

August 19, 2016

South Coast Air Quality Management District  
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*Submitted Electronically*

Thank you for the opportunity to comment on the Initial Draft of the 2016 Air Quality Management Plan (AQMP). The California Trucking Association (CTA) is the nation's largest statewide trade association representing the trucking industry.

### **Trucking Will Meet and Exceed “Fair Share” Emission Reductions without “Further Deployment”**

California's trucking industry is already subject to the most stringent emission regulations in the nation. In the past ten years, the California Air Resources Board (CARB) adopted a comprehensive suite of air quality rules which regulate nearly every facet of the in-use emissions from heavy-duty trucks. The industry spends approximately \$1 billion annually in compliance costs for these rules, which include:

- Statewide Truck and Bus Rule
- Statewide Drayage Truck Regulation
- Transport Refrigeration Unit Air Toxic Control Measure
- Heavy Duty Tractor-Trailer Greenhouse Gas Reduction Measure
- Commercial Vehicle Idle Reduction Program
- Heavy Duty Vehicle Inspection Program
- Periodic Smoke Inspection Program

Increased California-only costs from State strategies to reduce the carbon intensity and price the carbon content of fuel such as the Low Carbon Fuel Standard (LCFS) and Cap and Trade will also cost the trucking industry somewhere between \$500 million and \$1 billion annually through 2020<sup>1</sup>.

These existing regulations are estimated to by the Air Resources Board (ARB) achieve a 71% reduction in NOx from current levels.

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<sup>1</sup> Assumes 3 billion gallons of diesel consumed annually 2016-2020. Conservatively estimate CO2 allowance price to remain at auction floor. Low costs in 2016 of \$0.13/gallon increased cost from Cap and Trade and a \$100/MTCO2 LCFS credit price. High Costs in 2020 of a \$0.17/gallon increased cost from Cap and Trade and a \$200/MTCO2 LCFS credit price.

<b>Estimated Emissions from Medium/Heavy-Duty Trucks</b>		
	Remaining NOx (tpd)	Reduction from Current Levels
Current Regulations	43	<b>71%</b>
Current and Proposed CARB Mobile Source Strategy	28	<b>81%</b>
Current, Proposed and CARB Further Deployment On-Road Heavy Duty	17	<b>89%</b>
Current, Proposed, and AQMP Incentives (Table 4-15)	8	<b>95%</b>

\*Based on 2012 - 2031 Summer Planning Inventory for Class 2B – 8 Diesel Trucks.

Proposed, quantified measures in CARB’s Mobile Source Strategy increase the reductions to **81%** without the anticipation of further deployment or development of cleaner technologies. As discussed throughout the AQMP Advisory Group process, each sector was anticipated to help achieve a “fair share” reduction goal of 80% from current levels. Trucking is forecasted to exceed this goal without further action beyond current regulations and proposed, quantified measures in the CARB Mobile Source Strategy.

Current and proposed on-road heavy duty measures account for the lion’s share of reductions under CARB’s Mobile Source Strategy.

<b>South Coast NOx Reductions in CARB Mobile Source Draft Strategy (tpd)</b>				
Measure Concepts by Source Category	70% Reduction 80ppb Standard (2023)	Percent of Total	80% Reduction 75ppb Standard (2031)	Percent of Total
<b>On Road Light Duty</b>				
Current Programs	47	87%	59	91%
Proposed Programs	0	0%	1	2%
Further Deployment	7	13%	5	8%
<b>Total Category Reductions</b>	<b>54</b>	<b>100%</b>	<b>65</b>	<b>100%</b>
<b>Trucks and Buses (ORHD)</b>				
Current Programs	97	72%	115	77%
Proposed Programs	3	2%	23	15%
Further Deployment	34	25%	11	7%
<b>Total Category Reductions</b>	<b>134</b>	<b>100%</b>	<b>149</b>	<b>100%</b>
<b>Off-Road Federal and Int'l</b>				
Current Programs	9	16%	15	23%
Proposed Programs	1	2%	12	18%
Further Deployment	48	83%	38	58%
<b>Total Category Reductions</b>	<b>58</b>	<b>100%</b>	<b>65</b>	<b>100%</b>
<b>Other Off-Road</b>				
Current Programs	23	61%	32	68%
Proposed Programs	1	3%	5	11%
Further Deployment	14	37%	10	21%
<b>Total Category Reductions</b>	<b>38</b>	<b>100%</b>	<b>47</b>	<b>100%</b>
<b>Total Expected NOx Reductions</b>	<b>284</b>		<b>326</b>	

