

John W. McClelland, Ph.D. Vice President, Government Affairs

1101 Vermont Ave. NW, Suite 400 Washington, D.C. 20005 202/289-4460 Phone 202/289-4461 Fax John.McClelland@ararental.org

March 18, 2010

California Air Resources Board 1001 | Street Sacramento, CA 95814

**RE: ARA Comments** 

Following please find Comments from the American Rental Association (ARA) in regard to:

Notice of Public Executive Officer Hearing to Solicit Comments on the Regulation for In-Use Off-Road Diesel-Fueled Fleets

Should you have questions, feel free to contact me at the phone or e-mail listed above. You may also contact Dr. Michael S. Graboski at (303) 670-7130. Thank you.

Sincerely,

John W. McClelland

mcalland

## **Comment by the American Rental Association**



Dr. John McClelland Dr. Michael S. Graboski March 18, 2010

# Notice of Public Executive Officer Hearing to Solicit Comments on the Regulation for In-Use Off-Road Diesel-Fueled Fleets. *Docket inuse2010*

The American Rental Association represents 231 members in more than 500 locations throughout California. Many of our members have fleets of diesel-powered equipment that are subject to the provisions of California's off-road diesel emissions regulations. Recently, the staff of the Air Resources Board (ARB) have held hearings and had other discussions with regulated parties on the status of the enforcement of the off-road diesel regulations. A significant part of these discussions have centered on the performance of the California economy and forecasts of future economic activity in California that may affect diesel emissions from regulated fleets. ARA is writing today to provide our view of the economics of the rental industry in California. Our analysis is part of a larger industry research project that has been ongoing at ARA since 2004.

ARA supports California's effort to meet its Clean Air Act requirements. At the same time, we believe that California needs to provide regulatory relief to all businesses affected by the off-road rule due to the current state of the economy. To date, ARB's relief efforts have been primarily directed to the construction companies who hold older equipment through a variety of credits related to reduced activity and fleet size reduction. We believe that the reduced rental activity that our members have experienced is an equally meritorious reason for relief.

A major problem with regulatory relief to date is that it provides no real relief to any business. This is because the use of credits, for example activity credits, only delays expenditures for a few years only then to require full expenditure to meet the BACT commitment. The relief that is needed is for the recovery years beyond 2013 because businesses may not have the financial capability to ramp up their fleets to the level required to fully satisfy the requirements of the regulation.

#### **Statement on the Issue:**

When the Board passed the current regulation, construction economic activity had experienced year over year growth every year since the early 1990s except for a very slight decline during the Dot.com recession. Beginning in 2007, residential construction spending in California began to deteriorate significantly. In 2008, the trend expanded to include non-residential construction. The unprecedented recession and the ensuing impact on emissions were not anticipated in SIP development.

The segment of the rental industry directly impacted by construction spending derives a substantial portion of its rental revenue from residential and non-residential (commercial) construction.

The business model for rental companies is different from construction companies like those represented by AGC. Most rental equipment is smaller than road construction equipment for example being less than 175 horsepower. Figure 1 presents the results for engine size of the ARA survey previously submitted to staff. Figure 2 shows equipment type in the rental fleet. Rather than hold equipment, rental companies buy new and turnover their fleets rapidly. Before the recession, most chain and large independent rental fleets where considerably less than five years old on average. During downturns, fleet age generally increases as with the current situation. The large amount of equipment that has been liquidated in this recession has depressed equipment prices in the secondary market and exacerbated the tendency for the rental fleet to age during an economic downturn. That said, rental companies still hold the cleanest, most modern equipment in the State. Even so, they will face substantial problems when trying to meet the off-road averaging provisions after 2013.

As rental revenues have fallen dramatically during the past two years, budgets for equipment replacement have shrunk considerably. Rental Companies may have shrunk their fleets by eliminating older equipment but none have added much new equipment. Thus, fleet ages have increased.

More importantly, utilization, that is annual hours of operation, has decreased reducing construction and industrial equipment rental revenue that is mostly driven by rental of diesel equipment. With a near constant composition fleet, emissions from the rental fleet are essentially proportional to rental activity, which in turn is directly related to rental revenue. Such emissions are thus estimated to have fallen dramatically.

We have reviewed fleet data with a number of our members. Rental Companies view averaging as the best compliance approach for their business model. Since they have little or no Tier 0 equipment, retirement credits are of little value to them. Because the business model is based upon turnover, they are not interested in spending capital on retrofitting equipment. It appears that most rental companies can meet averaging through 2013 with their existing fleets. Thus credits for reduced activity would have no value. Beginning in 2014, they face problems with fleet averaging even assuming an economic recovery because capital budget increases will lag recovery. We provide an example for a large fleet later in this comment. There are also ongoing concerns about the availability of financial credit especially for smaller ARA member businesses. We have been told that manufacturers have cut back on equipment production and the lead-time on delivery may be long as recovery proceeds. Thus fleet modernization will lag. The silver lining in this picture is that there will be little Tier 3 equipment added to the fleet for the next few years. As capital budgets recover, fleets will be adding Tier 4I and Tier 4 equipment that will have much lower emissions per equipment unit.



