Project Listings by Organization

Section Key

H2F	Hydrogen Fuel R&D
FC	Fuel Cell R&D
TAHI	Technology Acceleration and Hydrogen Infrastructure R&D
SCS	Safety, Codes and Standards
SA	Systems Analysis

3M Company

FC Highly Active, Durable, and Ultra-Low-Platinum-Group-Metal Nanostructured Thin Film Oxygen Reduction Reaction Catalysts and Supports

FC Novel Ionomers and Electrode Structures for Improved Polymer Electrolyte Membrane Fuel Cell Electrode Performance at Low Platinum-Group-Metal Loadings

Advent Technologies, Inc.

FC Facilitated Direct Liquid Fuel Cells with High-Temperature Membrane Electrode Assemblies

Argonne National Laboratory

H2F HydroGEN Seedling: Platinum-Group-Metal-Free Oxygen Evolution Reaction Catalysts for Proton Exchange Membrane Electrolyzers

H2F Systems Analysis of Physical and Materials-Based Hydrogen Storage

H2F HyMARC Seedling: "Graphene-Wrapped" Complex Hydrides as High-Capacity, Regenerable Hydrogen Storage Materials

FC Tailored High-Performance Low-Platinum-Group-Metal Alloy Cathode Catalysts

FC ElectroCat (Electrocatalysis Consortium)

FC Highly Efficient and Durable Cathode Catalyst with Ultralow Platinum Loading Through Synergetic Platinum/Platinum-Group-Metal-Free Catalytic Interaction

FC Performance of Advanced Automotive Fuel Cell Stacks and Systems with State-of-the-Art d-PtCo/C Cathode Catalyst in Membrane Electrode Assemblies

TAHI Toyota Mirai Testing

SA Regional Water Stress Analysis with Hydrogen Production at Scale

SA Analysis of Technology Improvement in Fuel Cell Vehicles

SA Analysis of Cost Impacts of Integrating Advanced Onboard Storage Systems with Hydrogen Delivery

Arizona State University

H2F HydroGEN Seedling: Mixed Ionic Electronic Conducting Quaternary Perovskites: Materials by Design for Solar Thermochemical Hydrogen

Automated Dynamics

TAHI Continuous Fiber Composite Electrofusion Coupler

Brookhaven National Laboratory

FC Platinum Monolayer Electrocatalysts

California Institute of Technology

H2F Design and Synthesis of Materials with High Capacities for Hydrogen Physisorption

Carnegie Mellon University

FC ElectroCat: Advanced Platinum-Group-Metal-Free Cathode Engineering for High Power Density and Durability

Center for Transportation and the Environment

TAHI Fuel Cell Hybrid Electric Delivery Van

City and County of San Francisco

SCS Advancing Fuel Cell Electric Vehicles in San Francisco and Beyond

Colorado School of Mines

H2F HydroGEN Seedling: Accelerated Discovery of Solar Thermochemical Hydrogen Production Materials via High-Throughput Computational and Experimental Methods

Electricore, Inc.

TAHI Innovative Advanced Hydrogen Mobile Fueler

Federal Express Corporation

TAHI FedEx Express Hydrogen Fuel Cell Extended-Range Battery Electric Vehicles

Ford Motor Company

FC Vapor Deposition Process for Engineering of Dispersed Polymer Electrolyte Membrane Fuel Cell Oxygen Reduction Reaction Pt/NbOx/C Catalysts

FuelCell Energy, Inc.

TAHI Modular Solid Oxide Electrolysis Cell System for Efficient Hydrogen Production at High Current Density

General Engineering & Research

TAHI Low-Cost Magnetocaloric Materials Discovery

General Motors

FC Highly Accessible Catalysts for Durable High-Power Performance

FC Durable High-Power Membrane Electrode Assemblies with Low Platinum Loading

Giner ELX, Inc.

TAHI Electrochemical Compression

Giner, Inc.

H2F High-Temperature Alkaline Water Electrolysis

FC ElectroCat: Durable Mn-Based Platinum-Group-Metal-Free Catalysts for Polymer Electrolyte Membrane Fuel Cells

FC FY15 SBIR II Release 2: Ionomer Dispersion Impact on Fuel Cell and Electrolyzer Performance and Durability

FC Advanced Catalysts and Membrane Electrode Assemblies for Reversible Alkaline Membrane Fuel Cells

Greenway Energy, LLC

H2F HydroGEN Seedling: High-Temperature Reactor Catalyst Material Development for Low-Cost and Efficient Solar-Driven Sulfur-Based Processes

TAHI Hybrid Electrochemical Hydrogen/Metal Hydride Compressor

FC ElectroCat: Platinum-Group-Metal-Free Engineered Framework Nano-Structure Catalyst