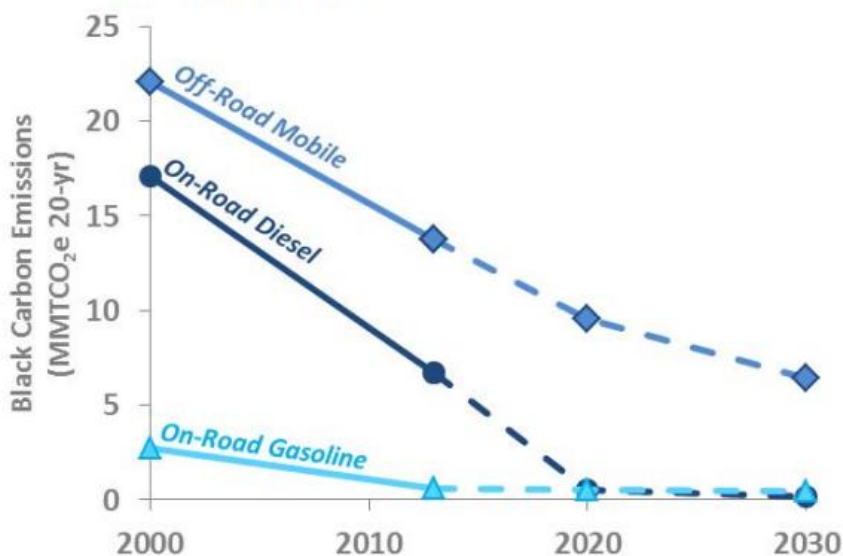
CARB’s Mobile Source Strategy also incorporated several measures for which they have not yet quantified (NYQ) emission reductions or cost, but plan to in the coming years. These NYQ measures include programs to lower in-use emissions and incorporating criteria pollutant benefits from the recently released Final Rule for the Second Phase of the Environmental Protection Agency (EPA) and National Highway Transportation Safety Administration’s (NHTSA) Heavy-Duty Vehicles and Engines Greenhouse Gas and Fuel Efficiency Standards (Phase 2).

EPA/NHTSA anticipates that their Phase 2 rules will result in as much as a 10.2% reduction in downstream NOx by 2040<sup>2</sup>. Cost-effective programs to lower in-use emissions also hold great promise as emission control deterioration accounts for a large part of the total T6-T7 EMFAC vehicle category emissions.

In addition to progress on regional air quality, localized health risk from diesel PM has also been drastically cut. As of 2023, with very few exceptions, all heavy-duty trucks in the South Coast Air Basin will be equipped with particulate matter (PM) filters. CARB’s own May 2015 evaluation of PM filters<sup>3</sup> found that “PM filters virtually eliminate PM from truck exhaust”.

This is reflected in CARB’s recent emissions inventory for black carbon<sup>4</sup>, for which diesel PM is a close surrogate.

**Figure 2. Black Carbon Emissions from On-Road and Off-Road Mobile Sources with Existing Measures.**



<sup>2</sup> Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles - Phase 2 Regulatory Impact Analysis, Table 5-42

<sup>3</sup> <http://www.arb.ca.gov/msprog/onrdiesel/documents/DPFEval.pdf>

<sup>4</sup> <http://www.arb.ca.gov/cc/shortlived/meetings/04112016/appendixa.pdf>

This is further reflected in a comparison between today’s assumed PM emissions and those used to characterize health risk from diesel PM just 16 years ago<sup>56</sup>.

