MECA Releases Report on Technology Feasibility for Heavy-Duty Diesel Trucks in Achieving 90% Lower NOx Standards in 2027

The Manufacturers of Emission Controls Association (MECA) today released a report that presents test results from emission control and fuel efficiency technologies installed on heavy-duty diesel on-road engines that offer several cost-effective compliance pathways to reduce NOx emissions by 90% below today’s certification levels with simultaneous CO2 emission reductions in the 2027 timeframe. The report, “Technology Feasibility for Heavy-Duty Diesel Trucks in Achieving 90% Lower NOx Standards in 2027,” and a report fact sheet are available on the MECA website.

The main conclusions in the report include:

- Commercially available engine efficiency technologies and advanced aftertreatment system designs can achieve a certification emission limit of 0.02 g/bhp-hr NOx and a low-load cycle limit below 0.075 g/bhp-hr NOx by 2027.

- Engine efficiency and powertrain emission control technologies being commercialized by component suppliers can enable simultaneous reductions in CO2 and NOx.

- The estimated cost of engine efficiency and emission controls for a Class 8 tractor meeting these future NOx limits is estimated to add $1,500 to $2,000, or about 1%, to the cost of a model year 2027 truck.

The new report is a companion to a report released by MECA in June 2019 that provides an assessment of market-ready technologies for heavy-duty diesel vehicles to meet lower intermediate NOx standards by 2024 ("Technology Feasibility for Model Year 2024 Heavy-Duty Diesel Vehicles in Meeting Lower NOx Standards").
“This new MECA white paper, along with our June 2019 companion report, shows that additional NOx emission reductions from new heavy-duty trucks beyond the current requirements are achievable and cost-effective by combining the improvements made to engines, emission control technologies, and fuels over the past twenty years,” said MECA’s Executive Director, Rasto Brezny. “The aftertreatment systems that will deliver ultra-low NOx emissions in 2027 will not look much different than they do today, incorporating advancements in substrates, catalysts, and calibrations. Furthermore, these advanced NOx emission controls are compatible with powertrain efficiency technologies to optimize vehicle fuel economy. As the U.S. EPA and California ARB move forward to strengthen the current heavy-duty emission standards, MECA members are committed to delivering the technology solutions to achieve real on-the-road emission reductions in NOx and CO2 from this sector.”

Founded in 1976, MECA is a nonprofit trade association of the world’s leading manufacturers of clean technology solutions for all mobile sources. For more information, please visit us on our website (www.meca.org) and on Twitter (@MECAforCleanAir).

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