymer Electrolyte Membrane Fuel Cell Electrode Structures
- V.C.3 FuelCell Energy, Inc.: Smart Matrix Development for Direct Carbonate Fuel Cell
- V.C.3 University of Connecticut: Smart Matrix Development for Direct Carbonate Fuel Cell
- VI.2 Connecticut Center for Advanced Technology: Clean Energy Supply Chain and Manufacturing Competitiveness Analysis for Hydrogen and Fuel Cell Technologies
- VII.C.4 FuelCell Energy, Inc.: Modular SOEC System for Efficient Hydrogen Production at High Current Density
- VIII.6 Proton OnSite: Hydrogen Safety Panel, Safety Knowledge Tools and First Responder Training Resources
- VIII.6 GWS Solutions of Tolland LLC: Hydrogen Safety Panel, Safety Knowledge Tools and First Responder Training Resources

Delaware

- V.A.6 University of Delaware: Extended Surface Electrocatalyst Development
- V.B.1 Ion Power Inc.: FC-PAD: Fuel Cell Performance and Durability Consortium
- V.B.1 University of Delaware: FC-PAD: Fuel Cell Performance and Durability Consortium
- V.B.2 Ion Power Inc.: FC-PAD: Components and Characterization
- V.B.6 Ion Power Inc.: High Performance Polymer Electrolyte Membrane Fuel Cell Electrode Structures
- V.C.5 University of Delaware: Highly Stable Anion Exchange Membranes for High-Voltage Redox-Flow Batteries

Florida

- IV.D.4 VENCORE Solutions and Services: Integrated Insulation System for Automotive Cryogenic Storage Tanks
- IV.D.4 Energy Florida: Integrated Insulation System for Automotive Cryogenic Storage Tanks
- IV.D.4 ITB Inc.: Integrated Insulation System for Automotive Cryogenic Storage Tanks
- IV.D.4 NASA: Integrated Insulation System for Automotive Cryogenic Storage Tanks
- VI.1 Mainstream Engineering: Fuel Cell Membrane Electrode Assembly Manufacturing R&D
- VI.6 Mainstream Engineering: In-line Quality Control of PEM Materials
- VII.C.3 Florida State University: Dynamic Modeling and Validation of Electrolyzers in Real-Time Grid Simulation
- VIII.6 Witte Engineered Gases: Hydrogen Safety Panel, Safety Knowledge Tools and First Responder Training Resources

Georgia

- II.B.6 Georgia Institute of Technology: Economical Production of Hydrogen through Development of Novel, High Efficiency Electrocatalysts for Alkaline Membrane Electrolysis
- II.E.2 University of Georgia: Sweet Hydrogen: High-Yield Production of Hydrogen from Biomass Sugars Catalyzed by in vitro Synthetic Biosystems
- IV.D.1 Center for Transportation and the Environment: Conformable Hydrogen Storage Coil Reservoir
- V.B.7 Georgia Institute of Technology: Fuel Cell Membrane Electrode Assemblies with Ultra-Low Pt Nanofiber Electrodes
- VI.1 Georgia Institute of Technology: Fuel Cell Membrane Electrode Assembly Manufacturing R&D

Georgia (Continued)

- VI.6 Georgia Institute of Technology: In-line Quality Control of PEM Materials
- VII.A.3 Center for Transportation and the Environment: Fuel Cell Hybrid Electric Delivery Van Project
- VII.A.3 United Parcel Service: Fuel Cell Hybrid Electric Delivery Van Project

Hawaii

- II.D.1 University of Hawaii: High-Efficiency Tandem Absorbers for Economical Solar Hydrogen Production
- II.D.2 University of Hawaii: Wide Bandgap Chalcopyrite Photoelectrodes for Direct Solar Water Splitting
- III.13 Hawaii Hydrogen Carriers LLC: Metal Hydride Compression
- IV.C.5 University of Hawaii at Manoa: HyMARC (Support): PNNL Effort
- IV.C.11 University of Hawaii at Manoa: HyMARC Seedling: Development of Magnesium Boride Etherates as Hydrogen Storage Materials
- V.D.1 Hawaii Natural Energy Institute: Novel Structured Metal Bipolar Plates for Low Cost Manufacturing
- X.1 Hawaii Natural Energy Institute: Hydrogen Energy Systems as a Grid Management Tool

Idaho

- VII.C.2 Idaho National Laboratory: Integrated Systems Modeling of the Interactions between Stationary Hydrogen, Vehicles, and Grid Resources
- VII.C.3 Idaho National Laboratory: Dynamic Modeling and Validation of Electrolyzers in Real-Time Grid Simulation
- VII.D.2 Idaho National Laboratory: High Temperature Electrolysis Test Stand

