



**KEY FACTS FOR
COMMUNITY MEMBERS**

UNDERSTANDING THE

Advanced Clean Fleets Rule

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Moving Forward
Network 

Understanding the Advanced Clean Fleets Rule

The **Advanced Clean Fleets (ACF)** rule aims to curb air pollution by increasing the purchase of zero-emissions trucks, starting with select commercial and governmental truck owners. This fact sheet introduces how states can adopt the rule, what activity it regulates, and how states can ensure it is followed.



The Advanced Clean Fleets Rule is a California-based regulation, first adopted by the state in April 2023.¹ The rule builds off of the Advanced Clean Trucks Rule, another California-based regulation: the Advanced Clean Trucks Rule works to ensure the state has enough zero-emission vehicles available for purchase; the Advanced Clean Fleets helps ensure that these zero-emission vehicles are used. However, the full impact of these rules falls short of meeting the Moving Forward Network's demand that all diesel trucks are off the road by 2045.



DIESEL AND PUBLIC HEALTH:

What harms environmental justice (EJ) communities?

Environmental justice examines the disproportionate impacts of climate change and governmental policy on the physical condition of marginalized neighborhoods.² Diesel engines are an environmental justice issue. They are a prominent source of some of the most common air pollutants in the United States, posing direct threats to human health and the environment.³ Those in EJ communities disproportionately bear these harms:

1

People who live near freight hubs or “diesel death zones”—including ports, highways, warehouses, and rail and intermodal yards—are disproportionately exposed to high concentrations of pollution from the combined activity of diesel-fueled heavy-duty trucks, equipment, rail, and vessels.⁴

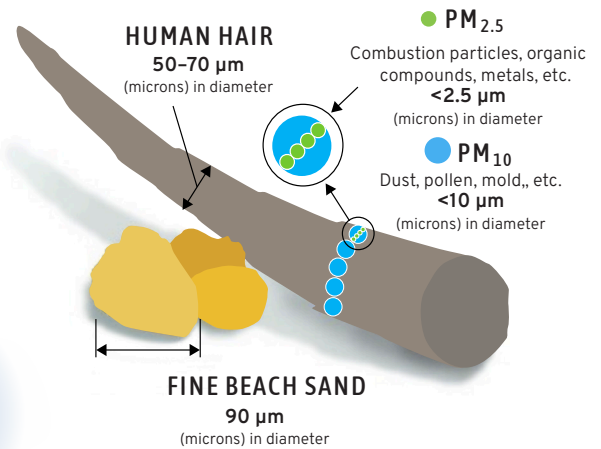
2

Low-income and overburdened communities are more likely to live in areas with higher levels of air pollution⁵ because of historical inequitable zoning practices

DIESEL AND PUBLIC HEALTH:

How Does Particulate Matter Affect Your Body?

COMPARISON OF HAIR, SAND AND PM_{2.5} & PM₁₀ PARTICLES



SOURCE: [A Critical Review on the Effect of Particulate Matter \(PM\) in Air on Public Health](#)

Brain



- Increased brain ischemia

Heart



- Altered cardiac autonomic function
- Oxidative stress
- Increased dysrhythmic susceptibility
- Altered cardiac repolarization



Lungs

- Inflammation
- Oxidative stress
- Accelerated progression and exacerbation of COPD
- Increased respiratory symptoms
- Effected pulmonary reflexes
- Reduced lung function

Blood



- Altered Rheology
- Increased coagulability
- Translocated particles
- Peripheral thrombosis
- Reduced oxygen saturation



Vasculature

- Atherosclerosis, accelerated progression and destabilization of plaques
- Endothelial dysfunction
- Vasoconstriction and hypertension

Source: "[Summary Report of the Aphekom Project 2008-2011.](#)"

DIESEL AND PUBLIC HEALTH:

Common Types of Pollutants

Some common pollutants in the United States include NO_x and particulate matter.

