
State Regulations & Construction Contract Specifications

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Michael C. Block
Emisstar LLC



Presentation Overview

- California (State) Regulations
- California Off-Road ATCM
- NYC LL77
- NYS Regulation
- NJ DRRP
- State Construction Contracts

California Regulations

The ARB is responsible for developing statewide programs and strategies to reduce the emission of smog-forming pollutants and toxics by diesel-fueled mobile sources.

Off-Road



- [Cargo Handling Equipment at Ports and Intermodal Rail Yards](#)
- [In-Use Mobile Agriculture Equipment Regulation](#)
- [In-Use Off-Road Equipment](#)
- [Locomotives](#)
- [New Off-Road Engines and Equipment](#)
- [Off-Road Emission Inventory Program](#)
- [Off-Road Implementation Advisory Group \(ORIAG\)](#)
- [Showcase](#) (Off-Road Diesel Retrofit)
- [Transport Refrigeration Units \(TRUs\)](#)

On-Road



- [Heavy-Duty New Vehicle Program](#)
- [Heavy-Duty In-Use Vehicle Regulation](#) (Statewide Truck and Bus)
- [Heavy-Duty Diesel Engine Certification Label \(ECL\) Inspection Program](#)
- Buses
 - [Public Transit](#)
 - [School Bus Grants](#)
 - [School Bus Idling](#)
 - [Shuttles](#)
- [Chip Reflash for Diesel Trucks](#)
- [Heavy-Duty Vehicle Greenhouse Gas Reduction Measure](#)
- [Heavy Duty Vehicle Inspections \(Periodic Smoke Inspection\)](#)
- Idling
 - [Commercial Vehicle \(Heavy-Duty\)](#)
 - [School Zones](#)
- [On-Road Certification Program](#)
- [Port Trucks / Drayage Trucks](#)
- [In-Use Public and Utility Fleets \(Heavy-Duty\)](#)
- [In-Use Solid Waste Collection Vehicles](#)

Marine & Related Links



- [Commercial Harbor Craft](#)
- [Harbor Communities Monitoring](#)
- [Recreational Marine Engines](#)
- [Ocean-going Ships](#) (Commercial Marine Vessels)
- [Shore Power](#)

RELATED LINKS:

- Demonstration Programs
 - [BP ECD Demo Program](#)
 - [CalTrans Green Fleet Demo](#)
 - [SCAQMD School Bus Demo](#)
- [Local Incentives Program](#)
- [Manufacturers' Advisory Correspondence \(MACs\)](#)
- [Mexico - California Border Activities](#)
- [Mobile Source Emission Reduction Credits](#)
- [Mobile Source Mailouts](#)
- [Carl Moyer Program](#)
- [In-Use Heavy-Duty Engine Compliance Program](#)
- [2007 Heavy-Duty Engine Standards](#)
- [Air Quality Improvement Program](#)
- [Goods Movement Emission Reduction Program](#)

California Regulations – Motivation

- Moving forward to meet the goals of the Diesel Risk Reduction Plan
 - 75% reduction in diesel PM by 2010
 - ss85% reduction in diesel PM by 2020
- Large reductions in NOx emissions still needed to attain ozone and PM standards
- Must reduce emissions from in-use diesel fleet to achieve both goals

Source: ARB

California Regulations

- Urban Buses (2000)
- Refuse Trucks (2003)
- School Bus Idling (2003)
- Stationary Engines (2004)
- TRUs (2004)
- Truck & Bus Idling(2004)
- Portable Engines (2004)
- Transit Fleet Vehicles (2005)
- Public HD On-Highway Vehicles (2005)
- Cargo Handling Equipment (2005)
- *Off-Road Engines (2007)*
- Shore power (2007)
- Port Drayage Trucks (2007)
- Private HD On-Highway Vehicles (under development)

Source: ARB



ARB Verification Program

- NOx & PM reduction emissions control technologies (ECTs) → “VDECS”
- Determine if emissions reductions are real and durable
- Quantify emissions reductions
- Ensure continued emissions reductions through in-use compliance testing and warranty reporting

Source: ARB

ARB Verification Program (ctd)

- Complete description of product and how it works
- Emissions test data
- Durability demonstration
- Prescribed warranty statement
- In-use compliance testing and warranty reporting

Source: ARB

CA Off-Road ATCM

- Included:
 - Commercial off-road diesel vehicles \geq 25 HP
 - Construction, industrial, mining, airport ground support
 - Excluded:
 - On-highway vehicles
 - Ag
 - Two Approaches:
 - Meet (BACT) requirements
 - NOx – engine replacements @ 10% of hp per year
 - PM – VDECS retrofits @ 20% of hp per year
- or**
- Meet NOx and PM *fleet average* targets