GVD Corporation

TAHI Advanced Barrier Coatings for Harsh Environments

Hawaii Natural Energy Institute

TAHI Hydrogen Energy Systems as a Grid Management Tool

Idaho National Laboratory

TAHI Grid Integration and Hydrogen Energy Generation: Modeling and Validation of Electrolyzers in Real-Time Grid Simulation

TAHI High-Temperature Electrolysis Test Stand

Ivys Energy Solutions

TAHI Advancing Hydrogen Dispenser Technology by Using Innovative Intelligent Networks

Lawrence Berkeley National Laboratory

TAHI Integrated Systems Modeling of the Interactions between Stationary Hydrogen, Vehicles, and Grid Resources

Lawrence Livermore National Laboratory

TAHI Performance and Durability Testing of Volumetrically Efficient Cryogenic Vessels and High-Pressure Liquid Hydrogen Pump

Liox Power

H2F HyMARC Seedling: Electrolyte-Assisted Hydrogen Storage Reactions

Los Alamos National Laboratory

H2F HydroGEN Seedling: High-Performance Ultralow-Cost Non-Precious-Metal Catalyst System for Anion Exchange Membrane Electrolyzer

H2F HydroGEN Seedling: Scalable Elastomeric Membranes for Alkaline Water Electrolysis

FC Advanced Electrocatalysts Through Crystallographic Enhancement

FC Advanced Materials for Fully Integrated Membrane Electrode Assemblies in Anion Exchange Membrane Fuel Cells

FC Polymer-Based Fuel Cells that Operate from 80°C to 220°C

FC FC-PAD: Fuel Cell Performance and Durability Consortium

SCS Fuel Quality Assurance Research and Development and Impurity Testing in Support of Codes and Standards

Mainstream Engineering

TAHI In-Line Quality Control of Polymer Electrolyte Membrane Materials

NanoSonic, Inc.

FC FY17 SBIR II Release 1: Novel Hydrocarbon Ionomers for Durable Polymer Electrolyte Membranes

TAHI Cryogenically Flexible, Low-Permeability Hydrogen Delivery Hose

National Renewable Energy Laboratory

H2F Biomass to Hydrogen (B2H2)

H2F HydroGEN Overview: A Consortium on Advanced Water-Splitting Materials

H2F Hydrogen Storage System Modeling: Public Access, Maintenance, and Enhancements

H2F HySCORE: Hydrogen Storage Characterization and Optimization Research Effort

H2F HyMARC Seedling: Fluorinated Covalent Organic Frameworks: A Novel Pathway to Enhance Hydrogen Sorption and Control Isosteric Heats of Adsorption

H2F HyMARC Seedling: Atomic Layer Deposition Synthesis of Novel Nanostructured Metal Borohydrides

FC Extended Surface Electrocatalyst Development

FC Advanced Ionomers and Membrane Electrode Assemblies for Alkaline Membrane Fuel Cells

TAHI Fuel Cell Membrane Electrode Assembly Manufacturing R&D

TAHI Manufacturing Competitiveness Analysis for Hydrogen Refueling Stations

TAHI Technology Validation: Fuel Cell Bus Evaluations

TAHI Hydrogen Station Data Collection and Analysis

TAHI Optimal Stationary Fuel Cell Integration and Control (Energy Dispatch Controller)

TAHI H2@Scale: Experimental Characterization of Durability of Advanced Electrolyzer Concepts in Dynamic Loading

TAHI 700-bar Hydrogen Dispenser Hose Reliability Improvement

TAHI Dispenser Reliability

SCS National Codes and Standards Development and Outreach

SCS NREL Hydrogen Sensor Testing Laboratory

SA Sustainability Analysis: Hydrogen Regional Sustainability (HyReS)

SA Regional Supply of Hydrogen

SA Market Segmentation Analysis of Medium- and Heavy-Duty Trucks with a Fuel Cell Emphasis

SA H2@Scale Analysis

Northeastern University

H2F HydroGEN Seedling: Enabling Efficient Water Splitting with Advanced Materials Designed for High-pH Membrane Interface

Northwestern University

H2F HydroGEN Seedling: Degradation Characterization and Modeling of a New Solid Oxide Electrolysis Cell Utilizing Accelerated Life Testing

H2F HydroGEN Seedling: Transformative Materials for High-Efficiency Thermochemical Production of Solar Fuels

Oak Ridge National Laboratory

H2F Novel Plasticized Melt-Spinning Process of Polyacrylonitrile Fibers Based on Task-Specific Ionic Liquids

TAHI Roll-to-Roll Advanced Materials Manufacturing Lab Consortium

Ohio Fuel Cell Coalition

TAHI Clean Energy Supply Chain and Manufacturing Competitiveness Analysis for Hydrogen and Fuel Cell Technologies

Oregon State University

H2F Novel Hybrid Microbial Electrochemical System for Efficient Hydrogen Generation from Biomass