AGC reported in its comments that the fleet as measured by DOORS is considerably smaller that that used to estimate the baseline emission inventory. We believe it is ARB's responsibility to review and adjust the emission inventory to properly reflect the current knowledge of the fleet and the economy. This should result in a new baseline and regulatory emission inventories that must be the basis for regulatory modifications and impact on attainment. The 2009 fleet reported should be a good snapshot of the fleet before the full force of the recession was felt, and thus should provide a more correct measure of the inventory. This in turn will result in a different regulatory requirement as applies to the SIP budget. Averaging targets should be adjusted to reflect this new reality.

At the same time, staff needs to revisit the health effects impact. The health impact of particulate from  $NO_X$  and DPM is related to exposure that is a time-weighted concentration. The lower emissions due to the recession have lowered the overall health impact of emissions, and this result could be used to lessen the impact of the rule in the future without changing the overall benefit promised by the regulation. The Agency should not use economic hardship to generate additional benefits that were not economically justified before the recession.

#### ARA California Economic Forecast

The results presented here come from the Annual State of the Rental Industry Analysis that is performed by IHS Global Insight. ARA and IHS Global Insight conduct a comprehensive analysis of the equipment rental industry for the United States in aggregate as well as individual analysis for each state. IHS Global Insight is the largest economic consulting and analysis firm in the world. Many of the macro economic variables forecast by IHS Global Insight are used to drive proprietary models of the US rental market.

The figures in chart 1 of the IHS Global Insight attachment (States: Rental Revenue Charts) show rental revenues for construction and industrial equipment from 2007 through 2014, the end of our forecast period. IHS will update its forecast in May, 2010 with actual data for 2009, and they have advised ARA that based on preliminary analysis they believe that the data will support their 2009 forecast. It is clear that the equipment rental industry in California has experienced a significant downturn in revenues in 2009-2010. The second chart in the Global Insight attachment shows that the downturn in California may have been more severe than that for the US as a whole.

The first table in the Global Insight attachment (States: Data Summary Tables) presents the data that explain the recovery shown in the two Global Insight figures. A significant portion of our rental revenue forecasting equations are driven by construction spending and employment. Rental revenues in California were significantly affected by the unprecedented collapse in residential construction spending that occurred in 2008 and 2009. In addition, steep declines in nonresidential construction spending beginning in 2008 and continuing through 2009 and 2010 have created an additional drag on revenues that have resulted in 2010 California rental revenues are forecast to be at 62% of pre-recession levels. A housing led recovery in construction spending in 2011 followed by a rebound in nonresidential construction spending have both categories predicting a full recovery occurring sometime in 2014.

We have polled members of ARA and they individually confirm the industry-wide revenue trend for 2008 relative to 2007 and 2009 relative to 2008. We have also been told that revenues are down in the beginning of 2010 compared to 2009.



#### **Impacts on the California Rental Fleet**

Forecasts can be wrong. Any regulatory relief needs to be tuned to the actual performance of the economy and not based upon a forecast as has been done to date. Additionally, relief has to include the time lag associated with response to recovery.

It is difficult to characterize with certainty how equipment rental businesses in California are responding to the recession. It appears that the rental fleet is shrinking in California as it is across the country. In addition ARA surveys show that new rental equipment purchases are down 70% from 2007. We believe that rental fleets that are looking forward to the day when the ARB has the authority to fully enforce the off-road diesel emissions rules are in all likelihood making every effort to retain their newest and cleanest equipment. With the replacement business model, we conclude that a significant majority of equipment rental businesses operating in California should ultimately be able to comply with the off-road diesel regulations using the averaging provisions of the rule going forward after full economic recovery.

## A Fleet Example:

We elected to use one of our poster-child fleets to demonstrate the impact of the recession on the fleet makeup.

We report here the analysis of the 2010 DOORS report of one of our members. This is typical of the large fleets owned by ARA members. Table 1 shows the results.

