

Ms. Sarah Carter

Staff Air Pollution Specialist, Emissions Compliance, Automotive Regulations and Science Division

Air Resources Board

9480 Telstar Avenue, Suite 4

El Monte, California 91731

TriTrack Motors is a vehicle manufacturer that produces an off grid electric vehicle system that emits zero pollution either CO2 or any of the 260 known or suspected human carcinogens of the gasoline or diesel engines on the market. As you are aware the studies on the cost and damage of air pollution vary wildly. The UN says that 1,000,000 to 7,000,000 people worldwide

(ref <https://www.unenvironment.org/news-and-stories/story/one-million-premature-deaths-linked-ozone-air-pollution>) meet their maker early because of airborne contaminants. MIT study indicates that in the US there are 200,000 early deaths from poor air quality. That said, if these numbers are correct then the attempt by a political entity to degrade air quality chasing some segment of the electorate is criminally negligent homicide. I believe that diesel-gate illustrates the lengths that old-guard European car makers will go to justify their disregard for their fellow man for a paltry few more horsepower on acceleration in a VW, Fiat, Suzuki, Renault, Jeep, Citoen, BMW or Audi.

Ref <https://www.theguardian.com/technology/2016/sep/19/many-car-brands-emit-more-pollution-than-volkswagen-report-finds>

From wikipedia A study published in Environmental Research Letters estimated that approximately 59 premature deaths will be caused by the excess pollution produced between 2008 and 2015 by vehicles equipped with the defeat device in just the United States, the majority due to particulate pollution (87%) with the remainder due to ozone (13%). The study also found that making these vehicles emissions compliant by the end of 2016 would avert an additional 130 early deaths.

Given the history of diesel cheating nothing indicates that they will not continue to effectively cheat the CARB requirements in reality. Any bolt on add on equipment or software upload has the potential to maybe work day one, but with the advertised advantage of a diesel engine being that they run for a million miles none of the pollution equipment is rated for that many miles of use. Because the exhaust treatment is in a chemically hostile environment none of those devices will outlast the vehicle. That means that these diesels turned loose on the unsuspecting public (although they should wise up some day) will be emitting at the pre 1980s levels once the exhaust treatment hardware fails at under 90,000 miles on the odometer. The emissions from an untreated diesel engine is so non-linear that one of these belchers overrides hundreds of Prius cars of responsible people wanting to do right and spending thousands extra to have a cleaner car. It is all for nothing when you let a diesel engine out of the barn knowing full well it will pollute incredibly with no restraint before it meets its crusher.

What is little understood is exactly how much impact these large bore diesel engines running incorrect temperatures and even some with the "chip" installed to further thumb their nose at CARB and what they are attempting to do.

Our solution is to obsolete the need for gasoline or diesel in an economic war. Our intent is to make the automobile a commodity and unprofitable for car makers to build polluting machines. Our target retail price is \$9,998 for the vehicle body and instant rental of the battery mule much lower cost per energy increment. This draw down of the price of the car will facilitate the transition away from burning up any gasoline or diesel as a transportation fuel. Our attraction to this advanced pollution-free mode is offering high speed. On the added infrastructure of elevated multilevel guideways, vehicles will drive themselves and travel 180 mph on a safe petite monorail. While on the street this dual mode car will drive like any other car but be limited to non-lethal speeds. So not only will less people die from air pollution but less people will be maimed or die in car crashes that ARE completely avoidable. (Crash avoidance being far more effective than crash worthiness)

To the point—I suggest that to achieve most of what is needed at zero cost would be to write legislation in California (that will be copied by all states later) that demands that the Cd of all cars and light trucks sold in California have a Cd less than .08. (point zero eight) That alone will make gasoline cars far more efficient and in turn pollute far less. Car makers are in a competitive world and if one builds a car that looks even slightly different than the competition then they feel like they will not sell a single one. If the entire playing field is elevated and every car maker has to build a good car with a Cd less than .08 then all cars will look like each other but none of them will look or waste fuel like a Hummer H1 for example. Rather than try to grab this problem one inch past the black tip end of the tailpipe, grab the problem on the front end which is the horrible inefficiency of the vehicle configuration. A configuration that comes to us through history and art school dropouts designing car fenders and parts.

A very simple example is Tesla wanted to remove the rear view mirrors and replace them with cameras and video displays. Besides cameras being cheaper to make and blind spots completely removed US DOT refused to listen. They still demand that rear view mirrors be attached to cars at the very worst aerodynamic position of the vehicle. Although in a 400 cubic inch V8 you won't notice the loss from the wind whipping around the rear view mirrors in a properly powered vehicle it will be noticeable. A law requiring that rear view mirrors be phased out in the next model year would be a baby step forward as an example of using regulations for good and saving all customers money in the process.

Ref dealer cost of two heated power folding rear view mirrors and directional controls is \$528 right mirror plus \$465 left mirror and control switch \$49.82 totaling \$1042.82 on a 2017 Ford Focus. We buy our screen displays for under \$50 and cameras are about \$7 each our cost.

Obviously reducing the aerodynamic drag by changing car design fashion is far more valuable but the side mounted mirror throwback can in no way be defended, yet it persists.

CARB can change all the oddities that have attached themselves to the automobile over the last century. Californians can breathe easier because of it. Although oil refineries are prevalent in south Texas and Louisiana some oil refining is done in California and like it or not the upstream pollution attributed to gasoline and diesel is on par with the tailpipe pollution. This pollution is swept under a corporate carpet but still in the air we breathe. Even if the refinery pollution is blown into the sky in Texas it still makes its way on occasion to California because the world shares one common air. Prevailing winds give California a strong advantage in air pollution but even with that the air is not clear or deemed healthy.

Changing the car design culture is key to converting all cars and big rigs to electric power that is converted from abundant sunshine using PV solar panels. It is no longer up for discussion that the world's cheapest power is now from PV solar panels manufactured in China. The Middle East has newest power going in at 1.75 cents per kilowatt-hour crushing any hope of coal or nuclear power being in the business of polluting our world while selling electricity via monopolies.

Using the powering of the automotive fleet as the transition mechanism to PV solar all power will shift from monopoly to a simple home appliance. Shifting from collective monopoly power plants to consumer level power will not only remove air pollution from cars but also more than half of the air pollution from running your home. This move to sunshine using the TriTrack battery mules as the energy storage buffer, will actually clean up California's air to safe healthy levels. Lowering the energy used up moving the vehicle down the guideway is key to both shifting to pure electric and shifting homes off of natural gas, coal or nuclear power. California buys much of their electricity from neighboring states but that can change with the paradigm shift to self-sufficiency afforded by PV solar power. LED lighting really helps. Converting all AC units to high SEER is another place where regulation should take the lead back to the fashion issue. If all AC makers had to meet the same high standard then they would all do better having to design and manufacture less models and thus making more profit through economies of scale.

CARB alone has the power to do these simple cost savings that happen to improve the lives of everyone.

Cd => less than .08

Rear view mirrors converted to rear facing cameras

LED light bulbs only

SEER minimum 21

Politically I personally tend toward libertarian but on air pollution that we all share, regulation may be the only way for all to thrive. Removing the bad options from the marketplace will cost less in the end. Thank you for your time.



Jerry Roane

CEO TriTrack Motors

30100 Spyglass Circle

Georgetown, TX 78628 Federal VIN numbers issued OEM