

CARB Rule 2025

Background of Rule

Why the rule is here

- The Rule is being forced upon California by USEPA- failure of state to eliminate non- attainment areas in state for NOx
- State must, by 2025, meet Federal air standards or face loss of billions in Federal Highway funding \$\$\$\$\$\$\$\$\$\$\$\$\$
- Proposed Rule 2025 drafted in April 2008 to address diesel, on road applications- both truck and bus

CBA Plan of Attack

- Soon after the draft rule was proposed, CBA met with CARB staff (Erik White/ Tony Brasil) to discuss impact of the rule on motorcoach industry
- The CBA team- Jim Seal, Jim Seaton, Chris Riddington, Mark & Mike Waters
- Results: mixed. While CBA clearly identified the financial difference between replacing a \$135,000 truck and a \$400,000 motorcoach, staff kept going back to the message that they must do something; and that EVERYONE they have met with has sung the 'poor me' song.

CBA Plan of Attack (con't)

- Once we determined that staff would be making their recommendation to the CARB board of directors who would vote on staff's suggestions, CBA felt that meeting with Board members would be required to insure that the Board got our message. This became a priority once we found out that the Board TYPICALLY only learned about any voting measure when the staff made their recommendations 45 minutes prior to voting!

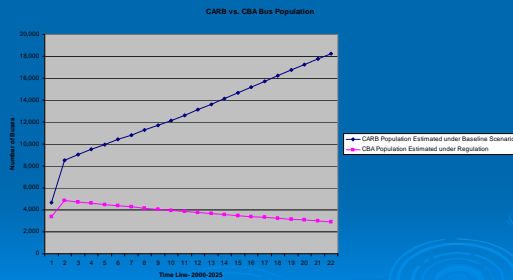
CBA Plan of Attack (con't)

- After meeting with about 1/3 of the Board at various meetings, the CBA Committee reviewed CARB's data as it pertained to vehicle populations and the amount of projected emissions based on their analysis.
- This is where the we found the flaw in their "science".

Flaws in the Data (Garbage in, Garbage out!)

- CBA discovered that CARB's estimates of the number of buses in California, historically, currently and looking forward to 2025, were flawed.
- While CARB eventually agreed to CBA's initial presentation of the adjusted number of buses, further research determined that the bus population is likely even SMALLER than CBA thought (in fact, the CBA membership analysis of growth from 2000-2008 actually showed a DECLINE overall. This information will be retained in the event CARB attempts to 'adjust the rule' in future years.
- The following graph depicts the HUGE difference in numbers.

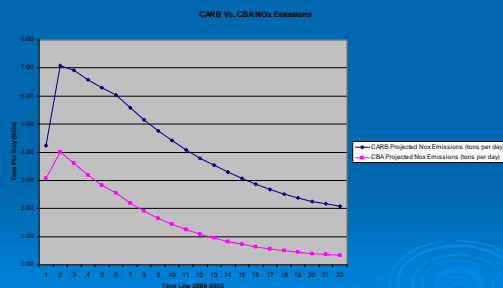
CARB Vs. CBA Bus Population



Phantom Buses & Emissions

- Once we were able to convince staff that since their bus population was exaggerated, it stood to reason that the emissions tied to these 'phantom buses' simply did not exist. Over the course of time (through 2025) this was a huge savings in all measured emissions (NOx, PM 2.5, and Carbon Dioxide), simply by using an accurate estimate of the bus population. These emissions savings, measured in 'tons per day' is displayed on the following graph:

CARB Vs. CBA NOx Emissions



The "Deal"

- After 12th hour meetings with CARB staff on December 4th, 9th and 12th, staff agreed with our counter to their estimated numbers, and agreed to propose to the Board the 'Motorcoach' regulation. Given that this option still contained the standard PM 2.5 language, the NOx requirements were delayed until 2017, 3 years beyond the truck regulation and establishing higher levels of emissions from buses, compared with trucks, until 2021. CARB board voted 12/12 to accept staff recommendations. This rule can be found at:
 - http://www.arb.ca.gov/msprog/onrdiesel/documents/08-1211Attachment_C.pdf

More of the "Deal"

- During our meetings with CARB staff, once it became clear that there were flaws in CARB's numbers, the "Unique Vehicle" exemption (2025 (d) 70- a through d- see next slide), an exemption we raised earlier in the process, became the 'out' promoted by CARB for motorcoaches that will not accept a high level emissions device (VDEC's). In addition, while CARB claimed that their plan was not to force companies to replace buses with new buses, but emphasize used, later model buses with updated emissions technology, this section allows exemption (annually) when these late model buses are NOT available on the secondary market.

UNIQUE VEHICLE exemption

- 69)(70) "Unique Vehicle" means a vehicle for which:
 - a used vehicle that performs a similar function with a 2007 NOx equivalent emissions engine or cleaner is not available, and
 - a suitable cab and chassis upon which the truck bed could be mount is not available, and
 - a verified NOx emissions control device that could reduce the vehicle's exhaust NOx emissions is either installed or not available, and
 - the vehicle's engine is equipped with the highest level VDECs.

