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Testimony

Investigations & Oversight Subcommittee Hearing - Environmentalism Off the Rails: *How CARB will Cripple the National Rail Network - Hearings - House Committee on Science Space & Tech - Republicans*

Introduction

Chairman Obernolte, Ranking Member Foushee and members of the Subcommittee, thank you for inviting me here today to testify on regulations relating to the public health impacts of locomotive air pollution.

My name is Alan Abbs, and I am the Legislative Officer for the Bay Area Air Quality Management District. I have been involved in air quality management in California for 17 years, including serving as the Executive Director for the California Air Pollution Control Officers Association (CAPCOA), the statewide association representing the 35 air pollution control officers in California.

Bay Area AQMD

The Bay Area AQMD was created by the California Legislature in 1955 as the first regional air pollution control agency in the nation. The agency is independent from state government, and is overseen by a Board of twenty-four locally elected officials. Our role includes regulation of stationary sources of air pollution in the nine San Francisco Bay Area counties, from Santa Clara in the south to Napa and Sonoma in the north.

Clean Air Act and California

The Clean Air Act defines roles for different levels of government to achieve cleaner air and improve public health, through a framework of cooperative federalism. In drafting the Clean Air Act, Congress recognized California's leadership and long history of regulating air pollution from mobile sources, a role that predates the federal statute. Because of this, the Clean Air Act protects California's ongoing right to regulate those emissions, and if California's standards are "at least as protective of public health and welfare," federal preemption can be waived.

Air pollution from locomotives

Locomotives are one of the largest sources of health-harming pollutants in California, and the pollution caused by locomotives makes it impossible for California to meet its Clean Air Act obligations. For highly polluted air basins such as South Coast and San Joaquin, locomotives represent 31% of the pollution reductions needed to meet federal air quality requirements under the Clean Air Act.

California's Class I Railroads are the nation's largest in both miles traveled and operating revenues. Yet they continue to use—and are increasing use of—some of the oldest and most polluting engines in California. EPA-compliant locomotives have been available since 2015, but most locomotives operating

in California have old emissions control technology that produces 90% more pollution than the current U.S. EPA standard. And according to CARB, in the past several years, the average emissions of their locomotive fleets operating in California have been getting worse—not better.

Bay Area example

In the San Francisco Bay Area, the regional air pollution inventory has shown that locomotives operations, including road hauling, switching, and rail passenger transportation, contributed approximately 40 tons of highly toxic fine particulate matter and 2,200 tons ozone-causing of nitrogen oxides in 2023.

In recent years, under California Assembly Bill 617 (AB 617), the District has been working with community members, the California Air Resources Board (CARB), and other stakeholders to reduce disparities in air pollution exposures. In two environmental justice communities, West Oakland and Richmond-North Richmond-San Pablo, technical assessments indicate that locomotives are a key driver of cancer risk, with locomotive emissions being of special concern in neighborhoods adjacent to local railyards.

For example, West Oakland is a shore-front community adjacent to the Port of Oakland, with related railyards and rail lines- four active marine terminals and three railyards. Locomotives operating at these railyards and rail lines in the community accounted for an incremental cancer risk from locomotive emissions of about 125 per million, exceeding EPA thresholds for acceptable risk. Likewise in the community of Richmond-San Pablo, rail activities increase the local cancer risk by 20% over background conditions.

Even in areas that currently attain Clean Air Act standards, pollution from locomotives is a serious public health concern. Ninety percent of California’s railyards are within one mile of vulnerable residential communities already highly impacted by traffic pollution which contains the same contaminants as from locomotives. Until the railroads take serious steps to reduce emissions from their locomotives, these communities will continue to have disproportionately high levels of air pollution and suffer the health consequences.

CARB locomotive rule

In 2023, the California Air Resource Board (CARB) adopted a Locomotive Regulation that is estimated to result in \$32 billion in health savings to Californians by preventing 3,200 premature deaths and 1,500 emergency room visits and hospitalizations. The regulation also would decrease the cancer risk from exposure to locomotive emissions by up to 90%.

CARB’s Locomotive Regulation does not set emission standards on new locomotives. Nor does it mandate use of zero emission technologies by 2030 or 2035. CARB’s regulation calls instead for a steady reduction of locomotive emissions over the next 30 years allowing for existing technologies to be used while new and more advanced zero emission technologies are developed and deployed. Advances in battery and hydrogen fuel cell technology now provide railroads with pragmatic options to pursue to meet these standards. Rail providers could make significant strides in meeting regulatory requirements and protecting public health just by upgrading existing equipment to 2015 EPA standards.

While the Regulation does not require the purchase of new zero-emission locomotives, it is worth noting that such locomotives are available for purchase today, and could be used now in trains running between

the ports of Long Beach and Los Angeles and San Bernardino or Barstow.¹ These zero-emission locomotives have sufficient power, range, and traction to entirely replace the diesel locomotives even along that very steep route—a route that runs through some of the most heavily polluted areas in California,

Role of Incentives

Since 2016, the Bay Area Air Quality Management District has provided incentive funding to support projects that upgraded 10 switcher locomotives and three passenger locomotives to current technology, as well as the Caltrain electrification project. While these projects have demonstrated the feasibility and readiness of cleaner and zero-emission technologies, they represent only a small fraction of the equipment in use. This highlights that incentives alone, without regulatory requirements, are not sufficient to drive widespread adoption of cleaner technologies by locomotive owners.

The spending account established by CARB’s In-Use Locomotive Regulation provides a mechanism to fund the transition and deployment of cleaner technologies. This helps equipment owners meet mandatory requirements, supplemented by incentive funding available from applicable funding sources to achieve earlier and extra emission reductions beyond those required by the regulations.

Conclusion

Thank you again for the opportunity to testify today. I would just conclude by pointing out that zero-emission rail transportation is nothing new. Electrified rail is more than 100 years old and is widely used around the world today. Nearly every locomotive operating today runs on fully electric motors and could be powered using a source other than its diesel generators, which emit a toxic air contaminant for which there is no known safe level of exposure.

¹ CARB, Zero Emission Train from the Port of Los Angeles to Barstow, <https://ww2.arb.ca.gov/resources/fact-sheets/zero-emission-train-port-los-angeles-barstow>.