

Statement of Ted Leonard
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To the Senate Transportation Committee
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Thank you, Chairman Langerholc, Chairman Sabatina and members of the Senate Transportation Committee for giving us the opportunity to present views on the auto emissions testing program and electric vehicles.

In 1998-1999, I participated in an Emissions Testing Stakeholder group hosted by PennDOT and DEP (Deputy Secretary Betty Serian presiding.) The group forwarded recommendations in January 2000, but a lawsuit subsequently overtook those recommendations and a US District court ordered into place the program we have had for over twenty years now.

In October 2017 the National Bureau of Economic Research published a report with the rather lengthy title of Technology and the Effectiveness of Regulatory Programs Over Time: Vehicle Emissions and Smog Checks with a Changing Fleet. The study concluded that emissions inspections have become less effective at reducing air pollution as more high-polluting vehicles from the 1970s and 1980s leave the fleet.

Emissions testing programs vary widely from state to state. Previously, California exempted six newer model years from testing. As of January 1, 2019, California now exempts eight model years and testing is biennial. Ohio requires testing in just seven of the state's eighty-eight counties and testing there is also biennial. Delaware exempts seven model years and again testing is biennial. New Jersey exempts five model years and testing is biennial. New York exempts two model years. Rhode Island exempts two model years and testing is biennial. Virginia tests in five northern counties, exempts four model years and testing is biennial.

AAA supports reasonable, fair, and effective means of preserving our environment including those designed to reduce motor vehicle-caused air pollution. Motorists should not be asked to bear a disproportionate share of the burden of this effort, nor should they be exempted from shouldering their fair share of the burden. States should have discretion in determining how best to meet the Clean Air Act's enhanced emissions testing requirements. Emissions testing programs should be both reasonable and cost effective, and states should periodically evaluate and modify programs based upon statistical testing results. States should exempt vehicles at least five years or older. In calendar year 2019, Pennsylvania's emissions testing results showed a test failure rate of less than one percent for the newest six model years. The total failure rate of all vehicles tested in 2019 was 3.63 percent which included a significant number of gas cap failures – 41% of the total failures.

AAA suggests the following policies regarding vehicle emissions testing:

- State I/M programs should be subjected to comprehensive and periodic review to ensure programs are both reasonable and cost effective.
- EPA should permit states to test only vehicles five years or older.
- Inspection of onboard diagnostic (OBD) systems should serve as a replacement for other types of emission inspection on vehicles so equipped, if it can be demonstrated that false failures are not a factor, and that this means of inspection is both cost effective and produces the desired emission reductions.

Electric Vehicles

As technology continues to improve and a wider selection of vehicle designs and styles become available, the popularity of electric vehicles (EVs) is gaining momentum with drivers. Thanks to their compatibility with autonomous vehicle technologies and energy efficiency, electric vehicles are emerging in popularity. A recent AAA survey has found an increased interest in electric vehicles, with 20 percent of Americans surveyed saying they are likely to buy one for their next car. EVs do not require as much maintenance as gas-powered cars since they do not need oil changes or air-filter replacements. If maintained according to automakers' recommendations, EVs cost \$949 per year, which is \$330 less than a gas-powered car. Potential buyers of EVs have expressed concerns such as "range anxiety" such as insufficient range and finding a place to charge. EV driving range is affected by outside air temperature particularly in the use of Heating, Ventilation and Air Conditioning (HVAC). AAA research has found when the temperature 20 degrees F and the HVAC system is used to heat the inside of the vehicle, the average driving range is decreased by 41 percent. With an outside temperature of 95 degrees F, and air-conditioning is used inside the vehicle, driving range is decreased by 17 percent.

Consumer expectations regarding the amount of time they would be willing to wait to charge their vehicle while on the road may not align with reality. A survey showed 68% of consumers felt that a charging time of no more than 30 minutes is reasonable, when in fact, with a Level 2 charger, it can take several hours to fully charge a fully depleted battery. If a normal 120-volt outlet is all that is available, an overnight charge may be required.

There are some precautions electric vehicle owners can take before hitting the road to help offset potential reductions in driving range:

- Plan ahead. When drivers are aware of the weather conditions before heading out, then can plan for more frequent stops for charging as well as identify the location of charging stations. Drivers can access these locations through AAA's mobile app or TripTik Planner.
- Make time to "pre-heat" or cool down the inside of the vehicle while still connected to the charger. This will reduce the demand on the vehicle's battery to regulate the cabin temperature at the onset of driving. If possible, park the vehicle in a garage to help stabilize cabin temperature.