Illinois

- II.A.1 Argonne National Laboratory: Analysis of Advanced H₂ Production Pathways
- III.9 Argonne National Laboratory: Hydrogen Refueling Analysis of Heavy-Duty Fuel Cell Vehicle Fleet
- III.15 Argonne National Laboratory: H2FIRST Consolidation
- IV.A.1 Argonne National Laboratory: System Analysis of Physical and Materials-Based Hydrogen Storage
- IV.A.2 Argonne National Laboratory: Hydrogen Storage Cost Analysis
- IV.C.9 Argonne National Laboratory: HyMARC Seedling: “Graphene-Wrapped” Complex Hydrides as High-Capacity, Regenerable Hydrogen Storage Materials
- IV.C.9 Southern Illinois University: HyMARC Seedling: “Graphene-Wrapped” Complex Hydrides as High-Capacity, Regenerable Hydrogen Storage Materials
- V.A.1 Argonne National Laboratory: ElectroCat (Electrocatalysis Consortium)
- V.A.4 Argonne National Laboratory: Tailored High-Performance Low-PGM Alloy Cathode Catalysts
- V.A.7 Argonne National Laboratory: Highly Active, Durable, and Ultra-Low PGM NSTF Thin Film ORR Catalysts and Supports
- V.B.1 Argonne National Laboratory: FC-PAD: Fuel Cell Performance and Durability Consortium
- V.B.2 Argonne National Laboratory: FC-PAD: Components and Characterization
- V.B.3 Argonne National Laboratory: FC-PAD: Electrode Layers and Optimization
- V.B.4 Argonne National Laboratory: Novel Ionomers and Electrode Structures for Improved PEMFC Electrode Performance at Low PGM Loadings
- V.C.6 Argonne National Laboratory: Advanced Materials for Fully-Integrated MEAs in AEMFCs
- V.E.4 Argonne National Laboratory: Performance and Durability of Advanced Automotive Fuel Cell Stacks and Systems with Dispersed Alloy Cathode Catalyst in Membrane Electrode Assemblies
- V.E.5 Argonne National Laboratory: Fuel Cell Vehicle Cost Analysis
- VII.B.3 Gas Technology Institute: Performance Evaluation of Delivered Hydrogen Fueling Stations
- VII.D.1 Argonne National Laboratory: H2@Scale Analysis
- VIII.6 UL: Hydrogen Safety Panel, Safety Knowledge Tools and First Responder Training Resources

Illinois (Continued)

- IX.1 Argonne National Laboratory: Employment Impacts of Hydrogen and Fuel Cell Technologies
- IX.1 RCF Economic and Financial Consulting, Inc.: Employment Impacts of Hydrogen and Fuel Cell Technologies
- IX.2 Argonne National Laboratory: Regional Water Stress Analysis with Hydrogen Production at Scale
- IX.3 Argonne National Laboratory: Cost Benefits Analysis of Technology Improvement in Light-Duty Fuel Cell Vehicles
- IX.8 Argonne National Laboratory: Greenhouse Gas (GHG) Emissions and Petroleum Use Reduction of Medium- and Heavy-Duty Trucks
- IX.9 Argonne National Laboratory: Agent-Based Modeling of Consumer Behavior
- IX.10 Argonne National Laboratory: Life-Cycle Analysis of Air Pollutants Emission for Refinery and Hydrogen Production from SMR
- IX.12 Argonne National Laboratory: Benefits Analysis of Multi-Fuel/Vehicle Platforms with a Focus on Hydrogen Fuel Cell Electric Vehicles

Indiana

- IV.D.1 High Energy Coil Reservoirs, LLC: Conformable Hydrogen Storage Coil Reservoir
- V.A.7 Purdue University: Highly Active, Durable, and Ultra-Low PGM NSTF Thin Film ORR Catalysts and Supports

Iowa

- III.6 Ames Laboratory: Magnetocaloric Hydrogen Liquefaction
- IV.C.13 Ames Laboratory: High-Capacity Hydrogen Storage Systems via Mechanochemistry

