FCHEA Members Secure Substantial DOE Funding to Advance Electrolyzers and Fuel Cells

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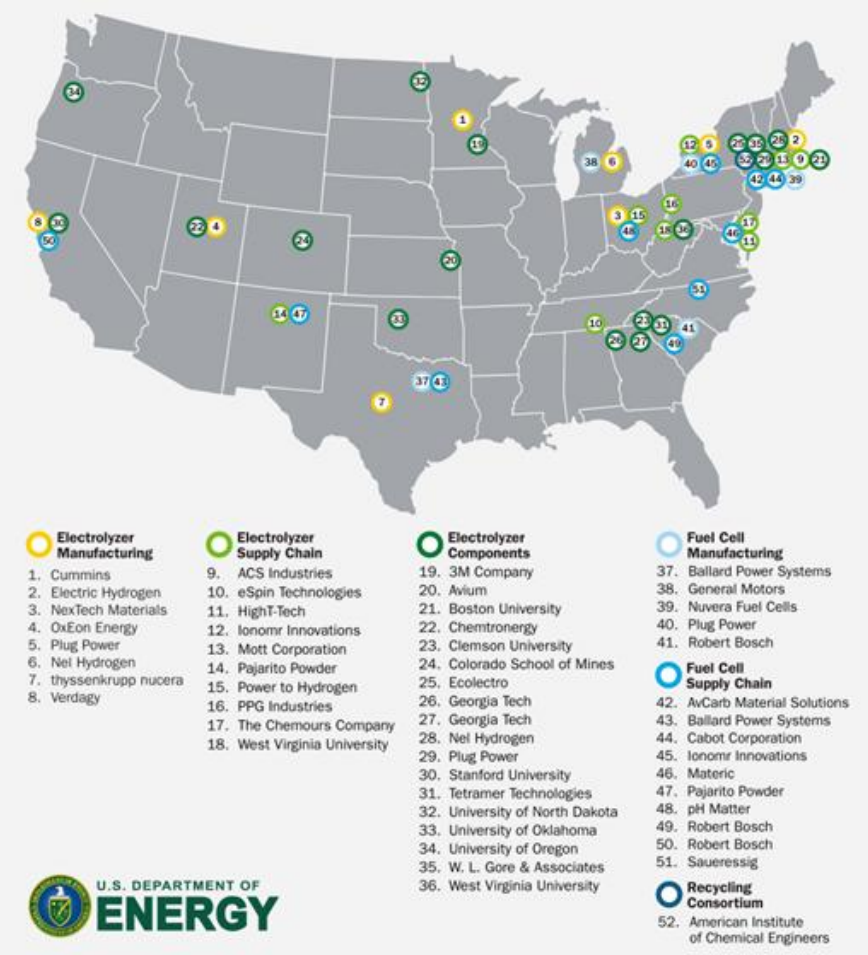
As those interested and involved in advancing the hydrogen and fuel cell footprint in the United States (U.S.) wait on 45V tax guidance and Hydrogen Hub contract negotiations to finalize, the U.S. Department of Energy (DOE) recently injected a major research, development, demonstration, and deployment (RDD&D) investment to move the ball down the field.

In addition to the $7 billion allocated to the now famous Hydrogen Hubs, the Infrastructure and Investment Jobs Act (IIJA) also authorized a total of $1.5 billion for RDD&D activities in the Clean Hydrogen Electrolysis, Manufacturing, and Recycling Program. On March 13, DOE announced $750 million in funding to support 52 projects in 24 states.



Eleven members of the Fuel Cell & Hydrogen Energy Association (FCHEA) were awarded a total of $368,900,000 to lead 18 of those projects. FCHEA members also comprise several of the partner teams to support the project leads selected.

There were five topic areas (out of six) in the funding solicitation that focused on electrolyzer and fuel cell stack, system, and component cost reduction, as well as boosting manufacturing and supply chains, and job creation.

