Department of Energy
Washington, DC 20585

February 14, 2019

Mr. Charles E. Freese
Vice Chair
Hydrogen and Fuel Cell Technical Advisory Committee
Pontiac Engineering Center
Global Propulsion Systems
850 North Glenwood Avenue
Pontiac, Michigan 48340

Dear Chairman Freese:

Thank you for your November 30, 2018, letter to Energy Secretary Rick Perry and the accompanying *2017 Annual Report of the Hydrogen and Fuel Cell Technical Advisory Committee (HTAC)*. The Department values the input of the Committee and sincerely appreciates its annual reports and recommendations.

Your report outlines many advances in United States-based hydrogen and fuel cell technology development and commercialization during 2017. It also summarizes key challenges to reaching the 2020 fuel cell and hydrogen infrastructure deployment goals envisioned in the Energy Policy Act of 2005 (EPACT), and identifies threats to U.S. competitiveness in this technology area. Your recommendations identify ways the program can work to resolve some of these concerns and we will continue to address these as we move forward.

Although the deployment of hydrogen fuel cell cars does not meet the widespread deployment targets envisioned in EPACT Section 811(a), DOE has met the EPACT Section 805(f) program goal of enabling automakers to make commitments to offer fuel cell electric vehicles (FCEVs) for sale to U.S. consumers. There are now over 6,000 commercial FCEVs on the road in the United States – more than any other country. You may be pleased to know that Deputy Secretary Brouillette attended the Hydrogen Energy Ministerial meeting in Japan in October 2018. Ministers and delegates from more than 20 countries attended and affirmed their commitment to accelerating progress in hydrogen and fuel cell technologies. In addition, the United States was elected Chair of the International Partnership for Hydrogen and Fuel Cells in the Economy in May 2018, which will help ensure that we are aware of global technical and market developments. Hydrogen safety and the harmonization of hydrogen and fuel cell codes and standards has been identified as a priority for international collaboration, and the United States will continue contributing to the development of consistent, science-based frameworks for hydrogen fuel and infrastructure.

We agree that cost continues to be a challenge, particularly the cost of hydrogen infrastructure and delivered hydrogen. Our H2@Scale initiative focuses on key challenges associated with wide-scale production and use of hydrogen across sectors, to unlock the revenue potential and value of hydrogen and fuel cells in multiple industries and applications. The H2@Scale research

and development (R&D) consortium now comprises over 20 industry-led projects that are focusing on hydrogen production, integration of hydrogen technologies with the grid, and hydrogen fueling stations. These efforts will address critical national issues such as grid resiliency, energy security, domestic job creation, and leadership in manufacturing.

In addition, we recently released a Request for Information (RFI) to assess the domestic resources compatible with large-scale hydrogen production and gain insight into the technical and economic barriers associated with these production pathways. We are hopeful that the information gained through this process will improve energy affordability and security, as well as increase the resiliency and reliability of the nation's infrastructure. We also released an RFI in 2018 on reducing regulatory barriers to the development and deployment of technology, and we are currently developing plans to address this feedback.

Since you specifically mention our national laboratories, I am pleased to report that we have established a number of national laboratory consortia that expedite industry access to unique combinations of laboratory expertise and capabilities for R&D in specific areas, such as electrocatalysis, advanced water splitting, and hydrogen storage and infrastructure. These consortia will accelerate innovation in key technology areas such as zero-platinum catalysts, low-cost renewable hydrogen production, advanced materials and systems for hydrogen delivery and storage, and integrated/hybrid systems.

We continue to establish and seek partnership opportunities with federal agencies, states, and other entities to broaden acceptance for hydrogen and transition technologies to the private sector. For example, to address your comment on military applications we are working closely with the Department of Defense (DoD) to explore these opportunities. A joint Memorandum of Understanding signed by DOE and DoD in October, 2018 will foster collaboration in development of hydrogen and fuel cell technologies for military, as well as civilian use.

As you note, this industry is an important potential source of sustainable domestic job growth, future innovation, and energy leadership. It will be vital to stay at the cutting edge of innovation to maintain our leadership position, and DOE will continue to work with you and other stakeholders to identify key R&D priorities. The Department values the advice and commitment of the Committee in its efforts to continue to improve our programs and activities related to hydrogen and fuel cells. Please extend my sincerest gratitude to the Committee members for their hard work and their valuable contributions to the Department and its mission.

Sincerely,

Daniel R Simmons
Assistant Secretary
Energy Efficiency and Renewable Energy