CA Off-Road ATCM

Fleet Size	Description	Compliance Date
Small	<ol style="list-style-type: none"> 1. $\leq 2,500$ hp & 2. small business or 3. muni or 4. low population muni fleet 	<p>2015-2025 PM-only</p>
Medium	<ol style="list-style-type: none"> 1. 2,501-5,000 hp 	<p>2010-2020 PM and NOx</p>
Large	<ol style="list-style-type: none"> 1. $> 5,000$ hp 2. privately owned or 3. California State or 4. US government or 5. Nonprofit.... 	<p>2009-2020 PM and NOx</p>

CA Off-Road ATCM

Complex regulation

- PM Requirements -- Two ways to meet the PM requirements (lesser OK)
 - PM fleet average targets approach -- meet PM emissions targets set by ARB by any means
 - or
 - Best Available Control Technology (BACT) approach -- Install VDECS on 20% of total fleet horsepower per year
- NOx Requirements -- two ways to meet the NOx requirements:
 - NOx fleet average targets approach -- Meet NOx emissions targets set by ARB by any means
 - or
 - Best Available Control Technology (BACT) approach -- replace engines at a rate of 8% of total fleet horsepower per year (after 2015, the 8% turnover rate increases to 10%)
- SOON (Surplus Off-road Opt-in for NOx) -- designed to achieve additional NOx reductions (local air districts opt in)

NYC LL77

- Law enacted by NYC Council in 2003
- DEP Rulemaking in 2005
 - Ch. 14 of Title 15, Rules of City of New York
- Addresses emissions from “non-road” diesel equipment
- All City Agencies and their contractors

NYC LL77

- Any diesel powered equipment > 50 HP must be:
 - Powered by ULSD
 - Utilize BAT for reducing emissions
- Equipment includes:
 - Excavators, backhoes, cranes, compressors, generators, bulldozers, etc.
- Does not include on-highway vehicles

NYC LL77

BAT Definition:

- “Technology shall achieve the greatest reduction in emissions of particulate matter (PM) and shall in no event result in an increase in the emissions of either PM or nitrogen oxides (NOx)”

Category I

- System using diesel particulate filter (DPF)
 - Control PM + NOx or
 - PM Only

Category II

- System using diesel oxidation catalyst (DOC) or flow-through filter (FTF)
 - PM + NOx or
 - PM Only

Category III

- Emulsified Diesel Fuel (ULSD compatible)

NYC LL77

- Technology must be verified by either:
 - US EPA
 - California Air Resources Board (ARB)
 - VERT
- Non-verified if:
 - OEM installed without compromising performance
 - Demonstration-stage technology

<http://www.epa.gov/otaq/retrofit/retroverifiedlist.htm>

<http://www.arb.ca.gov/diesel/verdev/level1/level1.htm?PF=Y>

NYS Regulation

“LL77 “like” w/o private contractor on muni construction projects precept”

- Mandatory ULSD fuel use requirement
- Mandatory BART retrofit requirement
- Any vehicle > 8,500 lbs GVWR
- On-highway and nonroad
- Owned, operated by or on behalf of, or leased by NYS agency
- \geq 33% by December '08
- \geq 66% by December '09
- All by December '10

NJ DRRP

Part One, School Buses

- Mandatory CCV installation
- All regulated publicly and privately owned school buses
- Within two years of the date when the NJDEP certifies that funding is available.
- Once certification of funding is announced, the school bus owner must submit to the NJDEP a Cost Estimate–CCVS form, downloaded from NJ DEP website:

www.stopthesoot.org

- Installation and purchase costs reimbursed by NJDEP
 - Only to authorized installers on the state contract.
 - List of authorized installers and their products:
www.stopthesoot.org.

NJ DRRP

Part Two, Other Commercial Vehicles

Mandatory BART installation

- Refuse trucks publicly owned or privately owned and used in a public contract.
- NJ Transit buses.
- Privately-owned commercial buses.
- Publicly-owned heavy-duty on-highway and nonroad vehicles.

Procedure

- Installation of retrofit equipment required after NJDEP approval of Initial Inventory/Cost Estimate - BART submittal and certification of reimbursement funding availability.
- Installation & purchase of ECTs reimbursed by the NJDEP to the authorized installers on the state contract.

State Construction Contracts

- Connecticut
- Illinois
- Maryland
- Michigan
- Minnesota
- New York
- Oregon
- Texas

Contact Information – Emisstar LLC

Michael C. Block, Principal

Office: (603) 487-3235

Mobile: (603) 520-4147

michael.block@emisstar.com

www.emisstar.com