Maryland

- III.1 National Institute of Standards and Technology: Fatigue Performance of High-Strength Pipeline Steels and Their Welds in Hydrogen Gas Service
- IV.C.4 National Institute of Standards and Technology: HyMARC (Support): NREL Effort
- V.A.7 Johns Hopkins University: Highly Active, Durable, and Ultra-Low PGM NSTF Thin Film ORR Catalysts and Supports
- V.B.3 National Institute of Standards and Technology: FC-PAD: Electrode Layers and Optimization
- V.E.1 National Institute of Standards and Technology: Neutron Imaging Study of the Water Transport in Operating Fuel Cells
- VI.1 W.L. Gore & Associates: Fuel Cell Membrane Electrode Assembly Manufacturing R&D

Massachusetts

- II.B.2 Giner, Inc.: High-Performance, Long-Lifetime Catalysts for Proton Exchange Membrane Electrolysis
- II.B.3 Northeastern University: High Performance Platinum Group Metal Free Membrane Electrode Assemblies through Control of Interfacial Processes
- II.B.4 Giner, Inc.: High Temperature Alkaline Water Electrolysis
- III.4 GVD Corporation: Advanced Barrier Coatings for Harsh Environments
- III.11 Giner, Inc.: Electrochemical Compression
- III.14 Ivys Energy Solutions: Advancing Hydrogen Dispenser Technology by Using Innovative Intelligent Networks
- IV.D.4 Aspen Aerogels: Integrated Insulation System for Automotive Cryogenic Storage Tanks
- V.A.3 Advent Technologies, Inc.: Innovative Non-PGM Catalysts for High-Temperature PEMFCs
- V.A.3 Northeastern University: Innovative Non-PGM Catalysts for High-Temperature PEMFCs
- V.A.10 Giner, Inc.: Regenerative Fuel Cell System (SBIR Phase II)
- V.A.13 Advent Technologies, Inc.: Development of Durable Active Supports for Low Platinum Group Metal Catalysts (SBIR I)
- V.A.17 Northeastern University: Vapor Deposition Process for Engineering of Dispersed PEMFC ORR Pt/NbO_x/C Catalysts

Massachusetts (Continued)

- V.B.3 Tufts University: FC-PAD: Electrode Layers and Optimization
- V.B.4 Tufts University: Novel Ionomers and Electrode Structures for Improved PEMFC Electrode Performance at Low PGM Loadings
- V.B.5 Giner, Inc.: Durable High-Power Membrane Electrode Assemblies with Low Pt Loading
- V.C.4 Giner, Inc.: Ionomer Dispersion Impact on Fuel Cell and Electrolyzer Performance and Durability (SBIR Phase II TTO)
- V.D.2 Advent Technologies, Inc.: Facilitated Direct Liquid Fuel Cells with High Temperature Membrane Electrode Assemblies
- V.D.3 Giner, Inc.: Advanced Catalysts and Membrane Electrode Assemblies (MEAs) for Reversible Alkaline Membrane Fuel Cells
- VI.1 Tufts University: Fuel Cell Membrane Electrode Assembly Manufacturing R&D
- VIII.6 Firexplo: Hydrogen Safety Panel, Safety Knowledge Tools and First Responder Training Resources
- IX.10 Eastern Research Group, Inc.: Life-Cycle Analysis of Air Pollutants Emission for Refinery and Hydrogen Production from SMR
- X.4 Nuvera Fuel Cells: Demonstration of Fuel Cell Auxiliary Power Unit (APU) to Power Truck Refrigeration Units (TRUs) in Refrigerated Trucks

Michigan

- IV.C.12 University of Michigan: Improving the Kinetics and Thermodynamics of $\text{Mg}(\text{BH}_4)_2$ for Hydrogen Storage
- IV.C.15 Ford Motor Company: Hydrogen Adsorbents with High Volumetric Density: New Materials and System Projections
- IV.C.15 University of Michigan: Hydrogen Adsorbents with High Volumetric Density: New Materials and System Projections
- V.A.17 Ford Motor Company: Vapor Deposition Process for Engineering of Dispersed PEMFC ORR Pt/NbO_x/C Catalysts
- V.A.17 University of Michigan: Vapor Deposition Process for Engineering of Dispersed PEMFC ORR Pt/NbO_x/C Catalysts
- V.A.8 General Motors: Highly Accessible Catalysts for Durable High-Power Performance
- V.A.9 Nissan Technical Center North America: Corrosion-Resistant Non-Carbon Electrocatalyst Supports for PEFCs
- V.B.2 General Motors: FC-PAD: Components and Characterization
- V.B.4 Michigan Technological University: Novel Ionomers and Electrode Structures for Improved PEMFC Electrode Performance at Low PGM Loadings
- V.B.5 General Motors: Durable High-Power Membrane Electrode Assemblies with Low Pt Loading
- V.B.7 Nissan Technical Center North America: Fuel Cell Membrane Electrode Assemblies with Ultra-Low Pt Nanofiber Electrodes
- V.C.1 General Motors Fuel Cell Activities: New Fuel Cell Membranes with Improved Durability and Performance
- V.C.2 Nissan Technical Center North America: Advanced Hybrid Membranes for Next Generation PEMFC Automotive Applications
- VI.1 General Motors: Fuel Cell Membrane Electrode Assembly Manufacturing R&D
- VIII.9 Ford Motor Company: Compatibility of Polymeric Materials Used in the Hydrogen Infrastructure

