

## UPDATED INFORMATIVE DIGEST

### **PUBLIC HEARING TO CONSIDER PROPOSED AMENDMENTS TO THE EXHAUST EMISSION STANDARDS FOR 2007-2009 MODEL-YEAR HEAVY DUTY URBAN BUS ENGINES AND THE FLEET RULE FOR TRANSIT AGENCIES**

**Sections Affected:** Amendments to title 13, California Code of Regulations (CCR), sections 1956.1, 1956.8, 2023.1, and 2023.4.

**Background:** California's oxides of nitrogen (NO<sub>x</sub>) emission standard for new 2007 and later model-year diesel urban bus engines is 0.2 grams per brake horsepower-hour (g/bhp-hr) – a tightening of the 0.5 g/bhp-hr NO<sub>x</sub> standard that has applied for the 2004-2006 model years. The California and federal national heavy-duty truck new engine standard for 2007, which includes urban buses for all but California, is also 0.2 g/bhp-hr NO<sub>x</sub>, and applies to one-half of the new engines sold in 2007 through 2009. The heavy-duty truck standard, however, allows manufacturers the flexibility to choose, for each engine type, any emission level between the current standard 2.4 g/bhp-hr (non-methane hydrocarbon plus NO<sub>x</sub>) and the new 0.2 g/bhp-hr NO<sub>x</sub> standard. This results in the possible option of certifying all engines to an average NO<sub>x</sub> level of 1.2 g/bhp-hr during 2007 through 2009, and this is what engine manufacturers have stated they plan to do. Thus, California's new urban bus engine standard is more stringent than the national urban bus engine standard.

Along with the exhaust emission standards for urban bus engines and vehicles, in 2000 the Air Resources Board (Board or ARB) also adopted a Fleet Rule for Transit Agencies. It has required each transit agency in the state to select a non-revocable compliance path – either the “diesel” path or the “alternative-fuel” path – by January 1, 2001. Path selection establishes the fuel type for new urban bus purchases or leases through model year 2015 and is a non-revocable election. There are 76 transit agencies statewide that report to ARB under ARB's Fleet Rule for Transit Agencies (28 are on the alternative fuel path and 48 are on the diesel path). Most air quality districts are fairly evenly split, with some transit agencies on the alternative fuel path and some on the diesel path. Exceptions are the Bay Area Air Quality Management District, where most agencies are on the diesel path, and the South Coast Air Quality Management District (SCAQMD or South Coast District), where most agencies are on the alternative fuel path.

The trends in certification and purchases of new urban buses show that manufacturers are not certifying any diesel urban bus engines that meet California's standards of 0.5 g/bhp-hr for 2004 to 2006 model years, leading to little or no turnover of diesel buses in 2004-2006 for transit agencies on the diesel fuel path reluctant to switch to alternative fuel. Engine manufacturers have indicated they do not plan to certify diesel urban bus engines to meet the California NO<sub>x</sub> standard of 0.2 g/bhp-hr for 2007 to 2009 model years, so diesel engines for buses would continue to be unavailable for three additional years.

In June 2004, ARB staff, with concurrence of the Board, postponed a decision on a staff proposal to align ARB's current urban bus engine standards with the California 2007 heavy-duty truck engine standard because of an ongoing evaluation of available urban bus engine technology. Of particular interest to the Board was whether natural gas engines would comply with the 2007 urban bus NOx emission standard.

Under its Clean Fleets Program, the South Coast District adopted seven fleet rules during 2000 and 2001. The rules were developed to gradually shift public agencies and certain private entities to lower emission and alternative-fuel vehicles whenever a fleet operator purchases or leases a vehicle for replacement or addition to a fleet. The South Coast District adopted these rules based on Health and Safety Code section 40447.5, which authorizes SCAQMD to adopt regulations that require operators of 15 or more public and commercial fleet vehicles, when adding or replacing vehicles, to purchase vehicles that are capable of operating on methanol or other equivalently clean-burning alternative fuel. One of the fleet rules adopted is Rule 1192 - Clean On-Road Transit Buses.

Shortly after the South Coast District adopted its fleet rules, the Engine Manufacturers Association (EMA) and the Western States Petroleum Association (WSPA) sued SCAQMD in federal court challenging its authority to adopt the rules. In April 2004, the United States Supreme Court ruled that it appears likely that at least certain aspects of the fleet rules were preempted by section 209(b) of the federal Clean Air Act. The Supreme Court remanded the case back to the federal District Court to determine whether some parts of the fleet rules could be characterized as state purchasing decisions and, if so, whether preemption applied. In response to this decision, SCAQMD requested that ARB submit the South Coast District's rules to the United States Environmental Protection Agency (U.S. EPA) for a waiver of preemption pursuant to section 209(b) of the Clean Air Act.