Pacific Northwest National Laboratory

H2F Material Challenges for Cryogenic Hydrogen Storage Technologies

FC ElectroCat: Highly Active and Durable Platinum-Group-Metal-Free Oxygen Reduction Reaction Electrocatalysts Through the Synergy of Active Sites

TAHI Demonstration of Fuel Cell Auxiliary Power Unit to Power Truck Refrigeration Units in Refrigerated Trucks

TAHI Magnetocaloric Hydrogen Liquefaction

SCS Hydrogen Safety Panel, Safety Knowledge Tools, and First Responder Training Resources

SCS Compatibility of Polymeric Materials Used in the Hydrogen Infrastructure

Pennsylvania State University

H2F Developing a New Polyolefin Precursor for Low-Cost, High-Strength Carbon Fiber

pH Matter, LLC

FC FY16 SBIR II Release 1: Regenerative Fuel Cell System

Plug Power, Inc.

TAHI Fuel-Cell-Powered Airport Ground Support Equipment Deployment

Proton OnSite

H2F Benchmarking Advanced Water Splitting Technologies: Best Practices in Materials Characterization

H2F HydroGEN Seedling: High-Efficiency Proton Exchange Membrane Water Electrolysis Enabled by Advanced Catalysts, Membranes, and Processes

Rutgers University

H2F HydroGEN Seedling: Best-in-Class Platinum-Group-Metal-Free Catalyst Integrated Tandem Junction Photoelectrochemical Water Splitting Devices

Sandia National Laboratories

H2F HyMARC: A Consortium for Advancing Hydrogen Storage Materials

TAHI Maritime Fuel Cell Generator Project

TAHI Hydrogen Stations for Urban Sites

TAHI Fatigue Performance of High-Strength Pipeline Steels and Their Welds in Hydrogen Gas Service

TAHI Metal Hydride Compression

SCS R&D for Safety, Codes and Standards: Materials and Components Compatibility

SCS R&D for Safety, Codes and Standards: Hydrogen Behavior

SCS Hydrogen Quantitative Risk Assessment

Savannah River National Laboratory

H2F Investigation of Solid-State Hydrides for Autonomous Fuel Cell Vehicles

Southwest Research Institute

TAHI Hydrogen Compression Application of the Linear Motor Reciprocating Compressor

Stanford University

H2F HydroGEN Seedling: Protective Catalyst Systems on III-V and Si-Based Semiconductors for Efficient, Durable Photoelectrochemical Water Splitting Devices

Strategic Analysis, Inc.

H2F Analysis of Advanced Hydrogen Production Pathways

H2F Hydrogen Storage Cost Analysis

FC Fuel Cell Systems Analysis

Tetramer Technologies, LLC

H2F New Approaches to Improved Proton Exchange Membrane Electrolyzer Ion Exchange Membranes

United Technologies Research Center

H2F HydroGEN Seedling: Thin-Film, Metal-Supported, High-Performance, and Durable Proton-Solid Oxide Electrolyzer Cell

FC High-Performance Polymer Electrolyte Membrane Fuel Cell Electrode Structures

University of California, Berkeley

H2F HyMARC Seedling: Super Metalated Frameworks as Hydrogen Sponges

University of Colorado Boulder

H2F HydroGEN Seedling: Computationally Accelerated Discovery and Experimental Demonstration of High-Performance Materials for Advanced Solar Thermochemical Hydrogen Production

University of Connecticut

H2F HydroGEN Seedling: Proton-Conducting Solid Oxide Electrolysis Cells for Large-Scale Hydrogen Production at Intermediate Temperatures

University of Hawaii

H2F HydroGEN Seedling: Novel Chalcopyrites For Advanced Photoelectrochemical Water Splitting

H2F HyMARC Seedling: Development of Magnesium Boride Etherates as Hydrogen Storage Materials

University of Kentucky

H2F Precursor Processing Development for Low-Cost, High-Strength Carbon Fiber for Composite Overwrapped Pressure Vessel Applications

University of Michigan

H2F HydroGEN Seedling: Monolithically Integrated Thin-Film/Silicon Tandem Photoelectrodes for High-Efficiency and Stable Photoelectrochemical Water Splitting

H2F Hydrogen Adsorbents with High Volumetric Density: New Materials and System Projections

H2F HyMARC Seedling: Optimized Hydrogen Adsorbents via Machine Learning and Crystal Engineering

US Hybrid

TAHI Northeast Demonstration and Deployment of FCRx200

Vanderbilt University

FC Fuel Cell Membrane Electrode Assemblies with Ultra-Low-Platinum Nanofiber Electrodes

Virginia Clean Cities at James Madison University

TAHI Hydrogen Fuel Cell Nexus Business-to-Business Website

Washington University in St. Louis

FC Corrosion-Resistant Non-Carbon Electrocatalyst Supports for Proton Exchange Fuel Cells

Xergy Inc.

TAHI Novel Membranes for Electrochemical Hydrogen Compression Enabling Increased Pressure Capability and Higher Pumping Efficiency