

H2@Scale New Markets Funding Opportunity Announcement (FOA)

DE-FOA-0002229

These awards are funded through the Department of Energy's Energy Efficiency and Renewable Energy Office's (EERE's) Hydrogen and Fuel Cell Technologies Office, with contribution from EERE's Advanced Manufacturing Office and Vehicle Technologies Office.

Selectee Name	Location (city, state)	Project Title	Federal Share
TOPIC 1: ELECTROLYZER MANUFACTURING R&D			
3M Company	Saint Paul, MN	Advanced Manufacturing Processes for Gigawatt-Scale Proton Exchange Membrane Water Electrolyzer Oxygen Evolution Reaction Catalysts and Electrodes	\$4,854,808
Giner ELX, Inc.	Newton, MA	Integrated Membrane Anode Assembly & Scale-up	\$4,592,664
Proton Energy Systems, Inc.	Wallingford, CT	Enabling Low Cost PEM Electrolysis at Scale Through Optimization of Transport Components and Electrode Interfaces	\$4,400,000
TOPIC 2: ADVANCED CARBON FIBER FOR COMPRESSED HYDROGEN AND NATURAL GAS STORAGE TANKS			
Collaborative Composite Solutions Corporation	Oak Ridge, TN	Melt Spun PAN Precursor for Cost-Effective Carbon Fiber in High Pressure Compressed Gas Tankage	\$2,700,540
Hexagon R & D LLC	Lincoln, NE	Carbon Composite Optimization Reducing Tank Cost	\$2,599,945
University of Kentucky	Lexington, KY	Low-Cost, High-Strength Hollow Carbon Fiber for Compressed Gas Storage Tanks	\$2,415,576
University of Virginia	Charlottesville, VA	Low-Cost, High-Performance Carbon Fiber for Compressed Natural Gas Storage Tanks	\$2,701,552
TOPIC 3: FUEL CELL R&D FOR HEAVY-DUTY APPLICATIONS; SUBTOPIC 3A: MEMBRANES FOR HEAVY-DUTY APPLICATIONS			
3M Company	Saint Paul, MN	Extending PFSA Membrane Durability Through Enhanced Ionomer Backbone Stability	\$999,889
The Lubrizol Corporation	Wickliffe, OH	Antioxidant Functionalized Polymers for Extended HD Polymer Electrolyte Membrane Lifetimes	\$1,000,000
Nikola Corporation	Phoenix, AZ	Advanced Membrane and MEA for HD Fuel Cell Trucks	\$998,376
University of Tennessee: Knoxville	Knoxville, TN	A Systematic Approach to Developing Durable, Conductive Membranes for Operation above 120°C	\$1,000,000
TOPIC 3: FUEL CELL R&D FOR HEAVY-DUTY APPLICATIONS; SUBTOPIC 3B: DOMESTICALLY MANUFACTURED FUEL CELLS FOR HEAVY-DUTY APPLICATIONS			
Cummins	Columbus, IN	Cummins PEM Fuel Cell System for Heavy Duty Applications	\$3,000,000
Plug Power	Latham, NY	Domestically Manufactured Fuel Cells for Heavy-Duty Applications	\$2,987,181

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TOPIC 4: H2@SCALE NEW MARKETS R&D—HYSTEEL			
Missouri University of Science & Technology	Rolla, MO	Grid-Interactive Steelmaking with Hydrogen (GISH)	\$4,000,000
University of California: Irvine	Irvine, CA	Solid Oxide Electrolysis Cells (SOEC) integrated with Direct Reduced Iron plants (DRI) for the production of green steel	\$4,043,993
TOPIC 5: H2@SCALE NEW MARKETS DEMONSTRATIONS; SUBTOPIC 5A: MARITIME DEMONSTRATIONS			
Hornblower Yachts	San Francisco, CA	Marine Hydrogen Demonstration	\$7,994,208
TOPIC 5: H2@SCALE NEW MARKETS DEMONSTRATIONS; SUBTOPIC 5B: DATA CENTER DEMONSTRATIONS			
Caterpillar Inc.	Mossville, IL	System Demonstration for Supplying Clean, Reliable and Affordable Electric Power to Data Centers using Hydrogen Fuel	\$6,000,000
TOPIC 6: TRAINING AND WORKFORCE DEVELOPMENT FOR EMERGING HYDROGEN TECHNOLOGIES			
Electric Power Research Institute, Inc.	Palo Alto, CA	Developing a Workforce for a Hydrogen Technology Economy	\$2,000,000