

The Maryland Clean Cars Act

Clean Cars Act

The Clean Cars Act is a state-based policy that has already been adopted by eleven other states. It would address global warming pollution while also reducing pollution that causes cancer, smog, and the dead zone in the Chesapeake Bay.

The bill:

- Strengthens the standards for emissions that form smog and other health-damaging pollution.
- Adds carbon dioxide—the main cause of global warming—to the list of pollutants that are covered by vehicle emission standards.
- Requires that a percentage of new cars sold each year are advanced technology vehicles such as hybrids.

Technology Is Ready

Car companies already have the technical know-how to make cars and trucks that pollute much less.

Nearby states such as Pennsylvania and New Jersey have already adopted the Clean Cars Program. The hard work of developing the policy has been done, and carmakers are already gearing up to meet the requirements in 30 percent of the new car market in America. Maryland can take the simple step of requiring the carmakers to meet those standards in our state as well, bringing us the benefits of reduced pollution without spending large amounts of government resources.

Global Warming

Global warming is the greatest environmental challenge of our time. Here in Maryland, it is likely to lead to a three foot increase in the water level of the Chesapeake Bay, more intense hurricanes, reduced agricultural productivity, and other major problems. Global warming is happening because the concentration of carbon dioxide in our atmosphere is higher than it has ever been, according to the fossil record. This level will inevitably continue to rise, but we can soon stabilize it and avert the worst impacts of global warming by implementing energy conservation and clean energy measures.

The Clean Cars Act would reduce global warming pollution by 4.4 million tons per year by 2020. Federal standards do nothing to address global warming pollution.

Smog and Toxic Pollution

At the same time, the program would also reduce cancer-causing pollution by 2,100 tons per year and nitrogen pollution by 1,500 tons per year by 2027. Because the program only covers new cars and trucks, the benefits start small but increase steadily over time.

These savings come without changing the type of gasoline used in Maryland. This represents an improvement over federal standards of 11 to 15 percent.

Cleaner Technology Saves Consumers Money

A secondary benefit of the technology to reduce global warming pollution is that it will reduce driving costs, saving consumers money and boosting the state economy. Requiring new technologies will marginally increase the sale price of an average car, but that will be more than offset by reduced fuel costs. Your loan goes up a little, but your costs go down more than that. The average consumer would save \$245-\$560 per year once the program is fully phased in by 2016.

Clean Car Technology

The technology that automakers would use to meet the Clean Car standards already exists. Advanced components are available in limited models of cars. To meet the standards, automakers would make these components standard on more models.

Technology to reduce smog-forming and cancer-causing pollution

- **Exhaust gas recirculation** to reduce emissions of smog-forming nitrogen oxides.
- **Oxygen sensors** that allow adjustments in the air/fuel mix in a vehicle's cylinders in order to maximize the efficiency of combustion and ensure proper function of the catalytic converter.
- **Faster-heating catalytic converters** to avoid emissions that take place while a car is heating up.
- **Improved computerized control of the engine start-up sequence** to reduce "cold start" emissions (current emission control systems are far less effective when cold).
- **"Smog-eating" coatings** on radiators that convert ground-level ozone in ambient air into oxygen.
- **Modified fuel tanks and lines** to control evaporative emissions. In addition to implementing such technologies, automakers must stand by their durability and place the emission systems under warranty for 150,000 miles. Doing so commits automakers to dealing with a fundamental problem experienced by earlier generations of vehicles: degradation of the emission control system over time.

Adding these advanced components increases the manufacturing cost by only \$100-\$300. In the early years of the Clean Cars Program, automakers have not been passing that cost on to consumers.

Technology to reduce global warming pollution

- **More efficient engines**, made possible through the use of turbocharging, in which a turbine recaptures the 25 to 50 percent of an engine's energy that is lost through exhaust and redirects it into the engine; or through variable compression ratios that allow an engine to tailor compression rates to load conditions.
- **Direct-injection engines** that allow greater control of the engine's use of fuel.
- **Advanced transmissions** that allow a broader range of gear ratios, such as five- and six-speed automatics and continuously variable transmissions.
- **Integrated starter-generators** that allow greater power and enable the vehicle to take advantage of some features of hybridization (such as idle-off).
- **Improved air conditioning systems**, which may include a more efficient compressor, leak less and use a refrigerant that contributes less to global warming.
- **Cylinder deactivation** technology, which turns off half of the cylinders in the engine during some operating modes, such as steady-speed freeway driving.
- **Improved lubricating oil** that reduces friction, and thus fuel consumption, and cuts global warming pollution.

Since an added benefit of this technology is reduced fuel use, these advanced components save consumers money. The average consumer would save \$245-\$560 per year.
