

**STATEMENT OF THE  
MANUFACTURERS OF EMISSION CONTROLS ASSOCIATION  
ON THE U.S. ENVIRONMENTAL PROTECTION AGENCY'S  
PROPOSED RULE FOR REPEAL OF EMISSION REQUIREMENTS FOR  
GLIDER VEHICLES, GLIDER ENGINES, AND GLIDER KITS**

**DOCKET ID NO. EPA-HQ-OAR-2014-0827**

*January 5, 2018*

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The Manufacturers of Emission Controls Association (MECA) is pleased to provide comments in response to the U.S. EPA's proposed rulemaking to repeal emission requirements for glider vehicles, glider engines, and glider kits. MECA opposes EPA's proposed repeal and supports the glider kit and glider vehicle provisions, as finalized last year, that would require engines installed in glider vehicles to meet the same criteria and GHG emission requirements as new engines certified in the same model year. An unlimited exemption of glider vehicles from the current emission requirements for new heavy-duty vehicles extends the huge loophole that has previously existed in the regulation. This loophole creates an uneven playing field that undermines billions of dollars of investments made by clean diesel technology manufacturers.

MECA is an industry trade association of the world's leading manufacturers of emission control technology for mobile sources. Our members have over 40 years of experience and a proven track record in developing and manufacturing emission control and efficiency technology for a wide variety of on-road and off-road gasoline and diesel fueled vehicles and equipment in all world markets. Our members provide the technologies that enable heavy-duty on-road vehicles to meet the most stringent NOx and PM emission standards as well as technologies that impact combustion efficiency and improve the overall CO<sub>2</sub> emissions of the powertrain. Our industry has played an important role in the emissions success story associated with light and heavy-duty vehicles in the United States and has continually supported efforts to develop innovative, technology-forcing, emissions programs to deal with air quality problems.

MECA strongly supported the agency's efforts to regulate fuel efficiency from heavy-duty vehicles under greenhouse gas and fuel efficiency regulations that were finalized in the Phase 1 and Phase 2 rules. In particular, our member companies supported the glider kit and glider vehicle provisions, finalized last year, that would require engines installed in glider vehicles to meet the same criteria and GHG emission requirements as new engines certified in the same model year. Glider vehicles are marketed as "new motor vehicles" because they use a new chassis, although they currently can continue to use engines that are 15-20 years old and emit 20-40 times more pollution than vehicles equipped with a new engine. MECA opposes the reconsideration of this provision of the Phase 2 GHG Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Vehicles regulation.

## **Economic and Industry Considerations**

MECA recognizes that there are legitimate uses for glider kits. For example, if a truck chassis is damaged in an accident, an older engine in good condition can be salvaged and installed in a new chassis. To allow for these legitimate applications, EPA's Phase 2 regulation placed a reasonable 300 unit cap, per manufacturer, on glider kits with engines that do not meet the standards for the year of glider kit manufacture. This cap was determined based on a careful review of glider kit volumes by manufacturers in order to minimize the economic impact on the industry. Glider kit manufacturers are still able to sell unlimited numbers of glider trucks above this cap with engines that meet the latest standards. This 300 unit cap is supported in a 2013 article on glider vehicles in the online publication *Heavy-Duty Trucking* as a profitable volume of vehicles for glider manufacturers (<http://www.truckinginfo.com/channel/equipment/article/story/2013/04/the-return-of-the-glider.aspx>). This article also states that most glider buyers prefer engines without emission controls and explains why the most popular engines installed in gliders are from before 2002, even before EGR was installed on engines.

An unlimited exemption of glider vehicles from the current emission requirements would represent a huge loophole in the regulation. This loophole currently creates an uneven playing field that undermines the billions of dollars of investments that our companies have made to deliver the latest clean diesel technologies. As sales of gliders continue to climb, this increases the potential to erode the new engine and vehicle market, and that would, in turn, threaten tens of thousands of U.S. jobs for our companies. The glider kit and glider vehicle provision in the Phase 2 heavy-duty rule took an important step in closing the loophole that previously existed by limiting gliders produced with non-compliant engines beginning in 2018. The existing loophole has stimulated the growth of glider truck sales by tenfold from 1,000 in 2010 to 10,000 in 2015 as glider manufacturers market their vehicles to buyers who are trying to avoid the clean diesel emission controls introduced on new trucks in 2010.