Minnesota

- II.B.2 3M Company: High-Performance, Long-Lifetime Catalysts for Proton Exchange Membrane Electrolysis
- V.A.7 3M Company: Highly Active, Durable, and Ultra-Low PGM NSTF Thin Film ORR Catalysts and Supports
- V.A.8 3M Company: Highly Accessible Catalysts for Durable High-Power Performance
- V.B.4 3M Company: Novel Ionomers and Electrode Structures for Improved PEMFC Electrode Performance at Low PGM Loadings

Minnesota (Continued)

- V.B.7 3M Company: Fuel Cell Membrane Electrode Assemblies with Ultra-Low Pt Nanofiber Electrodes
- V.C.1 3M Company: New Fuel Cell Membranes with Improved Durability and Performance
- V.C.2 3M Company: Advanced Hybrid Membranes for Next Generation PEMFC Automotive Applications
- V.C.7 3M Company: Advanced Ionomers and MEAs for Alkaline Membrane Fuel Cells

Missouri

- II.B.6 Washington University in St. Louis: Economical Production of Hydrogen through Development of Novel, High Efficiency Electrocatalysts for Alkaline Membrane Electrolysis
- IV.C.10 Saint Louis University: HyMARC Seedling: Fundamental Studies of Surface-Functionalized Mesoporous Carbons for Thermodynamic Stabilization and Reversibility of Metal Hydrides
- IV.C.10 University of Missouri—St. Louis: HyMARC Seedling: Fundamental Studies of Surface-Functionalized Mesoporous Carbons for Thermodynamic Stabilization and Reversibility of Metal Hydrides
- IV.C.10 Washington University in St. Louis: HyMARC Seedling: Fundamental Studies of Surface-Functionalized Mesoporous Carbons for Thermodynamic Stabilization and Reversibility of Metal Hydrides
- IV.C.13 University of Missouri: High-Capacity Hydrogen Storage Systems via Mechanochemistry
- V.A.9 Washington University in St. Louis: Corrosion-Resistant Non-Carbon Electrocatalyst Supports for PEFCs
- VIII.6 Becht Engineering: Hydrogen Safety Panel, Safety Knowledge Tools and First Responder Training Resources

Montana

- IV.D.2 Montana State University: Next Generation Hydrogen Storage Vessels Enabled by Carbon Fiber Infusion with a Low Viscosity, High Toughness Resin System

Nebraska

- IV.D.4 Hexagon Lincoln: Integrated Insulation System for Automotive Cryogenic Storage Tanks

Nevada

- II.D.1 University of Las Vegas: High-Efficiency Tandem Absorbers for Economical Solar Hydrogen Production
- II.D.2 University of Las Vegas: Wide Bandgap Chalcopyrite Photoelectrodes for Direct Solar Water Splitting

New Hampshire

- V.A.17 Exothermics, Inc.: Vapor Deposition Process for Engineering of Dispersed PEMFC ORR Pt/NbO_x/C Catalysts

New Jersey

- V.D.1 TreadStone Technologies, Inc.: Novel Structured Metal Bipolar Plates for Low Cost Manufacturing

New Mexico

- II.B.3 University of New Mexico: High Performance Platinum Group Metal Free Membrane Electrode Assemblies through Control of Interfacial Processes
- II.B.6 Pajarito Powder, LLC: Economical Production of Hydrogen through Development of Novel, High Efficiency Electrocatalysts for Alkaline Membrane Electrolysis
- V.A.1 Los Alamos National Laboratory: ElectroCat (Electrocatalysis Consortium)
- V.A.2 EWII Fuel Cells LLC: Development of PGM-Free Catalysts for Hydrogen Oxidation Reaction in Alkaline Media
- V.A.2 Los Alamos National Laboratory: Development of PGM-Free Catalysts for Hydrogen Oxidation Reaction in Alkaline Media
- V.A.2 Pajarito Powder, LLC: Development of PGM-Free Catalysts for Hydrogen Oxidation Reaction in Alkaline Media
- V.A.2 University of New Mexico: Development of PGM-Free Catalysts for Hydrogen Oxidation Reaction in Alkaline Media
- V.A.3 Pajarito Powder, LLC: Innovative Non-PGM Catalysts for High-Temperature PEMFCs