More of the “Deal” (cont.)

- The important caveat to the availability of used buses is that if “a used bus” of the year model needed is available (i.e., for your Fleet Calculator, you need a 2007 year engine), but not of the manufacturer you want, you may have no choice but to buy that bus. CARB’s plan is based on the engine year model and it’s ability to replace a non-compliant engine and NOT the make of the bus and whether you have any of these makes in your fleet or not. Not so good.....

Specifics of CCR section 2025- motorcoaches as a class

- (33) “*Heavy Heavy-Duty Diesel Vehicle (HHD)*” for the purposes of this regulation, means a diesel motor vehicle having a manufacturer’s gross vehicle weight rating
- greater than 33,000 pounds or a truck-tractor regardless of GVWR, or a **motorcoach**.
- (44) “**Motorcoach (MC)**” is a for hire, on-road motor vehicle having an under floor luggage compartment separate from the passenger cabin used for conveying
- passengers, is at least 35 feet in length, and is designed for and has seating capacity for 40 or more passengers

CCR section 2025 (con’t.)

- A NOx exempt vehicle is:
- (A) A schoolbus as defined in section 2025(d)(63); or
- (B) A vehicle subject to this regulation that operates exclusively in the NOx
- exempt areas defined in section 2025(d)(50); or
- (C) A vehicle subject to this regulation that is granted a compliance extension
- under the early action provision of section 2025(q)(7); or
- (D) A NOx mileage exempt vehicle, as defined in section 2025(d)(53).
- (E) A motorcoach as defined in section 2025(d)(44).

CCR section 2025 (con’t.)

- (m) Requirements for Motorcoaches
Motorcoaches are exempt from the NOx performance requirements until January 1, 2017. Beginning January 1, 2017, fleets with motorcoaches complying under section 2025(h), the fleet averaging option, would include the MC NOx target value from Table 3 when calculating the NOx target rate.

NOx Target Rates

➤ **Table 3: Fleet NOx Targets to be Used to Calculate NOx Target Rates (g/mile)**

	Compliance Deadline, as of January 1:		
	MHD	HHD	MC
➤ 2013	8.5	14.4	N/A
➤ 2014	5.8	9.8	N/A
➤ 2015	5.8	9.8	N/A
➤ 2016	4.6	7.8	N/A
➤ 2017	4.0	6.0	9.8
➤ 2018	4.0	6.0	9.8
➤ 2019	4.0	6.0	9.8
➤ 2020	3.2	4.4	9.8
➤ 2021	3.2	4.4	4.4
➤ 2022	1.6	3.0	3.0
➤ 2023	0.8	1.6	1.6

Fleet PM Target Rates

➤ **Table #4 Used to Calculate PM Target Rates (g/mile) Fleet PM Targets for each compliance**

	Compliance Deadline as of January 1	
	MHD	HHD
➤ 2011	0.38	0.710
➤ 2012	0.29	0.530
➤ 2013	0.17	0.320
➤ 2014	0.06	0.110
➤ 2015	0.06	0.110
➤ 2016	0.06	0.110
➤ 2017	0.06	0.110
➤ 2018	0.06	0.110
➤ 2019	0.06	0.110
➤ 2020	0.06	0.110
➤ 2021	0.06	0.110
➤ 2022	0.06	0.110
➤ 2023	0.06	0.110

Conclusions

- 1) The motorcoach industry benefited from negotiations in large part due to the 3 year delay in addressing NOx standards (when using the Fleet Calculator 'Fleet Average' method).
- 2) When the NOx requirements kick in, motorcoaches have a higher emissions levels of NOx than trucks; creating a not so aggressive plan of attack for meeting NOx emissions levels.
- 3) Motorcoach operators will need to address PM 2.5 regulations by 2011 (Fleet Averaging)
- 4) Operators will need to start looking at your fleets in addressing the NOx rule by 2015 or early 2016 to have the targets met by January 1, 2017.
- 5) All in all, the motorcoach industry came out way ahead of the truck rule through research, lobbying, hard work and determination. It's not perfect, but it's a lot better than what we started with.

More Conclusions

- 6) This rule 'in design', applies to EVERY heavy duty diesel vehicle that operates (enters) in California, regardless of the carriers base state of operations. This, historically speaking, would be looked as potentially interfering with interstate commerce; something ABA and UMA may need to get involved with.
- 7) Paperwork- this rule, particularly when dealing with the Unique rule and exemptions, will require A LOT OF PAPERWORK- ANNUALLY!
- 8) Enforcement- it remains unclear HOW CARB will enforce the rule (CHP/ARB/...). The other concern is HOW they plan to enforce border crossings into California by out of state carriers. Also how CARB will handle the registration of all DOT carriers that will enter California

No doubt, many questions remain, and only time will tell how this rule will play out. By watching how the trucking industry reacts, we will have an idea of how we might approach this.