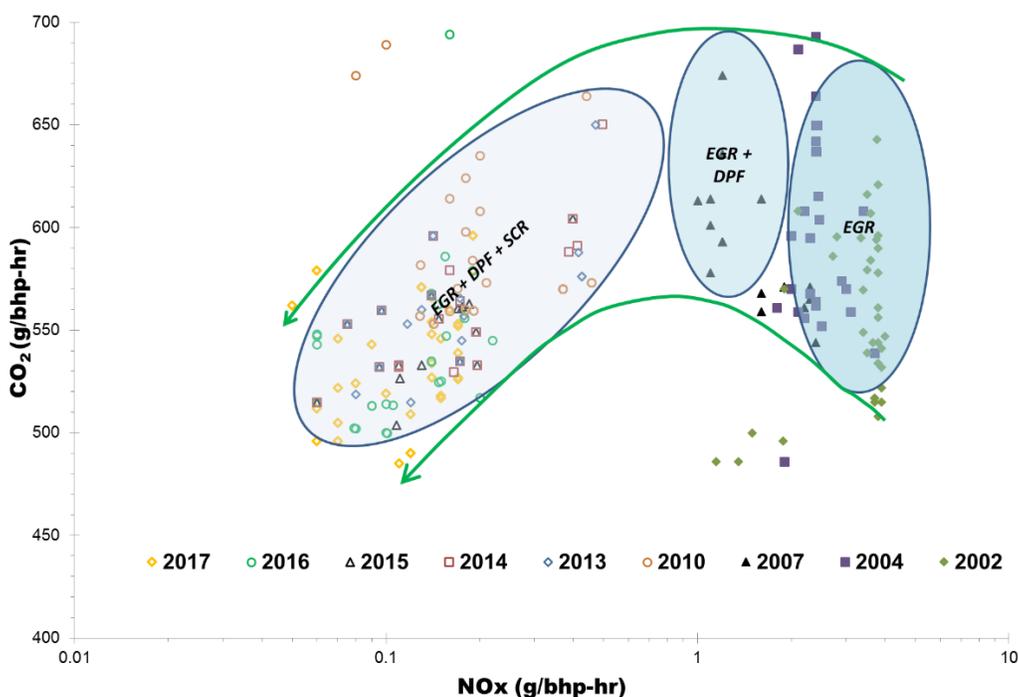
MECA members represent 70,000 of the nearly 300,000 North American jobs building the technologies that improve the fuel economy and lower emissions of today's vehicles. These jobs are located in nearly every state in the United States – the top 10 states in the U.S. are Michigan, Texas, Illinois, Virginia, New York, Indiana, North Carolina, Ohio, Pennsylvania, and South Carolina. The mobile source emission controls industry has generated hundreds of billions of dollars in U.S. economic activity since 1975 and continues to grow and add more jobs in response to environmental regulations. Just in 2017, emission control manufacturers have invested over \$3 billion in developing the technologies that reduce emissions from mobile sources. MECA members are engaged in developing a large portfolio of emission and efficiency technologies that will directly or indirectly impact emissions. These technologies include advanced catalysts and substrates, waste heat recovery, turbochargers, EGR coolers, EGR valves and other air management technologies, thermal management strategies including insulated dual wall manifolds and exhaust systems, active thermal management approaches, advanced fuel injection and ignition systems, and the OBD technologies that monitor the functionality of emission critical components. We request that the agency maintain the heavy-duty Phase 2 regulation and glider provision in

the current finalized form, as supported by OEMs, truck dealers, trucking associations, suppliers and states.