New Mexico (Continued)

- V.A.3 University of New Mexico: Innovative Non-PGM Catalysts for High-Temperature PEMFCs
- V.A.4 Los Alamos National Laboratory: Tailored High-Performance Low-PGM Alloy Cathode Catalysts
- V.A.5 Los Alamos National Laboratory: Platinum Monolayer Electrocatalysts
- V.A.9 University of New Mexico: Corrosion-Resistant Non-Carbon Electrocatalyst Supports for PEFCs
- V.A.13 Pajarito Powder, LLC: Development of Durable Active Supports for Low Platinum Group Metal Catalysts (SBIR I)
- V.A.16 EWII Fuel Cells LLC: Advanced Electro-Catalysts through Crystallographic Enhancement
- V.A.16 Los Alamos National Laboratory: Advanced Electro-Catalysts through Crystallographic Enhancement
- V.A.17 EWII Fuel Cells, LLC: Vapor Deposition Process for Engineering of Dispersed PEMFC ORR Pt/NbO_x/C Catalysts
- V.B.1 Los Alamos National Laboratory: FC-PAD: Fuel Cell Performance and Durability Consortium
- V.B.2 EWII Fuel Cells, LLC: FC-PAD: Components and Characterization
- V.B.2 Los Alamos National Laboratory: FC-PAD: Components and Characterization
- V.B.3 Los Alamos National Laboratory: FC-PAD: Electrode Layers and Optimization
- V.B.4 Los Alamos National Laboratory: Novel Ionomers and Electrode Structures for Improved PEMFC Electrode Performance at Low PGM Loadings
- V.C.4 Los Alamos National Laboratory: Ionomer Dispersion Impact on Fuel Cell and Electrolyzer Performance and Durability (SBIR Phase II TTO)
- V.C.6 Los Alamos National Laboratory: Advanced Materials for Fully-Integrated MEAs in AEMFCs
- V.C.6 Sandia National Laboratories: Advanced Materials for Fully-Integrated MEAs in AEMFCs
- V.D.2 Los Alamos National Laboratory: Facilitated Direct Liquid Fuel Cells with High Temperature Membrane Electrode Assemblies
- V.E.2 Los Alamos National Laboratory: Technical Assistance to Developers
- VIII.3 Los Alamos National Laboratory: Hydrogen Fuel Quality
- VIII.5 Sandia National Laboratories: Hydrogen Quantitative Risk Assessment
- VIII.10 Sandia National Laboratories: Enabling Hydrogen Infrastructure Through Science-Based Codes and Standards

New York

- II.F.3 University of Rochester: Nano-bio Systems for Light-Driven Hydrogen Production
- II.F.6 Brookhaven National Laboratory: Reversible Conversion between CO₂/H₂ and Formic Acid by Molecular Catalysts
- III.11 Rensselaer Polytechnic Institute: Electrochemical Compression
- V.A.5 Brookhaven National Laboratory: Platinum Monolayer Electrocatalysts
- V.A.8 Cornell University: Highly Accessible Catalysts for Durable High-Power Performance
- V.A.16 University at Buffalo: Advanced Electro-Catalysts through Crystallographic Enhancement
- V.C.6 Rensselaer Polytechnic Institute: Advanced Materials for Fully-Integrated MEAs in AEMFCs
- V.D.3 University at Buffalo: Advanced Catalysts and Membrane Electrode Assemblies (MEAs) for Reversible Alkaline Membrane Fuel Cells
- VI.5 Automated Dynamics: Continuous Fiber Composite Electrofusion Coupler
- VII.A.3 Unique Electric Solutions: Fuel Cell Hybrid Electric Delivery Van Project
- X.2 Plug Power: Ground Support Equipment Demonstration
- X.5 Plug Power: FedEx Express Hydrogen Fuel Cell Extended-Range Battery Electric Vehicles

Ohio

- III.2 ACI Services: Hydrogen Compression Application of the Linear Motor Reciprocating Compressor (LMRC)
- III.3 N & R Engineering: Low Cost Hydrogen Storage at 875 bar Using Steel Liner and Steel Wire Wrap

Ohio (Continued)