In this rulemaking, the Board has considered amending ARB's Fleet Rule for Transit Agencies – Urban Bus Requirement to mandate that the six diesel path transit agencies in SCAQMD switch to the alternative fuel path, in order to have the state rule achieve the alternative fuel objectives of the South Coast District's Rule 1192. The ARB's adoption of a unique fleet requirement for the transit agencies in the South Coast District would have the effect of addressing the Court's decision while reflecting the Legislature's intent that SCAQMD be authorized to establish an alternative fuel fleet rule for transit districts within the District operating 15 or more buses. Proponents of alternative fuels believe a mandate in the SCAQMD will encourage further development of alternative fuel engines and infrastructure, and is a good policy necessary to prepare California for a more energy secure future. Diesel engine manufacturers and California businesses oppose, on principle, any rule that mandates alternative fuels.

The rulemaking was initiated on July 29, 2005 with the publication and public availability of a notice and an Initial Statement of Reasons, which advised of the scheduling of a public hearing on September 15, 2005.

**Description of Regulatory Action:** At the public hearing held on September 15, 2005, the Board considered amendments presented by staff affecting urban buses owned or operated by transit agencies. Staff presented two policy decisions for the Board's consideration: 1) amending the statewide urban bus emission standards and 2) mandating that all transit agencies operating in the South Coast Air District be required to follow the alternative-fuel compliance path. The Board adopted Resolution 05-47, which amends the Fleet Rule for Transit Agencies – Urban Bus Requirement to require that all transit agencies in the South Coast District follow the alternative-fuel path. The Board deferred consideration of the amendment to the statewide urban bus emission standard until October 20, 2005.

At the October 20, 2005 hearing, staff presented three options to the Board: 1) retain the current new urban bus emissions standards, 2) align the 2007 and subsequent model-year new urban bus engine emission standards with the equivalent model year heavy-duty truck engine emission standard, and 3) require all transit agencies to purchase/lease only alternative fuel buses. At the conclusion of the hearing, the Board adopted Resolution 05-53, in which it approved modified amendments subject to the Board's consideration at an October 27 hearing of a report from the staff on the likely effect of one element of the modified amendments.

At the October 27, 2005 hearing, after considering the staff's report, the Board adopted Resolution 05-61, approving the modifications previously approved with one additional modification. The modified amendments align the 2007 and subsequent model-year urban bus engine emission standards with the equivalent model-year California heavy-duty truck engine emission standards, but require diesel path transit agencies with more than 30 urban buses in their fleets that purchase 2007 through 2009 model-year urban buses with diesel engines not certified at or below a 0.2 g/bhp-hr NO<sub>x</sub> engine emission standard to meet specified conditions. The conditions require the transit agency to mitigate the NO<sub>x</sub> emissions through retrofitting an existing urban bus or transit fleet vehicle within its fleet with a level 3 diesel emission control strategy with a 40 percent NO<sub>x</sub> reduction, and if a device is not verified, a minimum of 25 percent NO<sub>x</sub> reduction, until vehicles in the agency's fleet are retrofitted or are incapable of being retrofitted.

On April 28, 2006, ARB issued a Notice of Public Availability of Modified Text, which advised of, and requested comment on, the above modifications to the regulations originally proposed in the Staff Report: Initial Statement of Reasons released and made available to the public on July 29, 2005. The notice included an additional conforming modification as authorized in Resolution 05-53. The additional modification adds a reporting requirement to title 13, CCR, section 2023.4 for transit agencies. The reporting requirement applies when transit agencies purchase model-year 2007 through 2009 urban buses or engines not certified at or below 0.2 g/bhp-hr NO<sub>x</sub> emissions and requires transit agencies to report information regarding the mandated retrofitting of existing urban bus or transit fleet vehicles for these purchases. No further substantive modifications were made following the April 28, 2006 notice.

**Comparable Federal Regulations:** There are comparable federal regulations for 2007 and subsequent model-year heavy-duty engines, which are codified in title 40, Code of Federal Regulations, part 86, subparts A, I, and N. The Board's action aligns the California exhaust emission engine standards for new urban bus engines with the federal standards, but imposes additional requirements on transit agencies that purchase urban bus engines whose NOx emissions exceed 0.2 g/bhp-hr.

There are no federal regulations comparable to the California fleet rule for transit agencies.