

**Comments of the Manufacturers of Emission Controls Association  
on the U.S. Environmental Protection Agency's Standards of Performance for Stationary  
Compression Ignition and Spark Ignition Internal Combustion Engines Proposed Rule**

**Docket ID No. EPA-HQ-OAR-2010-0295**

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The Manufacturers of Emission Controls Association (MECA) is pleased to provide comments in response to the U.S. EPA's Standards of Performance (NSPS) for Stationary Compression Ignition and Spark Ignition Internal Combustion Engines Proposed Rule. We commend the agency for its continuing efforts to implement effective emission control standards for major sources of air pollution such as this category of engines. MECA supports EPA's proposal to implement more stringent standards for stationary compression ignition (CI) engines with displacement greater than or equal to 10 liters/cylinder and less than 30 liters/cylinder, consistent with recent revisions to standards for similar mobile source marine engines. In addition, MECA supports EPA's proposed revisions to the requirements for stationary CI engines with displacement at or above 30 liters/cylinder to align more closely with recent standards for similar mobile source marine engines. MECA agrees with EPA that the revised standards can be met through the combination of continued improvements in engine designs, the application of appropriate exhaust emission controls, and the use of lower sulfur fuels.

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**

For new stationary CI engines with displacement greater than or equal to 10 liters/cylinder and less than 30 liters/cylinder, MECA supports EPA's proposal to incorporate the emission standards promulgated by the agency in June 2008 for new locomotive and new CI marine vessels. As discussed in the original NSPS final rule for stationary CI engines promulgated in July 2006, stationary engines in this displacement range are similar in design to marine CI engines and are generally certified to marine standards. MECA agrees with EPA that the first tier of standards can be met through the use of engine-based technologies already in use or expected to be used for other mobile and stationary engines (e.g., improved fuel injection, engine mapping, and calibration optimization), as well as the use of ultra-low sulfur diesel (ULSD) (15 ppm sulfur max.). In addition, MECA agrees with EPA that the second tier of standards can be met with the use of exhaust emission controls that have already been used for other similar mobile and stationary engines, such as catalyzed diesel particulate filters (DPFs) and selective catalytic reduction (SCR) systems.

For stationary CI engines with displacement at or above 30 liters/cylinder, MECA supports EPA's proposed revisions to the requirements to align more closely with the IMO's Annex VI NO<sub>x</sub> standard approved earlier this year (and promulgated by EPA in April 2010) for marine engines with displacement above 30 liters/cylinder. Further, MECA believes implementation of the final NO<sub>x</sub> standard in 2016, which is expected to be met with the use of SCR technology, is technologically achievable in the timeframe proposed by EPA.

Regarding the proposed change to the fuel requirement for stationary CI engines with displacement at or above 30 liters/cylinder to a 1,000 ppm sulfur level beginning in 2014, MECA supports this revised fuel requirement, but urges EPA to take a leadership position of setting a timetable for further reductions in fuel sulfur to the ULSD level. The successful application of catalyst-based PM reduction technologies is dependent on the use of low or ultra-low sulfur diesel fuel since sulfur levels in the fuel can both deteriorate catalyst performance and contribute to PM emissions through the formation of sulfate emissions across the catalyst. This is why EPA's recent final rulemakings covering new highway, off-road, locomotive, and smaller marine diesel engines include or take advantage of the mandated use of ULSD to facilitate the use of sulfur-sensitive, catalyst-based emission control technologies like DPFs and DOCs, as well as NOx adsorber catalysts. Similarly, for stationary diesel engines with displacement at or above 30 liters/cylinder, the application of catalyst-based DPFs and DOCs for PM reductions would not be practical until fuel sulfur levels are reduced to 500 ppm S or, in some cases, even 50 ppm S or lower. This would enable the use of DPF and DOC technologies for the reduction of PM and extend catalyst durability (including SCR catalyst durability)

(Note: MECA has previously provided written comments to EPA on the agency's regulation for new locomotive engines and marine CI engines less than 30 liters per cylinder and the regulation for new marine CI engines at or above 30 liters per cylinder. Both comments contain detailed information on the available emission control technologies for these large diesel engines.)

## **Conclusion**

MECA supports EPA's proposed amendments for new stationary CI engines. By harmonizing the emission requirements for these engines with similar mobile source marine engines, the proposed rule will provide important PM and NOx reductions from stationary CI engines in the near-term through improvements in engine technology and the use of lower sulfur fuels, and significant long-term NOx reductions through the use of proven SCR technology. MECA and its member companies look forward to working with EPA and its stakeholders in implementing these revised standards.

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