- V.A.10 pH Matter LLC: Regenerative Fuel Cell System (SBIR Phase II)
- V.A.14 pH Matter LLC: Multi-Functional Catalyst Support (SBIR I)
- VI.2 DJW Technology, LLC: Clean Energy Supply Chain and Manufacturing Competitiveness Analysis for Hydrogen and Fuel Cell Technologies
- VI.2 Ohio Fuel Cell Coalition: Clean Energy Supply Chain and Manufacturing Competitiveness Analysis for Hydrogen and Fuel Cell Technologies
- VI.4 DJW Technology, LLC: U.S. Clean Energy Hydrogen and Fuel Cell Technologies: A Competitiveness Analysis
- VI.4 GLWN, Westside Industrial Retention & Expansion Network: U.S. Clean Energy Hydrogen and Fuel Cell Technologies: A Competitiveness Analysis
- X.5 Workhorse Technologies Inc.: FedEx Express Hydrogen Fuel Cell Extended-Range Battery Electric Vehicles

Oregon

- II.E.3 Oregon State U.: Novel Hybrid Microbial Electrochemical System for Efficient Hydrogen Generation from Biomass
- III.3 Hy-Performance Materials Testing, LLC: Low Cost Hydrogen Storage at 875 bar Using Steel Liner and Steel Wire Wrap
- IV.D.3 Hy-Performance Materials Testing, LLC: Development, Selection and Testing to Reduce Cost and Weight of Materials for BOP Components

Pennsylvania

- II.B.3 The Pennsylvania State University: High Performance Platinum Group Metal Free Membrane Electrode Assemblies through Control of Interfacial Processes
- II.C.1 Bucknell University: High Efficiency Solar Thermochemical Reactor for Hydrogen Production
- II.E.1 The Pennsylvania State University: Biomass to Hydrogen (B2H2)
- III.3 C P Industries: Low Cost Hydrogen Storage at 875 bar Using Steel Liner and Steel Wire Wrap
- III.8 LifeGuard Technologies: Cryogenically Flexible, Low Permeability H2 Delivery Hose
- III.15 PDC Machines: H2FIRST Consolidation
- IV.C.8 The Pennsylvania State University: HyMARC Seedling: Developing a Novel Hydrogen Sponge with Ideal Binding Energy and High Surface Area for Practical Hydrogen Storage
- V.A.8 Carnegie Mellon University: Highly Accessible Catalysts for Durable High-Power Performance
- V.A.8 Drexel University: Highly Accessible Catalysts for Durable High-Power Performance
- V.A.16 University of Pennsylvania: Advanced Electro-Catalysts through Crystallographic Enhancement
- VIII.3 SAE International: Hydrogen Fuel Quality
- VIII.6 Air Products and Chemicals, Inc.: Hydrogen Safety Panel, Safety Knowledge Tools and First Responder Training Resources

Rhode Island

- V.A.16 Brown University: Advanced Electro-Catalysts through Crystallographic Enhancement

South Carolina

- II.B.7 Tetramer Technologies, LLC: New Approaches to Improved PEM Electrolyzer Ion Exchange Membranes
- III.12 Greenway Energy, LLC: Hybrid Electrochemical Hydrogen/Metal Hydride Compressor
- III.12 Savannah River National Laboratory: Hybrid Electrochemical Hydrogen/Metal Hydride Compressor
- IV.B.1 Savannah River National Laboratory: Hydrogen Storage System Modeling: Public Access, Maintenance, and Enhancements
- IV.B.2 Savannah River Consulting: Investigation of Solid State Hydrides for Autonomous Fuel Cell Vehicles
- IV.B.2 Savannah River National Laboratory: Investigation of Solid State Hydrides for Autonomous Fuel Cell Vehicles

South Carolina (Continued)

- IV.C.16 Savannah River Consulting: Electrochemical Reversible Formation of Alane
- IV.C.16 Savannah River National Laboratory: Electrochemical Reversible Formation of Alane
- IV.D.4 Savannah River National Laboratory: Integrated Insulation System for Automotive Cryogenic Storage Tanks
- V.A.11 Greenway Energy, LLC: Development of Corrosion Resistant Carbon (CRC) Support for Ultra-Low Platinum Group Metal (PGM) Catalysts (SBIR Phase I)
- V.A.11 Savannah River National Laboratory: Development of Corrosion Resistant Carbon (CRC) Support for Ultra-Low Platinum Group Metal (PGM) Catalysts (SBIR Phase I)
- VI.5 Savannah River National Laboratory: Continuous Fiber Composite Electrofusion Coupler

