

The rise of electric vehicles in the DMV area

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WASHINGTON – The Environmental Protection Agency estimates that transportation accounts for 28 percent of total greenhouse gas emissions in the United States, making it the largest contributor to U.S. greenhouse gas emissions. Many believe that electric vehicles could solve this.

Electric cars run on batteries instead of using gasoline, allowing for less emissions when driven. Recently, there has been an increase in both electric vehicles driven and the number of car companies manufacturing electric models. This is expected to continue to rise within the next decade, as companies pledge to veer away from gasoline.

“Electric cars help with both local pollution, which is the air that we breathe, and overall climate change,” said Dr. Valentina Aquila, an environmental science professor at American University. “Since [an electric car] does not have a tailpipe, it does not worsen the air quality, and by electrifying it, it reduces the carbon dioxide emission associated with burning gasoline.”

Despite the environmental benefits, electric vehicle batteries require more time to charge and are not long lasting, creating challenges for car companies as they switch from gasoline to electric.

“The efforts should be not just to replace the current gasoline fleet with an EV fleet, but also to improve the technology of the electric cars,” Aquila said.

Many insist that electric cars offer a more enjoyable driving experience. Eric Cardwell, a former Washington resident and climate activist who has been driving electric since 2014, has

found a community of fellow electric vehicle enthusiasts through over nine Facebook groups dedicated to discussing electric vehicles. Cardwell says he has been passionate about electric cars for as long as he can remember.

“Even as a little kid, I remember riding along in the car, and I would see all these tailpipes spewing fumes out the back, and think there has to be a better way,” said Cardwell.

As electric vehicles are becoming popular, many car companies have announced pledges aimed to get their name into the market. Much of this could be pushed by the recent growth of electric car company Tesla, which has skyrocketed to a \$830 billion market capitalization since the release of its first car in 2008.

At the end of January, General Motors announced their goal to go all-electric by 2035. The company has promised to put 30 new electric car models on the market by 2025. This is part of their overarching goal to be carbon neutral by 2040.

In December, Hyundai released a global goal to have one million electric vehicles on the road by 2025. Kevin Reilly, owner and president of Alexandria Hyundai and Genesis of Alexandria, said that around two percent of the cars on the market are electric in the United States, but he believes this could double fairly quickly.

“As the technological advancements have increased so much, what the consumer is getting has advanced considerably, but also the cost difference between what an EV is costing versus a non-EV is decreasing,” said Reilly, who sells electric vehicles at both of his dealership locations.

According to a study done by the *Financial Times*, electric vehicles can be almost 45 percent more expensive to produce than gasoline cars, but it is estimated that the cost difference

will drop to nine percent by 2030. This cost decrease is enticing companies like Hyundai to increase their EV production.

Other big names like BMW and Ford have also announced plans for new models to be dropped in the coming years, as companies face more pressure from consumers to be environmentally friendly to slow the effects of climate change. Cardwell suspects this could be the tipping point that convinces many people to go electric.

“There’s going to become this point where people who may not be thinking about driving an EV start to hear so much about them and how good they’re getting,” said Cardwell. “But they’re going to want to wait for that name that they know, like GM, Ford, or BMW.”

With more electric cars comes a need for the necessary infrastructure, such as more public super chargers.

“Typically, the argument goes, ‘Well we can’t have electric vehicles if we don’t have infrastructure,’ and the other side goes, ‘I don’t want to build infrastructure unless there’s electric vehicles,’” said Eric Campbell, a program analyst for the D.C. Government Department of Energy and Environment. “What we’re trying to do now is build them both at the same time.”

According to the Clean Energy D.C. Omnibus Act of 2018, the goal is to have 25 percent of the registered vehicles in Washington be electric by 2030.

Currently, Campbell said, there are about 300,000 registered vehicles overall in DC and 1,600 of them are electric. The DOEE is hoping to raise that number to 75,000 in the next nine years in order to decrease pollution in the DMV.

To do that, they are offering tax cuts to residents who add charging stations to their properties, as well as supporting the development of more accessible charging stations throughout the area.

Pepco, the electric power company that supplies the DMV area, started the Pepco EVsmart program with the goal of accessibility to electric charging stations in mind.

Pepco EVsmart offers rebates to customers who purchase and install Level Two charging stations, which are faster charging stations specialized for electric cars, and to those who install charging stations in multi-family units such as apartments or condos.

The program also seeks to support installation of public charging stations throughout the DMV area, targeting areas that are under served.

“We see that this is the future,” said Jennifer Grisham, a program manager of the Pepco EVsmart program.

The Electric Vehicle Association of Greater Washington, a chapter of the Electric Auto Association, a volunteer organization that works to support infrastructure and educate citizens about the benefits of electric cars, believes that educating the public will result in a rise of electric cars.

EVA/DC visits schools to educate children on the benefits of electric cars from a young age by bringing cars for them to see and presenting on their environmental benefits, along with offering informational pamphlets and holding monthly meetings about the benefits of electric cars.

“What got me into this was the environmental benefits, but what gets me excited is that they’re just better cars,” said Ronald Kaltenbaugh, the president of EVA/DC, who has been driving electric for nearly 10 years.

While electric cars offer environmental benefits that gasoline-powered cars do not, Aquila says explains that they are not the solution to everything. Switching to all electric

vehicles does not reduce the number of cars on the road, so, she says, we also need to have a strong public-transportation system.

In order to create an environmentally friendly public-transportation system, the DOEE is hoping to have 50 percent electric buses and taxi cabs by 2030, with 100 percent by 2045.