	PM2.5 Emission Factor (g/mile)	% Reduction
Diesel Risk Reduction Plan (Appendix VII)	0.670	
EMFAC2011 (2010+ zero-mile)	0.035	-94.8%
EMFAC2014 (2010+ zero-mile)	0.004	-99.4%

### Serious Concerns with MOB 01-04 and MOB-08

We have serious concerns about the proposed control measures MOB-01 through 04 (“Facility Measures”) and portions of MOB-8 (“Fleet Rules”).

CTA is strongly opposed to the regulation of mobile sources such as trucks and transport refrigeration units via freight facility emission caps and performance targets. The proposed Facility Measures may leave the door open for the adoption of such regulations. These concepts would represent an unprecedented, and legally questionable, expansion of the SCAQMD’s regulatory authority of the freight industry. Given the remarkable progress demonstrated to date, we do not believe such a draconian regulatory expansion is either appropriate or warranted at this time.

We are also concerned about any expansion of the AQMD’s Fleet Rules to private trucking fleets. The extensive legal history on the Fleet Rules should make it clear that any such expansion would be a pointless and wasteful exercise which would tie up valuable resources that could otherwise go towards achieving real air quality progress.

Because of the limited authority the district has to regulate mobile sources, we would urge the AQMD to continue to work collaboratively with CARB, the EPA and the industry to further the progress towards zero and near-zero emission technologies.

There is ample history and evidence to show that this collaborative approach has and will continue to achieve significant air quality progress while continuing to balance economic concerns.

<sup>5</sup> <http://www.arb.ca.gov/diesel/documents/rrpapp7.PDF>

<sup>6</sup> [http://www.arb.ca.gov/msei/msab\\_oct\\_workshop\\_10\\_07\\_2013\\_final.pdf](http://www.arb.ca.gov/msei/msab_oct_workshop_10_07_2013_final.pdf)

## **CTA Supports Targeted, Cost-Effective Incentives**

The CTA will continue its work with State, Federal and Local stakeholders to bring about additional incentives to the South Coast Air Basin to further air quality progress. The CTA has strongly supported recent, successful bipartisan legislative efforts at the State level to reauthorize the Carl Moyer Program and set aside a portion of the Greenhouse Gas Reduction Fund for deployment of near-zero emission technologies.

The Initial Draft AQMP anticipates the potential of a \$5.1 billion incentive program for Medium and Heavy Duty Trucks which would achieve another 20 tons per day by 2031 by replacing nearly 130,000 trucks to help implement the State's "Further Deployment" commitment. Because of the assumed grant amount of \$35,000 - \$50,000 per unit, the likely private sector investment necessary to realize such a program would likely increase the overall costs to somewhere closer to \$10-15 billion. It is of note that such a program would actually far exceed CARB's committed tons under "Further Deployment" for the entire On-Road Heavy-Duty Sector.

A basic flaw in the way the analysis is framed in the Draft AQMP is using an assumption that 130,000 truck projects will in fact meet cost-effectiveness guidelines as set in the Carl Moyer Program. Because of the low NOx and PM emissions from 2010 and newer diesel engines, even assuming a replacement project vehicle achieves a 90% reduction at a new 0.02g/bhp-hr low NOx standard would make it difficult to reach traditional cost-effectiveness thresholds with a typical 3-5 year project life.

