

**Comments of the Manufacturers of Emission Controls Association
on the California Air Resources Board's Proposed Amendments to the
Airborne Toxic Control Measure for Stationary Compression Ignition Engines**

October 18, 2010

The Manufacturers of Emission Controls Association (MECA) is pleased to provide comments in response to the California Air Resources Board's (ARB) proposed amendments to the Airborne Toxic Control Measure (ATCM) for stationary compression ignition (CI) engines. We commend the agency for its continuing efforts to implement effective emission control measures for major sources of air pollution such as this category of engines.

MECA is a non-profit association made up of the world's leading manufacturers of emission control technology for mobile source applications and stationary internal combustion engines. A number of our members have extensive experience in the development, manufacture, and commercial application of emission control technologies for diesel engines, including new diesel engines used in stationary applications.

Discussion

MECA generally supports ARB's proposed amendments to the stationary CI engine ATCM to closely align the emissions standards in the ATCM with those in the U.S. EPA's Standards of Performance (NSPS) for stationary CI internal combustion engines. We agree that the proposed amendments will reduce the cost of complying with the ATCM while still providing health protective emission limits for stationary CI engines.

Regarding the specific proposed amendment that will eliminate the existing requirement in the ATCM that would have required new emergency standby engines to meet the Tier 4 Off-Road CI Engine Standards when they are more stringent than the ATCM's PM requirement of 0.15 g/bhp-hr, MECA offers the following points for consideration:

- Given the effectiveness of DPF systems and SCR systems in reducing PM and NOx emissions, respectively, ARB should consider maximizing the use of these technologies wherever possible to protect public health and the environment and to help the agency meet its regulatory obligations (e.g., the ATCMs under ARB's Diesel Risk Reduction Plan, as well as ARB's State Strategy for meeting California's State Implementation Plan, which targets reductions in NOx, PM_{2.5}, ROG, and SOx).
- MECA member companies have invested and continue to invest significant resources in developing and commercializing emission control technologies for the whole range of new and in-use diesel engines currently operating in California and the rest of the U.S., including on-road, off-road, and stationary sources. They rely on regulatory stability in order to continue making the necessary investments to meet the commercial needs in time for implementation. However, delays in the implementation of emission control requirements or the elimination of a specific requirement altogether will cause retrofit manufacturers to be extremely cautious in making these investments.
- The Tier 4 Off-Road CI Engine Standards will most likely cause engine manufacturers to require emission control technologies, such as diesel particulate

filters (DPFs) and selective catalytic reduction (SCR) systems, on their engines to meet the PM and NOx standards.

- Wall-flow diesel particulate filters, when used in combination with ultra-low sulfur diesel (ULSD) fuel, can reduce PM emissions by up to 85% or more, ultra-fine carbon particles by up to 99+%, and, depending on the system design, toxic HC emissions by up to 80%. Over 250,000 on-road heavy-duty vehicles worldwide have been retrofitted with passively or actively regenerated DPFs. In addition, over four million new passenger cars have been equipped with DPFs in Europe since mid-2000, and, since 2007, every new heavy-duty on-road engine sold in the U.S. and Canada has been equipped with a high-efficiency DPF.
- Similarly, SCR technology is a proven NOx control strategy. SCR has been used to control NOx emissions from stationary sources for over 20 years using either ammonia or urea injection ahead of the SCR catalyst to serve as the reductant that reacts with NOx in the lean diesel operating environment. Open loop SCR systems can reduce NOx emissions from 75 to 90%. Closed loop systems have achieved NOx reductions of greater than 95%. More recently, SCR systems have been applied to mobile sources, including trucks, off-road equipment, and marine vessels. Applying SCR+DPF systems to diesel-powered engines provides simultaneous reductions of NOx, PM, and HC emissions.

Conclusion

MECA generally supports ARB's proposed amendments to the ATCM for stationary CI engines. However, MECA advises ARB to fully take into consideration the feasibility, costs, and emission impacts of the changes to this ATCM, as well as changes to other ATCMs. MECA and its member companies look forward to continuing to work with ARB and its stakeholders in implementing the control measures under the agency's Diesel Risk Reduction Plan.

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