Tennessee

- III.1 Oak Ridge National Laboratory: Fatigue Performance of High-Strength Pipeline Steels and Their Welds in Hydrogen Gas Service
- III.3 Oak Ridge National Laboratory: Low Cost Hydrogen Storage at 875 bar Using Steel Liner and Steel Wire Wrap
- III.4 Oak Ridge National Laboratory: Advanced Barrier Coatings for Harsh Environments
- III.13 Oak Ridge National Laboratory: Metal Hydride Compression
- V.A.1 Oak Ridge National Laboratory: ElectroCat (Electrocatalysis Consortium)
- V.A.4 Oak Ridge National Laboratory: Tailored High-Performance Low-PGM Alloy Cathode Catalysts
- V.A.7 Oak Ridge National Laboratory: Highly Active, Durable, and Ultra-Low PGM NSTF Thin Film ORR Catalysts and Supports
- V.B.1 Oak Ridge National Laboratory: FC-PAD: Fuel Cell Performance and Durability Consortium
- V.B.2 Oak Ridge National Laboratory: FC-PAD: Components and Characterization
- V.B.3 Oak Ridge National Laboratory: FC-PAD: Electrode Layers and Optimization
- V.B.4 Oak Ridge National Laboratory: Novel Ionomers and Electrode Structures for Improved PEMFC Electrode Performance at Low PGM Loadings
- V.B.7 Vanderbilt University: Fuel Cell Membrane Electrode Assemblies with Ultra-Low Pt Nanofiber Electrodes
- V.C.1 Vanderbilt University: New Fuel Cell Membranes with Improved Durability and Performance
- V.C.4 Oak Ridge National Laboratory: Ionomer Dispersion Impact on Fuel Cell and Electrolyzer Performance and Durability (SBIR Phase II TTO)
- V.C.7 Oak Ridge National Laboratory: Advanced Ionomers and MEAs for Alkaline Membrane Fuel Cells
- VIII.9 Oak Ridge National Laboratory: Compatibility of Polymeric Materials Used in the Hydrogen Infrastructure
- X.5 Federal Express Corporation: FedEx Express Hydrogen Fuel Cell Extended-Range Battery Electric Vehicles

Texas

- III.14 Air Liquide Advanced Technologies: Advancing Hydrogen Dispenser Technology by Using Innovative Intelligent Networks
- III.2 Southwest Research Institute®: Hydrogen Compression Application of the Linear Motor Reciprocating Compressor (LMRC)
- IV.D.1 The University of Texas at Austin: Conformable Hydrogen Storage Coil Reservoir
- V.B.5 University of Texas at Austin: Durable High-Power Membrane Electrode Assemblies with Low Pt Loading
- VII.A.3 University of Texas at Austin: Fuel Cell Hybrid Electric Delivery Van Project
- VII.A.3 Valence Technology: Fuel Cell Hybrid Electric Delivery Van Project
- VII.B.1 Air Liquide: Innovative Advanced Hydrogen Mobile Fueler
- VI.5 NOV Fiberglass Systems: Continuous Fiber Composite Electrofusion Coupler

Utah

- II.B.8 Ceramtec, Inc: Multi-Scale Ordered Cell Structure for Cost Effective Production of Hydrogen by HTWS

Virginia

- II.A.1 Strategic Analysis, Inc.: Analysis of Advanced H₂ Production Pathways
- II.B.8 Gaia Energy Research Institute LLC: Multi-Scale Ordered Cell Structure for Cost Effective Production of Hydrogen by HTWS
- II.E.2 Virginia Polytechnic Institute and State University: Sweet Hydrogen: High-Yield Production of Hydrogen from Biomass Sugars Catalyzed by in vitro Synthetic Biosystems
- III.3 WireTough Cylinders, LLC: Low Cost Hydrogen Storage at 875 bar Using Steel Liner and Steel Wire Wrap
- III.8 Cardinal Rubber & Seal: Cryogenically Flexible, Low Permeability H₂ Delivery Hose
- III.8 Nanosonic, Inc.: Cryogenically Flexible, Low Permeability H₂ Delivery Hose
- III.11 Gaia Energy Research Institute LLC: Electrochemical Compression
- IV.A.2 Strategic Analysis, Inc.: Hydrogen Storage Cost Analysis
- V.A.12 CertainTech Inc.: Mesoporous Non-Carbon Catalyst Supports of PEMFC (SBIR I)
- V.E.5 Strategic Analysis, Inc.: Fuel Cell Vehicle Cost Analysis
- VI.3 Birch Studio: Fuel Cell and Hydrogen Opportunity Center, www.hfcnexus.com (Hydrogen Fuel Cell Nexus)
- VI.3 Breakthrough Technologies Institute: Fuel Cell and Hydrogen Opportunity Center, www.hfcnexus.com (Hydrogen Fuel Cell Nexus)
- VI.3 Virginia Clean Cities at James Madison University: Fuel Cell and Hydrogen Opportunity Center, www.hfcnexus.com (Hydrogen Fuel Cell Nexus)
- VI.4 Strategic Analysis, Inc.: U.S. Clean Energy Hydrogen and Fuel Cell Technologies: A Competiveness Analysis

