

CHARTER

U.S. Department of Transportation (DOT) Hydrogen Fuels Working Group July 8, 2003 (FINAL)

I. Establishment

In support of the U.S. Department of Transportation's (DOT) recognized responsibilities for transportation vehicle and infrastructure safety in all modes of transportation, and of DOT's established regulatory authorities and responsibilities, the DOT Hydrogen Fuels Working Group (Working Group) is established.

II. Purpose

a) General

The purpose of the Working Group is to coordinate, facilitate and inform all Operating Administration (OA) activities concerning research, development and demonstration into hydrogen fueled and fuel cell powered vehicles and stationary applications, and the infrastructure to support each; and to coordinate the various codes and standards activities concerning hydrogen and fuel cell vehicles and infrastructure affecting transportation, including international regulatory responsibilities.

b) Emphasis Areas

The Working Group will emphasize DOT activities in the following areas:

- 1) Establishing codes and standards for the safety of hydrogen and fuel cell vehicles, facilities and infrastructure for all modes of transportation.
- 2) Developing, demonstrating, and deploying fuel cells:
 - i. In heavy duty vehicles, particularly transit buses;
 - ii. As auxiliary power units to reduce truck idling;
 - iii. For marine onboard and hotelling applications;
 - iv. For air transportation ground support;
 - v. For other transportation applications.
- 3) Improving hydrogen transportation safety and mitigating hazards through parallel development of a safe hydrogen infrastructure:
 - i. In pipelines.
 - ii. As a hazardous material regardless of distribution method.
 - iii. In consumer applications throughout the transportation system.
 - iv. For first responders in accidents involving hydrogen and fuel cell vehicles and infrastructure.
- 4) Mitigating the environmental impacts of transportation, including recycling and disposal of hydrogen and fuel cell components.
- 5) Supporting DOT policy actions and decisions.

- c) Resource Identification
The Working Group will identify and pursue needed resources to support DOT's safety and regulatory research, development, demonstration and deployment roles concerning hydrogen and fuel cell technologies and infrastructure in transportation.
- d) Leadership
The Working Group will perform these tasks to provide leadership of the DOT portion of the President's Hydrogen Fuels and FreedomCAR Initiatives, to support the DOT Vision of Our Role in Developing a Hydrogen-Powered Transportation System (Appendix A), and DOT's Existing Authorities in Hydrogen (Appendix B).

III. Organization and Membership

- a) Chairman
The Working Group will be chaired by the Administrator, Research and Special Programs Administration (RSPA), or his/her designee.
- b) Membership
All OAs will provide at least two individuals, one with policy knowledge related to hydrogen, and one with technical knowledge related to hydrogen, to serve on the Working Group.
- c) Staffing
All OAs will provide staffing to the work of the Working Group, as requested by their Working Group members.
- d) Meetings
The Working Group will meet at the discretion of the Chairman, but no less than monthly.

IV. Action Teams

- a) Organization and Membership
 - 1) Two working teams will be established, with membership from all OAs. These include a Research and Development Action Team and a Codes and Standards Action Team. The Working Group Chairman will select chairmen of the Action Teams.
 - 2) The Working Group will serve as the Policy Action Team for hydrogen and fuel cell issues as requested by the Office of the Secretary or the Working Group Chairman.
 - 3) Other formal or *ad hoc* working teams may be established by the Working Group Chairman for specific activities, with the consent of the Working Group.
- b) Research and Development Action Team
 - 1) The Research and Development Action Team (R&D Team) will work multimodally to share information on and, as resources are available, conduct applied multimodal research and development activities in support of, the research, development, demonstration and deployment of hydrogen and fuel cell

vehicles, components, stationary applications, and the infrastructure to support them.

- 2) The R&D Team will:
 - a) Prepare and maintain a catalog of DOT research activities and projects related to hydrogen and fuel cells, and make this information generally available.
 - b) Set forth DOT R&D priorities in hydrogen and fuel cell transportation research, subject to the approval of the Working Group.
 - c) Demonstrate partnering with other Federal agencies by coordinating with and supporting the hydrogen and fuel cell research activities of the Department of Defense (DoD), Department of Energy (DoE), Environmental Protection Agency (EPA), and other Federal agencies.
 - d) Widely disseminate the results of research conducted.
- c) Codes and Standards Action Team
 - 1) The Codes and Standards Action Team (C&S Team) will work multimodally to share information on and, as resources are available, conduct coordinated research and regulatory activities in support of, the research, development, demonstration and deployment of hydrogen and fuel cell vehicles, components, stationary applications and the infrastructure to support them.
 - 2) The C&S Team will:
 - a. Prepare and maintain a catalog of DOT C&S activities related to hydrogen and fuel cells, and make this information generally available.
 - b. Set forth coordinated DOT C&S positions in hydrogen and fuel cell transportation and handling, subject to the approval of the Working Group.
 - c. Demonstrate partnering with other Federal agencies by coordinating with and supporting the C&S activities of the Department of Defense (DoD), Department of Energy (DoE), Environmental Protection Agency (EPA), and other Federal agencies.
 - d. Ensure full multimodal support of DOT positions on hydrogen and fuel cell C&S.

