



Sustainable Freight Advisory Committee

Clean Truck Program Acceleration Recommendation

The Committee recognizes that the immediate and wide scale implementation of zero and near-zero emission heavy-duty trucks in the South Coast Air Basin and throughout California is a priority focus. Such efforts are required to protect public health, comply with state and federal air quality standards, and avoid Clean Air Act sanctions that could cut off federal transportation funding, result in the potential takeover of local air quality regulatory programs by the federal government, and an increased offset ratio (2:1) that would make it much more difficult for stationary sources wishing to obtain required permits for new or modified equipment. In addition to immediate and large-scale criteria pollutant emission reductions, clean trucks and the fuel that powers them must also provide critical greenhouse gas (GHG) emission benefits.

- California's Sustainable Freight Action Plan seeks to improve freight efficiency, transition to zero-emission technologies, and increase competitiveness of California's freight system. Zero and near-zero emission heavy-duty trucks are a cornerstone of the on-highway elements of this plan.
- The City of Los Angeles Sustainability pLAN targets an increase in the percentage of Port-related goods movement trips that use zero-emission technology to at least 15% by 2025 and 25% by 2035.
- The Ports of Los Angeles and Long Beach are considering putting a goal in the updated Clean Air Action Plan that results in 100% zero-emission cargo handling equipment and drayage trucks by 2030 and 2035 respectively.
- CARB's Mobile Source Strategy and State Implementation Plan (SIP) calls for the reduction of NOx from mobile sources by 70 percent by 2023 and 80 percent by 2030. To reach these required reductions, and thus federal ozone attainment deadlines, ARB has stated that 900,000 zero and near-zero emission trucks must be deployed by 2030, with a majority of these required by 2023 to meet the major NOx emission reductions required by this time.¹
- In the South Coast Air Basin, significant progress towards federal ozone standard attainment deadlines must be achieved by 2023. The SCAQMD, joined by 17 other air quality agencies across the U.S., has recently filed a petition with the US EPA calling for a 0.02 g/bhp-hr NOx heavy-duty emission standard. Without near-term access to and

¹ CARB Mobile Source Strategy, Table 2: On-Road Fleet Transformation (p.50), May 2016.
<https://www.arb.ca.gov/planning/sip/2016sip/2016mobsrsrc.pdf>



deployment of heavy-duty trucks with emissions at or below a 0.02 g/bhp-hr NOx standard, the South Coast Air Basin will be unable to reach its near-term ozone attainment goals by 2023.

- Governor Brown has called for the reduction of petroleum use in California cars and trucks by up to 50 percent by 2030². In addition, California has stated widespread transportation electrification is critical to achieving ambient air quality standards and greenhouse gas emission reduction goals³. Significant deployment of non-petroleum fueled heavy-duty vehicles will be required to meet this goal.

Further, the widespread use of low carbon and renewable fuels that achieve a 40 percent to 80 percent reduction in well-to-wheel based carbon emissions will be critical to the State's efforts to achieve the goals of SB 32 and AB 32, respectively.

The Committee recognizes that the ports have the ability to influence and drive investments in cleaner technologies by virtue of their unique leadership position in the marketplace and ability to develop and implement aggressive clean air programs. As an example, the original Clean Truck Program was a key contributor to moving nearly all of the heavy-duty truck manufacturers to develop and sell natural gas-powered trucks as part of their technology portfolio. As the onset of the Clean Truck Program, Cal Cartage's 132 Daimler (Sterling brand) natural gas truck project, co-funded by Proposition 1B bond monies, was the first time a major truck OEM engineered and sold a natural gas truck in the U.S. Kenworth, Volvo, Mack and Peterbilt immediately followed with commercial natural gas products. Since this port-driven catalyst, more than 10,000 heavy-duty natural gas on-road trucks have been sold throughout the U.S. and Canada to fleets such as UPS, Frito Lay, Anheuser-Busch and many others, including more than 8,000 units powered by 12-liter Cummins Westport natural gas engines. The wide scale adoption of this technology by major trucking companies indicates an important level of technological robustness has been achieved in the last decade. The importance and opportunity for the ports to drive such technological innovation and development in the marketplace should not be underestimated.