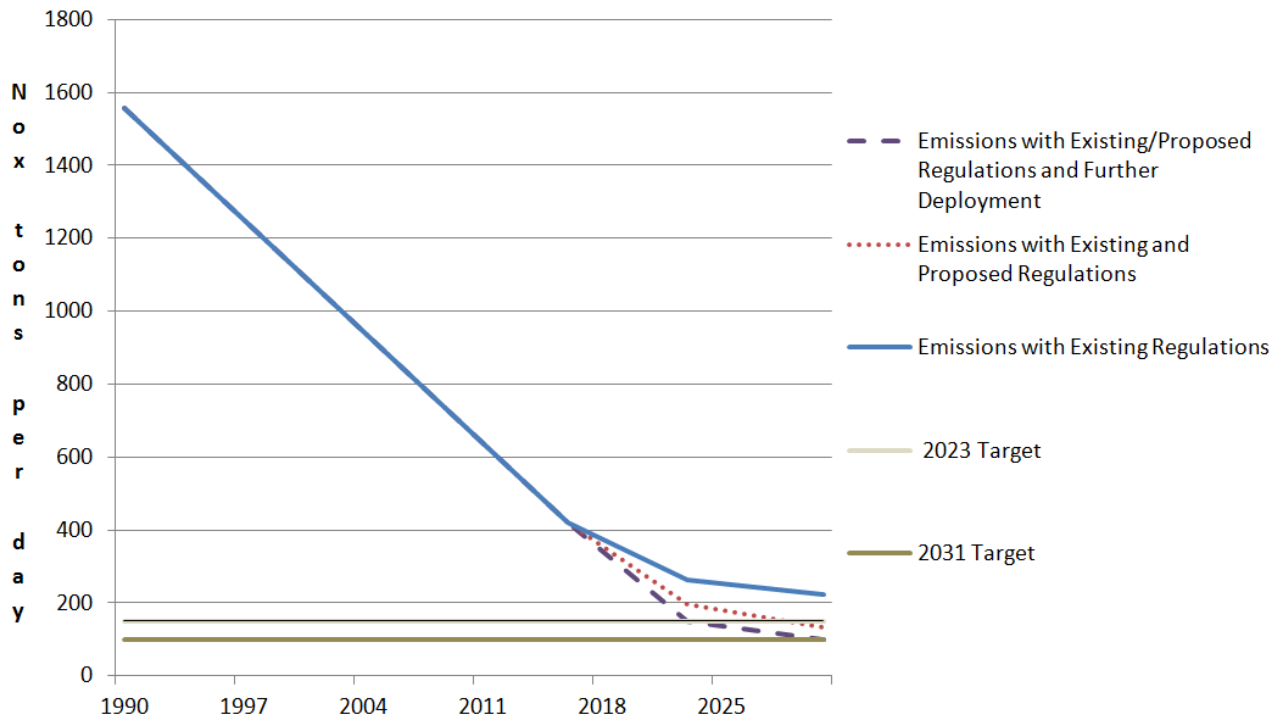
Future stakeholder discussions will need to explore issues of continued cost-effectiveness in a world of diminishing returns as emissions levels get further towards zero. SB513 (Beall-2015) allows adjustments to, specifically, Moyer cost-effectiveness thresholds through a public process. Such a discussion may be productive to further the case for additional public dollars to assure the public and policymakers that our emission control programs continue to be targeted at achieving the most cost-effective use of public and private investment.

## **AQMP Should Provide Additional Historical Context**

While the current draft AQMP does provide useful historical context for policymakers regarding our remarkable air quality progress, it could better highlight certain historical data on NOx reductions to more simply frame the choices which are outlined in the draft plan.

For instance, while pages 1-6 through 1-10 of the draft plan demonstrate the progress made on ozone since 1990, because this is primarily a NOx focused plan we believe

reductions in NOx achieved by existing and proposed regulations and incentives since that same timeframe should be highlighted.<sup>7</sup>



For instance, implementing the estimated 33 ton per day improvement from the “further deployment” of technologies in 2031 would reduce an additional **2.1%** of NOx beyond what will be achieved by regulations and incentives already adopted and quantified using the same 1990 baseline as Figure 1-4. This is roughly equivalent to the average annual emission reduction achieved in a single year between 1990 and 2031.

<sup>7</sup> Historical NOx (1990 levels) from California Almanac of Emissions and Air Quality – 2009 Edition [http://www.arb.ca.gov/aqd/almanac/almanac09/textfiles/table4\\_12.txt](http://www.arb.ca.gov/aqd/almanac/almanac09/textfiles/table4_12.txt)

## Conclusion

Thank you for the opportunity to comment on the draft plan. If you have any questions, please feel free to contact Chris Shimoda at [cshimoda@caltrux.org](mailto:cshimoda@caltrux.org)

Thank You,

A handwritten signature in cursive script that reads "Eric Sauer".

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