- **Topic 1: Low-Cost, High-Throughput Electrolyzer Manufacturing**
- **Topic 2: Electrolyzer Component and Supply Chain Development**
- **Topic 3: Advanced Technology and Component Development**
- **Topic 4: Advanced Manufacturing of Fuel Cell Assemblies and Stacks**
- **Topic 5: Fuel Cell Supply Chain Development**

FCHEA Member Lead	Topic	Project Title	Amount
Ballard Power Systems	4	Ballard PEM Electrode Assembly Manufacturing and Automated Stack Assembly US Operation	$30,000,000
	5	Ballard's Next Generation Flexible Graphite Bipolar Plate Manufacturing Line	$10,000,000
Bosch	5	Bosch Industrialization of High-Volume BPP Processes for North American Market	$10,000,000
	5	HyPER: Hydrocarbon Polymer Electrolyte Realization	$5,000,000
	4	Industrialization of MEA and Stack Assembly for North American Market	$30,000,000
Chemours	2	Durable, High-Performance Membranes for Proton Exchange Membrane Water Electrolysis	$10,000,000
Cummins	1	Multilayer Membrane-Electrode-Subgasket-PTL Assembly (MESPA) for Facile Assembly of PEM Electrolysis Stacks	$17,900,000
Electric Hydrogen	1	Manufacturing Innovations for Scaling Green H2 to Fossil-parity	$46,300,000
GM	4	High Speed Fuel Cell Stack Manufacturing	$30,000,000
Gore	3	Durable, Ultra-Thin Diaphragms for Liquid Alkaline Water Electrolysis	$4,800,000
Ionomr Innovations	5	Advanced hydrocarbon proton exchange ionomer and membrane scale-up and electrode optimization for heavy duty fuel cells	$5,000,000
	2	Alkaline stable, non-porous, anion exchange ionomer and membrane separator scale-up for liquid alkaline electrolysis	$6,100,000
Nel	1	Fully Automated Production Proton Exchange Membrane Electrolyzers to Achieve Hydrogen Shot	$50,000,000
	3	Low-Cost, Clean AEM Electrolysis through Transport Property Understanding, Manufacturing Scale-up, and Optimization of Electrodes and Their Interfaces	$4,900,000

Nuvera	4	Integrated Automation for High Volume PEM Fuel Cell Stacking and Acceptance Testing in Heavy-Duty Motive Applications	$30,000,000
Plug Power	3	Advanced PEM Electrolyzer Membrane for Hydrogen Crossover Mitigation	$3,200,000
	1	Gigawatt Scale Electrolyzer Component Manufacturing and Stack Assembly	$45,700,000
	4	High Volume Fuel Cell Manufacturing, Stack Assembly, and Final Test	$30,000,000

Cumulatively, the projects are expected to generate more than 1,500 new direct jobs, as well as increase fuel cell manufacturing capacity to 14 gigawatts (GW) per year and electrolyzer capacity to 10 GW per year.

Several FCHEA members have amplified DOE's announcement with their own press releases, providing additional details on selected projects and how the funding will be utilized to implement advanced manufacturing, expand or construct new facilities, and ramp up fuel cell and electroyzer stack and system production.

- Ballard Power Systems – funding will support a new gigafactory in Rockwall, Texas;
- Electric Hydrogen – will use the grant to scale manufacturing at Massachusetts gigafactory;
- Nel Hydrogen – investment will support new gigafactory in Michigan;
- Nuvera – funding will be used to develop the high-volume production process for its next-generation fuel cell stack technology; and
- Plug – scaling up manufacturing of fuel cell and electrolyzer stacks, among other activities.

FCHEA is extremely proud of its members and all the award recipients; and is excited to follow the progress of each of the winning projects across the U.S. To make sure you are in the know about the latest industry news, funding opportunities, and key events, please subscribe to FCHEA's free monthly newsletter, the Connection, or inquire about membership to join our efforts!