MECA Releases Report on Technology Feasibility for Heavy-Duty Diesel Trucks to Meet Lower NOx Standards by 2024

The Manufacturers of Emission Controls Association (MECA) today released a report that provides an assessment of market-ready technologies being commercialized by suppliers of emission control and efficiency components for heavy-duty diesel vehicles to meet lower intermediate standards for oxides of nitrogen (NOx) by 2024 as a transition to final standards in 2027. The report presents test results and emission models from fully aged aftertreatment systems installed on heavy-duty on-road engines to offer several compliance paths that are achievable by model year 2024 without significant changes to today’s engines or aftertreatment systems. The report, “Technology Feasibility for Model Year 2024 Heavy-Duty Diesel Vehicles in Meeting Lower NOx Standards,” is available on the MECA website at: http://www.meca.org/resources/MECA_MY_2024_HD_Low_NOx_Report_061019.pdf.

The main conclusions in the report include:

- Several advanced technology options can be deployed on heavy-duty engines and vehicles to reduce NOx emissions by 75% below today’s heavy-duty FTP NOx standards while also meeting the 2024 heavy-duty Phase 2 greenhouse gas limits and reducing the total cost of ownership of trucks.

- Strategies for reducing emissions during cold start and low load operation, combined with improved engine calibration and control of urea dosing, can be implemented to enable heavy-duty trucks to achieve an FTP NOx emission limit of 0.05 g/bhp-hr and a low-load cycle limit below 0.2 g/bhp-hr. These same technologies will deliver low temperature NOx conversion in the real world as part of the newly proposed moving average windows-based compliance program.
• The cost of controlling NOx to 0.05 g/bhp-hr in 2024 and to 0.02 g/bhp-hr by 2027 will be less than the cost of emission control technology in 2010 because, over the past nine years, ingenuity and innovation have downsized emission controls by 60% and substantially lowered their cost.

“Both the U.S. EPA and the California ARB have announced rulemakings focused on strengthening the current heavy-duty emission standards. Getting to ultra-low NOx and greenhouse gas emission levels will require a systems approach of advanced aftertreatment technologies, efficient engines, and clean fuels,” MECA’s Executive Director, Rasto Brezny, said. “MECA and our member companies have played an important role in the environmental success story associated with mobile sources in the U.S. for over 40 years. To achieve our country’s air quality goals, we must ensure trucks are as clean as possible as the heavy-duty fleet moves toward electrification. MECA members are committed to delivering the technology solutions and supporting the regulatory policies to continue to reduce emissions from this sector.”

Note: MECA has also put together a fact sheet on achieving ultra-low NOx emissions from heavy-duty trucks. The fact sheet is available on the MECA website at: http://www.meca.org/resources/MECA_heavy-duty_low_NOx_fact_sheet_-April_2019-.pdf.

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

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