### Gliders are not a Suitable Option for Small Businesses and Independent Operators

MECA would like to comment specifically on EPA’s solicitation for comments concerning gliders being a suitable option for small businesses and independent operators who cannot afford to purchase a new vehicle. In the petition, glider kit manufacturers argue that gliders are a more cost-effective option than new trucks, representing a savings of up to 25% below the cost of a new truck. Gliders are most often equipped with 1998-2002 model year engines that can have over a million miles on them and no emission control technology. Clean diesel trucks, equipped with the latest particulate and NOx emission control technology, have been available from OEMs since 2010. Used trucks that are only two years old can offer the same 25% cost savings to small businesses and come equipped with the same state of the art emission control and efficiency technology as a new truck ([www.truckpaper.com](http://www.truckpaper.com)).

**Figure 1: Heavy-Duty Engine Certification Levels for NOx and CO<sub>2</sub>**



The introduction of selective catalytic reduction (SCR) technology on new highway, heavy-duty trucks in both Europe and the U.S. has allowed engine manufacturers the possibilities of calibrating engines for lower fuel consumption (and lower greenhouse gas emissions), while still meeting applicable NOx emission standards. Engine manufacturers that employed SCR technologies on 2010-compliant heavy-duty, highway engines in the U.S. claimed up to 5% improvements in fuel efficiency compared to engines that did not

employ SCR technology. Engine manufacturers have continued to further optimize engine fuel consumption characteristics and SCR system designs to assist in achieving the reductions proposed by EPA under this regulation. Figure 1 (above) plots the certification level for NO<sub>x</sub> and CO<sub>2</sub> from heavy-duty engines over the last 15 years and several generations of emissions technology. The data clearly show the fuel economy and NO<sub>x</sub> reduction benefit of SCR technology in 2010 and newer engines to the left of the apex on the curve. Furthermore, as heavy-duty GHG regulations are implemented (since 2014), the CO<sub>2</sub> emissions and fuel economy will continue to outperform those of pre-2002 engines that are common in glider trucks.

The Advanced Collaborative Emissions Study (ACES) Phase 2 report published in 2012 showed that modern heavy-duty engines are achieving PM and NO<sub>x</sub> levels well below the federal standards. MY 2017 and MY 2018 engines are certifying much lower than 0.2 g/bhp-hr NO<sub>x</sub>; in fact, 11 of 36 highway diesel engine families certified in 2017 reported full useful life certification levels at 0.1 g/bhp-hr or lower. The ACES study showed that modern DPF equipped engines emit PM at several orders of magnitude below the standard of 0.01 g/bhp-hr.

### **Repealing Glider Provisions Will Result in Negative Environmental Impact**

EPA requested comment on the expected emissions impacts if the regulatory requirements at issue here were to be repealed or were to be left in place. A November 15, 2017 EPA memo (Docket ID: EPA-HQ-OAR-2014-0827-2379) presented data from glider industry surveys that concluded the industry's sales have increased by an order of magnitude – from 1,000 to 10,000 units – between 2010 and 2015. EPA also concluded that the engines installed in nearly all of these glider vehicles were certified to model year 1998-2002 engine standards. For reference, engines certified between 1998 and 2002 were only required to meet 4.0 g/bhp-hr NO<sub>x</sub> and 0.1 g/bhp-hr PM without the use of advanced aftertreatment or on-engine EGR. These NO<sub>x</sub> levels are 20 times higher than today's current NO<sub>x</sub> emission standard of 0.2 g/bhp-hr and 200 times higher than the California optional low-NO<sub>x</sub> standard of 0.02 g/bhp-hr. The PM levels are 10 times higher than today's 0.01 g/bhp-hr standard.