VI. Expiration

The Working Group will be reviewed annually for need for continuation.

Adopted by the U.S. Department of Transportation (DOT) Hydrogen Fuels Working Group, July 8, 2003.

Samuel G. Bonasso
Acting Administrator
Research and Special Programs Administration

Department of Transportation (DOT) Vision of Our Role in Developing a Hydrogen-Powered Transportation System

The Department of Transportation has a vital role in the Nation's move to a hydrogen-powered transportation system. For nearly half a century, transportation has accounted for about one-fourth of total U.S. energy use and currently accounts for two thirds of U.S. oil consumption. The development of a marketable hydrogen vehicle will greatly reduce the nation's dependence on foreign oil. We will support this mission by developing technology and infrastructure for commercially viable hydrogen fuel cells to power cars, buses, trucks, homes and businesses free of air pollution or greenhouse gases. We must pursue a clean, safe, and secure energy future.

DOT has existing authorities, regulatory responsibilities and expertise for vehicle safety and fuel economy, and for pipeline and hazardous material safety. These include the safety of hydrogen-powered vehicles and hydrogen storage in vehicles, as well as the safe transportation and distribution of hydrogen. DOT is already working internationally and domestically in these areas.

DOT's heavy-duty vehicle research includes the leading role in fuel cell research, development, demonstration and deployment for heavy vehicles. These efforts are already demonstrating hydrogen fuel cell buses on the road. The efforts in fuel cell buses and heavy-duty vehicles can help pave the way for other transportation markets. Furthermore, DOT has a unique role in providing capital to support, and to maintain the safety of, the Nation's transportation infrastructure.

Given these responsibilities DOT should lead government's planning for the hydrogen distribution and delivery system. Because DOT has primary responsibility for pipeline safety and transportation of hazardous materials, we must coordinate the concurrent development of the infrastructure to support the pace of commercially available vehicles, and the pace of local production, storage and protection of energy using hydrogen. In the words of Energy Secretary Abraham, "unless we work on parallel tracks, developing the vehicle and the infrastructure concurrently instead of consecutively, this process could take three decades or longer." The President's initiative sets a goal of a marketable technology within twelve years, and widespread commercial availability within seventeen, and the DOT will do our part to achieve those goals.

DOT's Existing Authorities in Hydrogen

Federal Aviation Administration

49 U.S.C. 44504, Improved aircraft, aircraft engines, propellers, and appliances.

49 U.S.C. 44508 Research Advisory Committee

49 U.S.C. 44511 Aviation Research Grants

49 U.S.C. 44513 Regional Centers of Air Transportation Excellence

49 U.S.C. 44714 Aviation Fuel Standards

49 U.S.C. 47136 Inherently Low Emission Airport Vehicle Pilot Programs

Federal Motor Carrier Safety Administration

49 U.S.C. 304 and 49 U.S.C. 1655, Authority for DOT to regulate fuel system safety in commercial trucks.

Federal Railroad Administration

49 U.S.C. 1653 (a), Research and development relating to transportation, including research and development on all types of engines, fuels, and emissions.

Federal Transit Administration

49 U.S.C. 5308, Clean fuels formula grant program--a "clean fuel vehicle" includes a vehicle powered by fuel cell. Historically, Congress has provided funding available in the Transportation Equity Act for the 21st Century for this program to the bus and bus-related category of the Capital investment grant program.

49 U.S.C. 5309, Capital investment grant and loans program, bus and bus-related category – fuel cell buses fall within the scope of this program.

49 U.S.C. 5312, Research, development, demonstration, and training projects – authorizes fuel cell bus work.

49 U.S.C. 5314, National planning and research programs - FTA's research program includes activities that support hydrogen & fuel cell buses.

49 U.S.C. 5318, Bus Testing Program – All new model buses must undergo a FTA Bus Testing Protocol prior to transit agencies using FTA funds to purchase.

Maritime Administration

46 App. U.S.C. 1101, Fostering development and maintenance of the merchant marine vehicles and infrastructure for national defense purposes and development of the foreign and domestic commerce of the United States – includes the development of fuel cell technology.

National Highway Traffic Safety Administration

49 U.S.C. 30101 et seq., Motor vehicle safety

49 U.S.C. 32901 et seq., Automobile fuel economy.

49 U.S.C. 32905 et seq., Manufacturing incentives for alternative fuel vehicles

Research and Special Programs Administration

49 U.S.C. 60101 et seq., Pipeline safety

49 U.S.C. 5101 et seq., Hazardous material safety, both domestically and internationally

49 U.S.C. 5506 - Advanced vehicle technology program, research and development activities