

Clean Air: Unfinished Business

WHEN CONGRESS PASSED THE 1990 CLEAN AIR Act Amendments, the United States took a giant step to improve air quality and public health. The law established completely new requirements, for USEPA and states, to abate acid rain, air toxins, chemical accidents, tailpipe emissions, smog, and global pollution issues. Since then, the air has become much cleaner. However, pockets of bad air quality persist, particularly in places where historic redlining policies systematically forced minority communities up against factory fence lines and into clouds of concentrated mobile source pollution.

Since 1998, California has recognized that diesel emissions cause lung cancer, heart disease and other adverse health effects. But only recently have innovations in low-cost monitoring technology (some pioneered by UC Berkeley scientists) enabled us to measure local and neighborhood air quality. The data clearly shows that people living near heavy truck traffic suffer dangerous exposure to diesel emissions. In minority, low-income, neighborhoods, diesel pollution exposure can be 2–3 times higher than in more affluent areas. This is the unfinished business of the clean air movement.

My note in the Spring 2018 issue of *Policy Notes* describes the Goldman School's role in the passage of a new law (AB 617) designed to address this problem. It is the first legislation of its kind, and could set an example for other states and nations. Hence, much rides on its successful implementation. Here is an update on efforts to implement AB 617.

Late in June, the Board of the Port of Oakland issued plans to achieve zero emissions from port and freight operations. Goldman's Center for Environmental Public Policy (CEPP) recently filed comments on the plan. While implementation details of the Port's zero-emission plan need to be worked out, this is an important commitment. It could improve public health in West and Central Oakland, reduce greenhouse gas emissions from trucking and freight operations, and incubate truck electrification throughout the region.

In July, Oakland Mayor Libby Schaaf, Bay Area Air Quality regulators, and West Oakland activists convened stakeholders to design an AB 617 Action Plan for West Oakland. The event, and the Port's draft plan, stem from work by West Oakland citizen groups, who used new monitoring technology and community engagement to demonstrate the need for action. Technical studies by Google, Environmental Defense Fund, UC Berkeley researchers and others also helped document pollution hotspots in minority neighborhoods.

In August, CEPP released a report, *Financing Low- and Zero-Emission Freight Transportation Technologies in California*. Truck electrification is a key strategy to implement AB 617. This report provides a roadmap to \$1.8 Billion of state funding for diesel emission reduction and electric truck financing. It shows where



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to find the funding and how to secure it. Electric trucks cost less to operate and maintain than diesel engines, but currently the initial equipment cost is higher. These state incentives address that barrier and help transform markets toward mass production of electric drives, higher demand and lower purchase prices.

In September 2018, Mayor Schaaf and dozens of other East Bay city and county officials signed a pledge to go “Diesel Free by ’33.” This was during an affiliate event to Governor Brown's Global Climate Action Summit. This is a key policy building block toward electrification of transport and delivery trucking throughout the Bay Area.

These events are the latest development in a broader effort to reduce the air quality impacts of trucking. Starting in the 1990s, state regulation, financial incentives, and private investment gradually reduced pollution from heavy-duty trucking. Truck owners and operators invested large sums to modernize emission controls and truck manufacturers produced increasingly cleaner engines. Air quality has improved dramatically, but dangerous hotspots persist. While diesel truck controls have helped, they are not a permanent solution, and they do not address the greenhouse gas emissions from diesel fuel combustion.

Trucking is ripe for change. Dozens of manufacturers, including Toyota, Volvo, Siemens, TESLA, Bosch, Cummins, and Proterra, produce electric trucks or components capable of moving heavy loads 100+ miles between charges. Daimler

and others will sell medium and heavy-duty electric trucks with 200–250-mile range by 2021. Since two-thirds of CA's crude oil supply is imported, electrification lowers risk of rising oil prices.

These developments mirror other leadership on heavy-duty vehicle pollution. Several California municipalities have committed to all-electric bus fleets. LA Ports plan to use financial incentives to encourage trucks to adopt zero-emission technology. Anheuser-Busch ordered 800 hydrogen-powered electric semi-trucks for long distance beer delivery. Paris, Mexico City, Madrid and Athens plan to phase-out diesel delivery trucks by 2025.

Public-private partnerships to electrify trucking can achieve environmental justice for disadvantaged communities, reduce fuel costs, and cut greenhouse gases. CEPP is pleased to be a partner in this policy and social evolution. **G**

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