Statement to U.S. Senate Energy and Natural Resources Committee
Britta Gross
Director, Advanced Vehicle Commercialization Policy
General Motors Company
January 25, 2018

Good morning.

My name is Britta Gross and I am General Motors' director of advanced vehicle commercialization policy. I want to thank Chairman Murkowski, Ranking Member Cantwell, and the other committee members for inviting me here today to talk about some of the opportunities and challenges General Motors sees facing advanced vehicle technologies, particularly electric, or zero emission, vehicles.

If I may first offer you a perspective about how quickly the world is changing. In 2010, when General Motors introduced the plug-in Chevrolet Volt, we were one of consumers' first experiences with a plug-in vehicle. However last year, Americans purchased nearly 200,000 electrified vehicles including battery electrics, plug-in hybrid electrics, and fuel cell electric vehicles from more than a dozen manufacturers. Our own ground-breaking Chevrolet Volt, Chevrolet Bolt EV and Cadillac CT6 Plug-in accounted for nearly one-quarter of those vehicles. While this sounds like an incredible growth in electric vehicle interest, it's nothing compared to what is coming.

You may have heard General Motors recently announced our zero, zero, zero vision: that is, our belief in a future world with zero crashes, zero emissions and zero congestion. This vision represents the convergence of our work in

connectivity, electric vehicles, autonomous vehicles and car-sharing in an effort to move humanity forward. And as part of that vision, we announced our plans to bring at least 20 new all-electric vehicles to the market by 2023 – our next step in moving to a zero emissions world.

We know we are not alone in our optimism. As electric vehicles become cheaper, as batteries improve on performance and price, and as manufacturers reach scale – we will see exceptional growth in EV adoption.

Electric vehicles bring enormous societal, economic and technological opportunities. Not only are electric vehicles cleaner and quieter to operate, they are also fun to drive thanks to the instant torque electric motors provide. Because of electric vehicles, General Motors is making major financial investments in manufacturing facilities, as well as research and development facilities in the U.S. We are innovating around battery design and we're increasing hiring in areas not always associated with the auto sector, like computer science and software design.

With all the benefits electric vehicles bring, there are challenges too. Consumer acceptance of electric vehicles has steadily increased, but we still have a long way to go. I want to focus on two areas where your committee could help sustain

continued growth: the first is consumer adoption and the second is aiding with charging infrastructure build-out.

The Federal Electric Vehicle Tax Credit, worth up to $7,500, has been an important incentive for EV buyers and is without a doubt responsible for helping to fuel EV adoption. We appreciate the Senate's role in keeping this customer incentive in place as tax reform passed last year. This federal incentive sends a particularly powerful signal about the importance of vehicle electrification to consumers in all 50 states. Right now, when we are on the cusp of attracting more mainstream consumers to EVs, is when we need to continue and strengthen this positive signal the most. It is a valuable tool to allow consumers greater access to EVs.

On infrastructure, this committee has a unique opportunity to lay the foundation for the future. Mass-adoption of electric vehicles represents a large, smart, and flexible load that is unlike any other load on the electric grid. If we do this right, and plan for the smart-charging of EVs – late at night and in the early morning hours – EVs can act as storage devices that make use of under-utilized power plants at night and take advantage of intermittent renewables. Thus, EVs can lead to a more balanced grid load.

But all the benefits to the grid can't happen, unless the United States reaches true scale with EVs. We need EV charging stations that are highly visible to consumers and that drive consumer-confidence in the ability to drive EVs anywhere at any time.

EV charging infrastructure today has grown from non-existent to over 17,000 public stations, but more is required. This market will become more viable and competitive over time, but we have a long way to go. This early market currently requires continued partnership between electric utilities, station operators, vehicle manufacturers and support by federal, state and municipal government to establish charging stations at the same scale as the 168,000+ gas stations across the country.

EV infrastructure is not only key to removing the barriers to acceptance of electric vehicles, but is also an imperative for other innovative and advanced mobility solutions, such as car-sharing, ride-hailing, and self-driving vehicles. The speed with which EV charging infrastructure and EV adoption grow will determine the future of mobility in the U.S., and set the stage for even more advanced transportation technologies. And leading in these technologies here in the U.S.

means we can take these technologies to global markets – and that's good for all of us.

Thank you for your time today and I look forward to answering any questions that the members of the committee might have.