Washington

- III.3 MVP Co.: Low Cost Hydrogen Storage at 875 bar Using Steel Liner and Steel Wire Wrap
- III.6 Emerald Energy NW LLC: Magnetocaloric Hydrogen Liquefaction
- III.6 Pacific Northwest National Laboratory: Magnetocaloric Hydrogen Liquefaction
- IV.A.2 Pacific Northwest National Laboratory: Hydrogen Storage Cost Analysis
- IV.B.1 Pacific Northwest National Laboratory: Hydrogen Storage System Modeling: Public Access, Maintenance, and Enhancements
- IV.C.5 Pacific Northwest National Laboratory: HyMARC (Support): PNNL Effort
- VII.C.1 Washington State University: Optimal Stationary Fuel Cell Integration and Control (Energy Dispatch Controller)
- VII.D.1 Pacific Northwest National Laboratory: H₂@Scale Analysis
- VIII.6 Pacific Northwest National Laboratory: Hydrogen Safety Panel, Safety Knowledge Tools and First Responder Training Resources
- VIII.9 Pacific Northwest National Laboratory: Compatibility of Polymeric Materials Used in the Hydrogen Infrastructure
- X.4 Pacific Northwest National Laboratory: Demonstration of Fuel Cell Auxiliary Power Unit (APU) to Power Truck Refrigeration Units (TRUs) in Refrigerated Trucks

Washington, D.C.

- III.1 National Institute of Standards and Technology: Fatigue Performance of High-Strength Pipeline Steels and Their Welds in Hydrogen Gas Service
- VIII.8 Fuel Cell & Hydrogen Energy Association: Fuel Cell & Hydrogen Energy Association Codes and Standards Support Alabama

FOREIGN COUNTRIES

Canada

- II.B.5 Versa Power Systems Ltd.: Solid Oxide Based Electrolysis and Stack Technology with Ultra-High Electrolysis Current Density ($>3 \text{ A/cm}^2$) and Efficiency
- V.B.3 University of Alberta: FC-PAD: Electrode Layers and Optimization
- VII.B.1 Hydrogen Technology & Energy Corporation: Innovative Advanced Hydrogen Mobile Fueler
- VII.C.4 Versa Power Systems Ltd.: Modular SOEC System for Efficient Hydrogen Production at High Current Density
- VIII.1 A.V. Tchouvelev & Associates, Inc.: National Codes and Standards Development and Outreach
- VIII.6 CSA Group: Hydrogen Safety Panel, Safety Knowledge Tools and First Responder Training Resources
- VIII.7 A.V. Tchouvelev & Associates, Inc.: NREL Hydrogen Sensor Testing Laboratory
- X.3 Hydrogenics: Maritime Fuel Cell Generator Project
- X.4 Ballard Power Systems: Demonstration of Fuel Cell Auxiliary Power Unit (APU) to Power Truck Refrigeration Units (TRUs) in Refrigerated Trucks

Finland

- VIII.3 VTT: Hydrogen Fuel Quality

France

- VIII.3 CEA-Liten: Hydrogen Fuel Quality

Germany

- III.14 Rheonik GmbH: Advancing Hydrogen Dispenser Technology by Using Innovative Intelligent Networks
- V.B.2 Umicore: FC-PAD: Components and Characterization

Japan

- VIII.3 Japan Automotive Research Institute: Hydrogen Fuel Quality

Norway

- V.B.3 Norwegian University Science and Technology: FC-PAD: Electrode Layers and Optimization

Poland

- II.F.2 Institute of Physics, Polish Academy of Sciences: Hybrid Perovskites and Non-Adiabatic Dynamics Simulations: Catching Realistic Aspects of the Charge Recombination Process

Switzerland

- VI.4 E4tech: U.S. Clean Energy Hydrogen and Fuel Cell Technologies: A Competitiveness Analysis
- VIII.3 International Organization for Standardization: Hydrogen Fuel Quality