A near-zero emission 9-liter natural gas engine is now commercially available to the heavy-duty market. A manufacturer expects to request CARB and EPA certification of a 12 liter near-zero engine – fully capable of meeting the needs of a port drayage application - in 2017, with commercial sales of this product starting in Q1 2018. Testing taking place at Southwest Research has raised the possibility of having diesel engines certified to 0.02 g/bhp-hr NOx in the

² <https://www.arb.ca.gov/cc/pillars/pillars.htm>

³ <https://energycenter.org/blog/senate-bill-350-major-triumph-transportation-electrification>



2023 timeframe. At the same time, new battery and fuel cell electric and hybrid heavy-duty trucks are being built and tested by Volvo, BYD, TransPower, US Hybrid, and others.

Given the need for zero emission and ultra-low NOx heavy-duty engine technology to be immediately deployed on a wide scale, the Committee sees a unique opportunity for the updated San Pedro Bay Ports Clean Truck Program to again provide the catalyst needed to see an acceleration of industry-leading technology in the heavy-duty truck sector in the next three to five years. Given the higher cost of these ultra-low NOx and zero emission technology, it will be imperative that public funding and innovative financing mechanisms be utilized to ensure that the financial burden of clean technology does not become the sole responsibility of the port truck driver, nor result in cargo diversion due to a requirement that would significantly increase the cost of trucking from the San Pedro Bay Ports. The Committee values solutions that advance both the economic and environmental sustainability of the Port.

Provided that the necessary public and private funding and financing are available to the market, replacing 100 percent of the existing diesel-powered drayage fleet in the San Pedro Bay Ports with equipment that is zero and near-zero emission is a shared goal of the Committee. The Committee, therefore, recommends that LA Mayor Eric Garcetti and the Port of Los Angeles executive director, Gene Seroka:

- Take advantage of the diverse stakeholder group represented within the Committee to further build and lead a coalition of businesses (including cargo owners, shipping companies, terminal operators and others), environmental, community, regulatory agency, and other stakeholders to advocate for this shared vision to the greatest extent possible.
- Leverage this coalition to work with federal, state and local agencies, elected officials and others to advocate for the allocation of existing and new financial resources required to implement this vision by the end of 2023.
- Continue to work with Long Beach Mayor Robert Garcia and the Port of Long Beach to develop and implement a series of new measures related to drayage trucks that will cause older and higher emitting trucks to be removed from port drayage service in order that they are replaced with ultra-low emission and/or zero emission technology.
- Ensure that the San Pedro Bay Ports' competitiveness is increased based upon the sum of actions taken.
- Utilize existing and new port resources, public funding, incentives, grants, bulk purchasing collaboratives, and innovative financing to lower the cost to the truck owner to transition to zero and near-zero emission trucks (i.e., those with emissions at or below the 0.02 g/bhp-hr NOx standard) that are commercially available and viable for



commercial deployment as fully-capable heavy-duty drayage trucks in a port application.

- Require zero and near-zero emission trucks that receive funding to use a low carbon fuel that achieves at least a 40 percent well-to-wheels based carbon reduction from CARB diesel.
- Provide meaningful support for public, private, and Public/Private joint ventures to develop low carbon fueling and charging infrastructure projects that enhance and/or accelerate the efficacy of zero and near zero emission trucks.

The Committee recommends that a new Clean Truck Program, with the above elements incorporated, be implemented as soon as possible, but no later than April 1, 2018.

It is recommended that a letter be submitted to relevant federal, state and local agencies and elected officials by January 15, 2017 in order to outline the above goals and request funding support for this important initiative. With hundreds of millions of dollars in incentives available in the marketplace today from a variety of other sources, now is the time to demonstrate the leadership needed to focus these resources on the Clean Trucks initiative being recommended by the Port of Los Angeles Sustainable Freight Advisory Committee.