ONE HUNDRED FIFTEENTH CONGRESS

Congress of the United States

House of Representatives

COMMITTEE ON ENERGY AND COMMERCE

2125 RAYBURN HOUSE OFFICE BUILDING WASHINGTON, DC 20515-6115

Majority (202) 225-2927 Minority (202) 225-3641

March 22, 2018

Dr. John Farrell Laboratory Program Manager, Vehicle Technologies National Renewable Energy Laboratory 15013 Denver West Parkway, MS-1633 Golden, CO 80401

Dear Dr. Farrell:

Thank you for appearing before the Subcommittee on Environment on March 7, 2018, to testify at the hearing entitled "The Future of Transportation Fuels and Vehicles."

Pursuant to the Rules of the Committee on Energy and Commerce, the hearing record remains open for ten business days to permit Members to submit additional questions for the record, which are attached. To facilitate the printing of the hearing record, please respond to these questions with a transmittal letter by the close of business on Thursday, April 5, 2018. Your responses should be mailed to Kelly Collins, Legislative Clerk, Committee on Energy and Commerce, 2125 Rayburn House Office Building, Washington, DC 20515 and e-mailed in Word format to kelly.collins@mail.house.gov.

Thank you again for your time and effort preparing and delivering testimony before the Subcommittee.

Sincerely.

John Shimkus

Chairman

Subcommittee on Environment

cc: The Honorable Paul Tonko, Ranking Member, Subcommittee on Environment

Attachment

Attachment—Additional Questions for the Record

The Honorable John Shimkus

- 1. Mr. Farrell, in your view, what are the benefits for future spark ignition engines of high octane fuels?
- 2. Compared to other octanes which NREL has studied and researched through Co-optima efforts, how does ethanol compare?

The Honorable Joe Barton

1. While we work to create new, energy efficient technologies to fuel our transportation system, are we also taking steps to make current energy sources more sustainable?

For example, natural gas is one of this country's most practical energy sources and a proven fuel with many opportunities that could be explored to upgrade with new technologies. With the rapid growth in energy demand, I believe that more needs to be done to explore novel developments of this major untapped natural resource.

- 2. What steps is the Department of Energy taking to encourage natural gas-related energy research and development for biological and catalytic technologies, methods and tools to convert natural gas into fuels, chemicals and other products? Moving forward to upgrade this vital resource in our nation not only offers alternative sources of fuel but also provides opportunities for economic growth in regions of our country where methane gas is prevalent.
- 3. What types of financial incentives currently exist through the federal government and private sector, to encourage this type of innovation?
- 4. How would such a company present these types of ideas to the federal government for consideration?

The Honorable Bill Flores

- 1. In your testimony, you discuss the wave of innovation dramatically reshaping the concept of transportation as we know it. Often, when alternative fueling stations, such as hydrogen, are first introduced to a community, the local governments are challenged in how best to permit the stations.
 - a. How could the federal government facilitate the development of these fueling stations?

- b. Could the federal government provide some sort of consistency in permitting alternative fueling infrastructure, for hydrogen or others, to facilitate development of fueling stations?
- 2. The availability of fueling infrastructure is critical to the widespread adoption of alternative fuel vehicles. In what manner is NREL examining challenges that new technologies face, such as cost and fueling infrastructure barriers?