Table 1

Data for a Large California Rental Fleet as Reported to DOORS

2010	Average Fleet Age	4.8 years		
	Fleet NO <sub>X</sub> Index	Fleet PM Index		
2010	4.72	0.322		
	Fleet NO <sub>X</sub> Target	Fleet PM Target		
2010	5.83	0.508		
2011	5.83	0.508		
2012	5.23	0.386		
2013	5.23	0.386		
2014	4.68	0.226		
2015	4.68	0.226		



This fleet contains 72.4% of its engines under 100 hp, 21.8% between 100 and 174 hp, and 5.9% under 299 hp; the distribution agrees fairly well with the survey data presented in figure 1. With the existing constraints imposed by the economy, this business in all likelihood will not be able to comply with the PM target beginning in 2014. We replaced older equipment in their DOORS fleet based upon capital expenditure forecasts adapted from IHS Global Insight. In this adaptation, we took yearly national capital budget estimates (state level estimates were not available) and scaled these using national revenue to California rental income linearly. Since the data are in nominal dollars, we discounted the dollars assuming a conservative 2% CPI. Then we assumed that constant dollars were proportional to units. While we know that Tier 4 equipment will be considerably more expensive, we assumed no premium in our calculations so as to be conservative. We do not want the regulation to eliminate businesses. The greatest 95% confidence fleet age from the ARA survey provided during the rule making process to staff was 4.03 years. Without the recession, these businesses would all have been able to comply. Assuming this age applies, we estimated the average fleet turnover in 2006 (assumed to be 2007 also) was 12.4%. We rolled the example fleet distribution forward in time based upon the adjusted turnover rates from the adjusted IHS Global Insight's capital budget projection.

Table 2 shows the revenue relative to 2007 for California and national capital investment trends in the forecast as well as units turned over annually.

Table 2

Actual and Projected Revenue and capital Investment

## Nominal Dollars

#### 2007 equals 1.00

Year	Relative Revenue	Forecast Investment (US)	Units Purchased California 2007-
		(03)	Dollars with 2% CPI
2007	1.00	1.00	1.00
2008	0.916	0.91	0.90
2009	0.6966	0.29	0.27
2010	0.6178	0.34	0.28
2011	0.6575	0.49	0.40
2012	0.7829	0.74	0.62
2013	0.9249	1.00	0.85
2014	1.027	1.145	0.97



Table 3 shows the horsepower distribution by model year on March 1, 2010 and March 1, 2014. We did not attempt to make purchases by equipment types or engine Tiers. Instead, we rolled forward based only on engine model year. Using the assumptions presented above, we compute the fleet emissions to be 4.13 g/bhp-hr  $NO_X$  and 0.243 g/bhp-hr PM on March 1, 2014. Because of the economic downturn, the fleet contains a substantial amount of Tier 2 equipment even in 2014. It is evident that with this plan, the fleet gives away considerable  $NO_X$  but fails PM by a wide margin.

Table 3
Fleet Horsepower Distribution by Engine Model Year

Year	2010	2014
1998	0.0%	0.0%
1999	0.1%	0.0%
2000	0.0%	0.0%
2001	0.1%	0.0%
2002	1.5%	0.0%
2003	4.3%	0.0%
2004	18.1%	1.7%
2005	31.9%	27.9%
2006	34.5%	34.2%
2007	7.6%	7.5%
2008	1.7%	1.7%
2009	0.2%	0.2%
2010	0.0%	3.4%
2011	0.0%	5.1%
2012	0.0%	7.7%
2013	0.0%	10.6%
	100.0%	100.0%

We believe that the capital expenditures assumed in this example could be optimistic because they were linearly scaled from national numbers which assumed that the recession would be less deep in other states compared to California.



ARA acknowledges that some of its members have national fleets. In this situation, equipment could be moved to help satisfy California air quality regulations. ARB should be aware that many ARA members are independents with no out of state presence. These businesses will not have such flexibility.

Since we deem the fleet data confidential, we will provide our detailed spreadsheet to ARB as confidential information if staff requests the analysis.

#### **Discussion:**

ARA is willing to work with staff to provide a more detailed look at the rental business.

It is our belief, as with the truck rule, that for rental fleets, particulate emission targets will be most difficult to achieve as a result of this downturn. The 50% drop in PM targets in the 50 to 99 hp range is challenging since this engine hp range represents the majority of our fleet. This change originally assumed the rapid introduction of Tier 4I equipment beginning in 2012 and 2013. With capital replacement budgets severely depressed, we have shown that this is not likely to occur.

It is also not clear whether the particulate inventory reduction produced by the regulation is necessary for SIP compliance or to meet the commitments in the Diesel Risk Reduction Plan.

We make no estimates of the emissions inventory. It is the responsibility of the Agency to perform the quantitative analysis. We have no knowledge of what safety factor was built into the SIP modeling analysis. To the extent that there is a safety factor, the Board should apportion any such over compliance to the regulated parties.

Due to a lack of inventory analysis from ARB based upon the DOORS fleet, we cannot make a concrete proposal that relates our circumstance to the inventory. It is ARB's responsibility to initiate another round of analysis that could meet the State's clean air objectives without further damaging business. ARA is prepared to respond to such an approach.

