



March 31, 2017

Division of Air Quality
Delaware Department of Natural Resources and Environmental Control
100 West Water Street, Suite 6A
Dover, DE 19904

RE: Comments Regarding Proposed Beneficiary Mitigation Plan

The Fuel Cell and Hydrogen Energy Association (FCHEA) appreciates the opportunity to comment on the Delaware Department of Natural Resources and Environmental Control, Division of Air Quality's proposed Beneficiary Mitigation Plan ("Plan"). The plan is provided by Appendix D of the Partial Consent Decree stemming from Volkswagen "Clean Diesel" Marketing, Sales Practices and Products Liability litigation (United States of America v. Volkswagen AG et al., Case No. 16-cv-295 (N.D. Cal.)).

The Fuel Cell and Hydrogen Energy Association is the trade association dedicated to the commercialization of fuel cells and hydrogen energy technologies. FCHEA member organizations¹ represent the full global supply chain for hydrogen and fuel cells, including automakers; material, component, fuel cell stack and system manufacturers; hydrogen producers and energy companies; utilities; and end users.

Prominent among these members are two innovative companies operating in Delaware. Air Liquide operates a research and development facility in Newark. W. L. Gore, also in Newark, produces membrane electrode assemblies (MEA) and membranes for the proton exchange membrane (PEM) fuel cell industry

Fuel cell installations and deployments are increasing every year, in number and in megawatts (MW). There are more than 235 MW of large stationary (100 kW to multi-megawatt) fuel cells

¹ Members include Air Liquide, Air Products, Altery Systems, American Honda Motor Company, Anglo American Marketing Limited, Applied Research Center, AREVA, Black & Veatch, Bloom Energy, BMW of North America, California Air Resources Board, California Fuel Cell Partnership, CERES Power, CHANGE, Connecticut Hydrogen-Fuel Cell Coalition, CSA Group, Daimler, Doosan Fuel Cell America, Edgewise Energy, Fuel Cell Energy, Fuel Cell Seminar & Energy Exposition, Fuji Electric, GE-Fuel Cells, General Motors, Gore Fuel Cell Technologies, Hydrogenics, Hyundai, Idaho National Laboratory, Intelligent Energy, ITM Power, Johnson Matthey Fuel Cells, LG Fuel Cell Systems, McPhy Energy, Methanol Institute, myFC, National Renewable Energy Laboratory, Nebraska Public Power District, Nel Hydrogen, Nissan North America, Nuvera Fuel Cells, Ohio Fuel Cell Coalition, Pajarito Powder, PDC Machines, Plug Power, Sandia National Laboratories, Savannah River National Laboratory, Shell Oil, South Coast Air Quality Management District, 3M, The Linde Group, Toyota Motor North America, TreadStone Technologies, and United Hydrogen

currently operating in 43 States. Electric utilities use fuel cells to provide multi-megawatts of power to local users. Cities are adopting fuel cells to power essential services when the grid goes down. Railroad and telecom companies use fuel cells to power communication towers and signaling infrastructure.

Major corporations are installing hundreds of fuel cell systems to power retail sites, data centers, and other facilities. Also, companies are deploying fuel cell-powered forklifts in warehouses and distribution centers across the country. Fuel cell vehicles are available for purchase or lease in California, and soon will be available in several northeastern States. Finally, fuel cell buses are in operation in several states, including Delaware.

These examples display the industry's capability and capacity to successfully deliver the kind of projects the draft Beneficiary Mitigation Plan envisions funding.

FCHEA endorses the Plan's goal of improving ambient air quality by seeking significant and sustained cost effective reductions in nitrogen oxide emissions; and expediting deployment and adoption of zero emission and near-zero emission vehicles and engines.

To enhance fulfillment of the Plan's goals, FCHEA recommends an economic impact factor be added to the Plan's anticipated project selection criteria. Doing so will help promote further growth in Delaware's fuel cell industry.

FCHEA supports zero emission vehicles (ZEV) as a key pathway to advancing energy independence and to reducing the carbon intensity of transportation fuels. Because fuel cell vehicles (FCV) combine the emissions-free driving of battery electric vehicles (BEV) with the range and convenience of gasoline-powered vehicles, FCHEA supports building refueling infrastructure ("networks") that support bringing these cars to market.

To expedite the deployment and adoption of ZEV as called for by the Plan, FCHEA recommends available ZEV supply equipment-related funds² be allocated in coordination with private sector-funded hydrogen refueling networks. Hydrogen providers and automakers are exploring the development of such a network on the I-95 corridor in the Mid-Atlantic region.

Also, FCHEA recommends a "zero emissions miles dispensed" factor be added to the Plan's anticipated project selection criteria. By giving added preference to those projects capable of dispensing greater zero emissions driving miles, nitrogen oxides reduction benefits can be maximized.

² See [Consent Degree, Appendix D-2, Eligible Mitigation Actions, Page 8](#)

Thank you for your consideration of these comments. If you have any questions, please contact me at mmarkowitz@fchea.org.

Sincerely,

Morry Markowitz
President