

The Hydrogen and Fuel Cell Technical Advisory Committee
Washington, D.C.

June 22, 2014

The Honorable Dr. Ernest Moniz
Secretary of Energy
U.S. Department of Energy
1000 Independence Ave. SW
Washington, D.C. 20585

Dear Mr. Secretary:

Enclosed is the Hydrogen and Fuel Cell Technical Advisory Committee's (HTAC's) Annual Report on Hydrogen and Fuel Cell Commercialization and Technical Development. I am pleased to provide it to you on behalf of my fellow Committee Members, who have endeavored to provide you with a comprehensive, thematic report, along with sufficient detail to create an understandable overview while also writing an easy-to-read document for the widest possible audience.

The Committee is once again pleased to report to you that the working relationship with the Fuel Cell Technologies Office is productive, functional, and cooperative. The Office remains critical to addressing the Department's ongoing efforts on fuel cell durability, costs, advanced research and manufacturing, codes and standards, and infrastructure. The Committee continues to assess these efforts with an ongoing topical subcommittee structure that operates in the mutual interests of both the full Committee and the Program Office.

This Annual Report highlights progress made, as well as challenges, regarding hydrogen commercialization and technical development. It describes both domestic and international developments. It also signals a fundamental conundrum: sustained low levels of Department of Energy funding have slowed progress, and this slow progress negatively impacts market-based funding. The Committee is deeply concerned that increased international support and funding will de-position U.S. leadership, and without increased budgetary support, the United States will fail to demonstrate the priority and progress the Program deserves.

For clarity, this letter includes highlights and concerns captured in the Annual Report that warrant your attention. We conclude with several recommendations for your consideration. We also hope that you have the opportunity to look more closely at the Annual Report itself and that you will enjoy doing so.

Highlights:

- Increasing penetration of stationary fuel cell deployments for back-up power, grid security, and expansion of distributed generation capacity.
- More definitive plans by automobile manufacturers for 2014–2017 commercial deliveries of fuel cell electric vehicles (FCEVs).

- Continued commitment to refueling infrastructure in California.
- Establishment and growth of H2USA.
- Rapid growth in fuel cells for material handling applications.
- Key decisions on policy and regulations, and additional work on codes and standards.
- Some improvement in the financial climate for stationary products amidst weakness for early-stage and venture capital-backed investments.
- Demonstration of hydrogen generation using a variety of renewable resources.

Concerns:

- Decreased funding for fuel cell and hydrogen research and development.
- Stalled progress toward reaching DOE's own goals set in prior years, due to a lack of funding.
- Delays in achieving both cost and durability targets for automotive fuel cells.
- Difficulty in making progress towards cost reduction targets for hydrogen dispensing.
- Diminished progress in hydrogen storage in pressurized tanks.
- A sustained lack of understanding of hydrogen and fuel cell technologies and applications among stakeholders.
- Multiple years of zero budgeting for the education and communication about hydrogen and fuel cell technology.

The Committee provides recommendations in fulfillment of its Congressional mandate as a part of the Annual Report process. The strength of the recommendations' wording reflects the depth of concern felt by the Committee members, emboldened by the promise and enthusiasm we see and feel with regard to the Program's potential contribution to the Department's opportunities to impact the nation's energy future. We welcome the opportunity to discuss these suggestions with you and/or your designate.

Recommendations:

- With respect to both the highlights and concerns, the Committee suggests that the priority and future funding levels for hydrogen and fuel cell technology be increased. Increased funding is critical to progress for commercialization, research and development, infrastructure, and education, and it makes a statement about the fuel cell and technology future to the marketplace and potential investors. FCEVs and stationary fuel cells both contribute to the reliability and security of the nation's future energy system. From the Committee's perspective, we cannot achieve the potential or promise of hydrogen and fuel cell technology in the U.S. energy system at the current priority and funding levels in a time frame that is meaningful, internationally competitive, or serves the nation's interests and defends against potential threats. We know and understand the priority preference that has been demonstrated within the Department as regards battery electric vehicles (BEVs). We are aware of both the progress and near-term successes of the Program, as well as some of its challenges and difficulties. We thus recommend more

priority and emphasis on FCEVs in an “all of the above” world for the fundamental reason that future outcomes will be “no regrets” for doing so.

- We would be pleased if you would request a review of the HTAC’s work later this year or early next year as we approach the ten-year anniversary of the Committee’s formation and commissioning. The Committee has not yet had the opportunity to present its work, worth, and accomplishments to the Secretary in person. We welcome an opportunity in which both you and members of your leadership team can hear and see firsthand how this Committee of energy technology and public policy expert volunteers is committed to helping shape a part of the nation’s future energy system in support of the ongoing efforts of the Department and its Program Office.

We look forward to continuing our service to you, your leadership team, and the Program Office. It is a pleasure for us to serve the nation with our contributions and to serve on this Committee. Any feedback you might have would be most welcome and appreciated.

Sincerely yours,

A handwritten signature in black ink, appearing to read "John Hofmeister". The signature is fluid and cursive, with a large initial "J" and "H".

John Hofmeister
Chair

On behalf of the Hydrogen and Fuel Cell Technical Advisory Committee