We think that if the economy recovers as HIS Global Insight predicts, that this is a worse situation for attainment than if the Lynn Reaser AGC recovery occurs. In that case, emissions might be depressed enough so the regulation could be delayed. Considering these two vastly different scenarios, it would seem that planning is impossible. We would encourage the Board to request a delay on the SIP attainment date for PM2.5 pending the recovery.



Figure 1



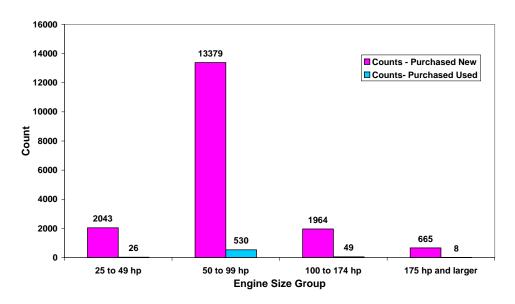
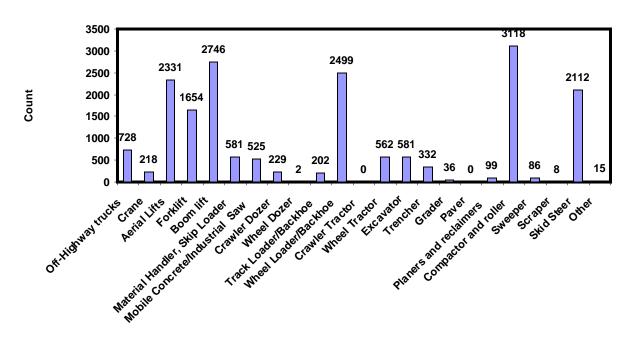


Figure 2

#### Mobile Equipment by Type in Rental Fleet





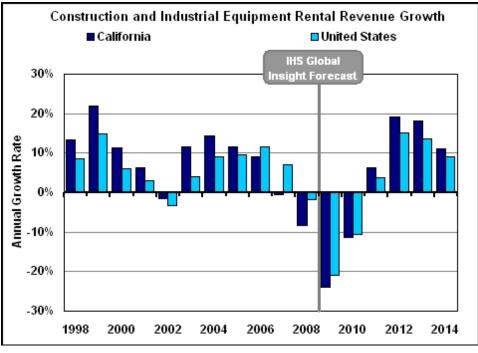


## California

This information was last updated on Mon 22 Feb 2010, 4:04 AM EST (9:04 GMT)

States: Rental Revenue Charts





This information was last updated on Mon 22 Feb 2010, 4:04 AM EST (9:04 GMT)

States: Data Summary Tables

Data Summary								
Millions of U.S. Dollars (Unless Otherwise Noted)								
	2007	2008	2009F	2010F	2011F	2012F	2013F	2014F
Const. & Indust. Equipment Rental Revenue	2,924.7	2,679.6	2,037.2	1,807.0	1,923.0	2,289.7	2,705.1	3,003.6
Nonresidential Construction	66,985.3	71,943.2	67,886.9	58,189.5	60,086.6	65,451.7	71,505.7	77,978.0
Residential Construction	86,572.5	46,443.1	29,857.9	34,782.7	52,405.6	71,422.6	86,871.6	94,346.6
Construction Employment (Thousands)	892.6	785.4	643.9	576.4	582.6	649.2	727.8	769.3
Gross State Product - Manufacturing	179,089.0	181,134.7	171,009.0	177,014.8	186,084.3	197,076.0	208,500.8	219,649.9

Note: The letter 'F' indicates a forecast year

Data Summary - Growth Rates								
Percent Change, Year-on-year								
	2007	2008	2009F	2010F	2011F	2012F	2013F	2014F
Const. & Indust. Equipment Rental Revenue	-0.5%	-8.4%	-24.0%	-11.3%	6.4%	19.1%	18.1%	11.0%
Nonresidential Construction	18.1%	7.4%	-5.6%	-14.3%	3.3%	8.9%	9.2%	9.1%
Residential Construction	-31.6%	-46.4%	-35.7%	16.5%	50.7%	36.3%	21.6%	8.6%
Construction Employment	-4.4%	-12.0%	-18.0%	-10.5%	1.1%	11.4%	12.1%	5.7%
Gross State Product - Manufacturing	2.5%	1.1%	-5.6%	3.5%	5.1%	5.9%	5.8%	5.3%

Note: The letter 'F' indicates a forecast year

Copyright ©2010 IHS Global Insight Inc. Reproduction in whole or in part prohibited except by permission. All Rights Reserved

Information has been obtained by sources believed to be reliable. However, because of the possibility of human or mechanical errors by our sources, IHS Global Insight Inc. does not guarantee the accuracy, adequacy, or completeness of any information and is not responsible for any errors or omissions or for the results obtained from the use of such information. http://www.ihsglobalinsight.com/

Terms of Use • Privacy Policy