



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

Opening Statement

Chairman Bill Foster (D-IL)
of the Subcommittee on Investigations and Oversight

Subcommittee on Investigations and Oversight Field Hearing:
Pedal to the Metal: Electric Vehicle Batteries and the Critical Minerals Supply Chain
April 21, 2022

Good morning to our witnesses and all our attendees. It's great to be here for a field hearing in Woodridge.

I'm thrilled to be meeting on a transformational technology issue. The United States has at last reached that storied "tipping point" for affordable, high-quality electric vehicles. The whole world is reaching for their wallets, and the 11th district of Illinois is answering the call. Rivian is at this very moment ramping up production of electric passenger and delivery trucks at its factory in Normal, and Lion Electric is readying for installation of production machinery at its electric bus factor in Joliet.

I should point out here that battery electric vehicles aren't the only game in town – literally, in this town – for low-emission fleets. Hyzon Motors is manufacturing hydrogen fuel cells for commercial vehicles in Bolingbrook. Clearflame Engine Technologies in Geneva has developed a truck powered by low-carbon biofuels. Demand for low-emission trucks and buses is booming, and our regional economy will reap the harvest.

But the clean truck and bus revolution is not just an opportunity for Illinois, but for a safer climate and cleaner air around the globe. Traditional trucks and buses tend to be diesel powered, which means they have a higher emissions profile for nitrous oxides and soot than gasoline-powered vehicles. An electric bus, on the other hand, doesn't emit anything at all. Electric fleets will enable massive improvements in urban air quality and help protect public health.

Furthermore, over the life of the vehicle, the average EV has less than half the carbon footprint per passenger mile than its equivalent internal combustion engine vehicle. And the environmental profile of EVs only gets better over time as grid operators replace more and more fossil plants with zero-carbon alternatives. There's a lot to be excited about.

Let us not forget that decades of dedicated research have led to this moment. It is no accident that the global transportation sector is changing. Cost-effective, lightweight, long-duration batteries that last more than a decade are the key. And they were developed over time by hardworking scientists and engineers with a very specific vision, many of them toiling up the street at Argonne National Lab. I'm proud to count some of these folks as my constituents.

But now is not the time to stop innovating. On the Oversight Subcommittee for the House Science Committee, it's our responsibility to look into technology concerns that could impede progress. And the supply chain for critical minerals that go into an electric vehicle battery – lithium, cobalt, nickel, graphite, manganese – may be an enormous technological challenge.

Global demand for these critical minerals is surging along with electric vehicle sales and projections from automakers. These numbers are simply eye-popping. And because they have more cells in their products, Rivian, Lion Electric and other companies that make big vehicles with big battery packs know better than anyone how much minerals costs affects their bottom line. Unfortunately, the United States is home to almost no mineral processing or midstream fabrication for batteries. China has invested billions in these steps of the supply chain and as a result, they hold a lot of the cards.

One value proposition of electric vehicles has always been their potential to loosen our dependence on a global commodity – oil. Oil prices are out of the U.S.'s control, and so they create volatility in our economy and harm American families. Russia's war on Ukraine has brought to light the grave dangers of our geopolitical dependency on fossil fuels. The last thing we want is to exchange one form of geopolitical vulnerability for another. So we need to focus on alternative battery chemistries, recycling strategies that can help keep mined minerals circulating in the economy, and new methods for extraction and processing that reduce environmental impacts.

I am a technology optimist. I believe we can engineer our way out of this problem. And the U.S. research enterprise has a lot more battery science breakthroughs up its sleeve. So many talented scientists, like Dr. Srinivasan and Dr. Amanchukwu, are committing their professional lives to the battery mineral supply chain. We have exciting companies like Rivian and Lion Electric both contributing to that quest and providing the demand pull for new innovations.

President Biden has set a goal for 2030 that half of the cars sold in the United States should be electric. I want to make sure the federal researchers are laser focused on that goal and deploying all available resources. I also want the federal research enterprise to be thinking beyond 2030.

I hope our witnesses today will be frank in their advice to the Committee, as we appreciate that decarbonizing the global transportation sector is a matter of urgency. I thank the witnesses for joining us.

