



U.S. HOUSE OF REPRESENTATIVES COMMITTEE ON
SCIENCE, SPACE, & TECHNOLOGY

Opening Statement

**Chairman Conor Lamb (D-PA)
of the Subcommittee on Energy**

Subcommittee on Energy Hearing:
*The Next Mile: Technology Pathways to Accelerate Sustainability within the
Transportation Sector*

Wednesday, September 18, 2019

Good afternoon and thank you to all our witnesses joining us here today to discuss a topic that is critical for our nation: sustainable transportation. This includes the cars that we use every day to drive to work, the trucks that help us transport goods across the country, the planes that fly all over the world, and the trains and ships that help us get products and people to the places they need to be.

It's clear that transportation is vital to our everyday lives. But we need to be smarter about our investments in technologies that can help reduce emissions from this sector. In 2017, transportation overtook electricity as the sector of the U.S. economy with the highest percentage of greenhouse gas emissions, accounting for 29% of emissions economy-wide. Finding pathways to reduce greenhouse gas emissions from this sector is an essential part of solving our climate challenge. At the same time, it is incumbent on us to ensure that we are leaders in supporting the jobs and industries of the future. The research and development of these innovative technologies improve our economy, our national security, and our climate. That's what we are here to talk about today.

While our labs, universities, businesses and research institutions have worked on these problems for decades – even centuries – much of the transportation landscape remains unchanged. Ford first sold the Model T just over a century ago (1908) and most cars, trucks, and buses on our roads still use an internal combustion engine. And with larger vehicles – think airplanes, trains, and ships – the problem becomes even more complicated.

Scientists have been working hard to come up with solutions that will help these technologies evolve for decades – and we need to ensure they can continue doing so. We have seen the development and growth of clean electric vehicles that can travel hundreds of miles on a single charge, and hybrid electric vehicles that can travel even further. Demand for electric vehicles is projected to increase in the coming years, both worldwide and in the United States and this is already growing rapidly: in 2018, more than 1.7 million plug-in and battery electric vehicles were sold worldwide – a nearly 40% increase over 2017.

The Department of Energy is researching other technologies in this sector as well. For example, the Bioenergy Technologies Office is working to develop commercially viable biofuels that are compatible with our modern transportation infrastructure. These fuels can be made from a variety of feedstocks, including waste organic materials or crops grown specifically for creating energy. Some of these fuels, known as “drop-in” fuels, are nearly identical to the fuels they are designed to replace, but burn much more cleanly than existing fuels. That means we wouldn’t need to make any changes to engines, fuel pumps, and other vehicle technologies in order to use these fuels, while still reaping the benefits.

The Fuel Cell Technologies Office at the DOE is working to develop vehicles that run off of hydrogen fuel cells. These fuel cells use hydrogen to produce electricity, which then powers an electric motor, similar to how an electric vehicle operates. Fuel cell vehicles emit zero carbon; in fact the only by-product from these vehicles is water. While hydrogen-powered cars are showing promise, hydrogen can be produced in a variety of ways and scientists are working hard to identify a cost-effective, commercial scale method of production that is also clean, including through the use of renewables and nuclear power.

Making our transportation sector more sustainable is an enormously challenging and complex problem. It requires significant investment on our part and coordination across government, our labs and universities, and the private sector. But it’s a must-solve riddle, and I believe it is critical we develop and manufacture the answer – these technologies – here at home. Doing so is a clear win for our economy, national security, and climate.

I am excited to hear from our excellent panel of witnesses assembled here today on their ideas on how to tackle this problem, and I look forward to working with my colleagues across the aisle to advance legislation on this critical and timely topic.