EPA also conducted emissions testing on two 2015 glider vehicles and compared the results to original equipment (OE) trucks of the same model year and similar characteristics (Docket ID: EPA-HQ-OAR-2014-0827-2417). The agency concluded the NO<sub>x</sub>, CO, THC, and PM emissions from the glider vehicles were significantly higher than the same model year OE tractors with newer engines over all test cycles. More specifically, the data presented in the document show that glider NO<sub>x</sub> emissions were 5-20 times higher and the glider PM emissions were up to 450 times higher than the MY2015 OE truck and engine. Similar trends were observed for hydrocarbon and carbon monoxide emissions. These data indicate that one glider vehicle has the potential to emit as much pollution as tens to hundreds of new trucks.

In its regulatory impact analysis for the Phase 2 rule, EPA estimated that the significant increase in the glider market could nearly double the emissions of NO<sub>x</sub> and

PM2.5 from Class 8 trucks. An International Council on Clean Transportation (ICCT) analysis shows that the EPA proposal to repeal the glider kit sales cap will result in 3.5 times more cumulative NOx emissions from the class 7-8 truck sector over the next decade (<https://www.theicct.org/blog/staff/glider-proposal-means-resurrecting-dirty-diesel>). This analysis was based on the data obtained by EPA's survey of the industry (annual sales of 10,000 units in 2015 growing to 17,400 in 2027). As new engines become cleaner in the future, the contribution from glider vehicles will continue to grow. The emissions increase due to the allowance of glider sales is projected to be even greater if EPA sets a new low-NOx emission standard, which the agency and California have signaled will be a near term regulatory priority.

MECA would like to comment specifically on EPA's solicitation for comments on whether limiting the availability of glider vehicles could result in older, less safe, more-polluting trucks remaining on the road much longer and whether glider vehicles produce significantly fewer emissions overall compared to the older trucks they would replace. When EPA finalized the 2007/2010 heavy-duty vehicle emissions standards, the agency conducted a regulatory impact analysis that concluded that the rule would result in emission reductions that would prevent 8,300 premature deaths, more than 9,500 hospitalizations, and 1.5 million work days lost. The availability of glider vehicles undermines these emissions reductions and related health benefits. While a glider vehicle may in some cases emit at lower emission levels than the vehicle it replaces, the typical glider will always emit more NOx and PM than a 2010 or newer model year OE truck unless the glider engine is equipped with clean diesel emission technology. That directly undercuts the health and environmental benefits of the 2007/2010 on-highway heavy-duty rule.

## **Summary**

MECA opposes EPA's proposed rulemaking to repeal emission requirements for glider vehicles, glider engines, and glider kits. An exemption of glider vehicles from the current emission requirements for new heavy-duty vehicles extends the huge loophole that previously existed in the regulation. This loophole creates an uneven playing field that undermines billions of dollars of investments made by clean diesel technology manufacturers. Our industry and the regulatory agencies have invested significant resources to ensure that the current regulatory structure delivers cost-effective and durable emission reductions. Manufacturers have made significant investments in developing engine-based technologies under the first and second phases of heavy-duty GHG standards as well as engine and exhaust technologies under the 2007/2010 heavy-duty vehicle standards, which will continue to deliver environmental and health benefits into the future.

Glider vehicles are marketed as "new motor vehicles" because they use a new chassis, although they currently can continue to use engines that are 15-20 years old and emit 20-40 times more pollution than vehicles equipped with a new engine. The EPA proposal to repeal the glider kit sales cap will result in over 40% more NOx emissions in 2030. The engine certification levels for criteria pollutants and CO<sub>2</sub> since 2010 demonstrate that these fuel-efficient powertrain designs, combined with appropriate emission controls and efficiency technologies, can be optimized to improve overall CO<sub>2</sub> emissions of the

vehicle while also achieving ultra-low NOx and other criteria pollutant emissions. Gliders do not have a fuel economy advantage over 2017 and 2018 trucks, and future new trucks will be equipped with engines that continue to increase in fuel economy.

In conclusion, MECA recommends EPA maintain the current glider provisions of the regulation, including a 300 unit cap on gliders per manufacturer. MECA believes that limiting glider sales is essential to delivering the health and environmental benefits of the Phase 2 medium- and heavy-duty GHG standards and the 2007/2010 heavy-duty vehicle emissions standards.

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