PM

Particulate matter (PM) is made of solids and liquids that are small enough to inhale. Once in your body, particulate matter can enter your lungs and bloodstream, causing health issues such as asthma, heart attacks, and even death for people with pre-existing heart and lung illnesses.⁶

NO_x

NO_x is the collective term for nitrogen monoxide and nitrogen dioxide. Long-term exposure to high levels of NO_x can lead to diseases like bronchitis, worsen the impact of heart disease, and contribute to premature deaths.⁷

GREENHOUSE GASES

Greenhouse gases, primarily CO₂, speed up the rate of climate change by trapping heat in the atmosphere. In the United States, the communities that are most vulnerable to heat-related health impacts are Black and Hispanic communities.¹⁰

HC

Hydrocarbons (HC) are another pollutant that, when mixed with NO_x, create ground-level ozone that can cause long-term lung damage.⁸

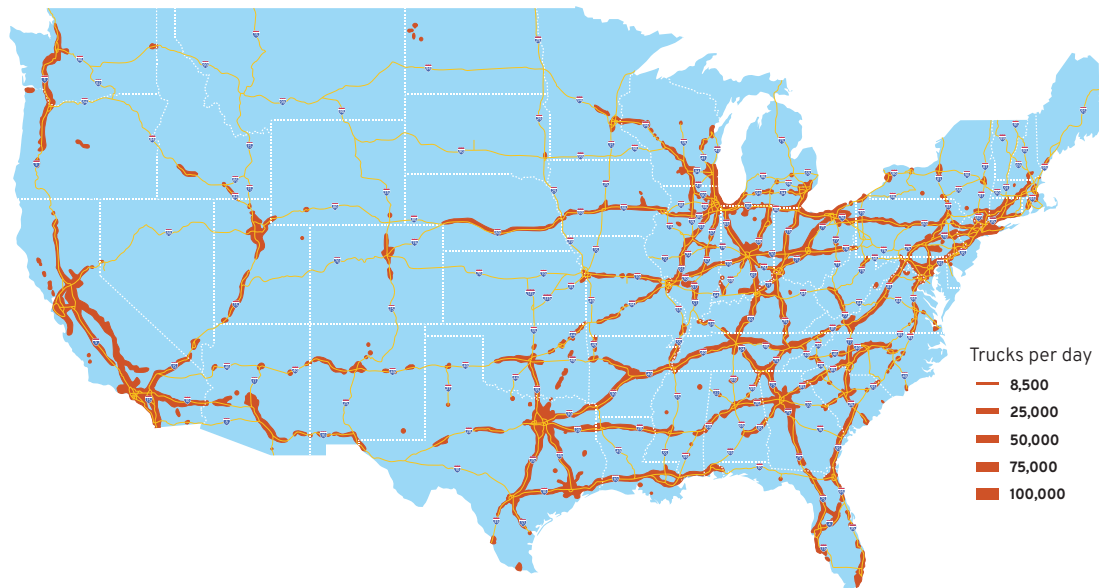
CO

Carbon monoxide (CO) can poison and kill humans when inhaled.⁹

WHY DO WE NEED THE ADVANCED CLEAN FLEETS RULE?

Medium and heavy-duty trucks are a major source of NO_x and particulate matter emitted by the transportation sector: while only 10% of vehicles on the road are medium and heavy-duty vehicles, 45% of NO_x and 56% of PM_{2.5} (the smallest, most hazardous type of particulate matter¹¹) originate from these vehicles.¹² These emissions worsen community air quality, contributing to increased rates of diseases like asthma and lung cancer within communities near major transportation routes.¹³

Trucking Routes Across the US Carrying 8,500 or More Trucks per Day



Source: American Lung Association. "[Delivering Clean Air: Health Benefits of Zero-Emission Trucks.](#)"

The transportation sector is the largest contributor to man-made greenhouse gas emissions in America.¹⁴ Again, medium and heavy-duty trucks produce a disproportionate share of this pollution: they make up 10% of on-road vehicles but produce 28% of greenhouse gases emitted from among on-road vehicles.¹⁵

Increasing the number of electric trucks on the road can help improve community air quality, health, and lessen the speed of climate change.

WHO PASSES THE ADVANCED CLEAN FLEETS RULE?

States are responsible for passing the Advanced Clean Fleets Rule.

However, the federal Clean Air Act places limits on states' ability to adopt their own truck standards. Instead, the Clean Air Act allows California because of its long history of regulating cars and trucks due to significant statewide air pollution issues, to adopt emission standards that are stricter than federal emission standards.

Once the US Environmental Protection Agency (EPA) approves those California standards, other states can choose whether to adopt the stronger California standards. With a few exceptions noted below, if states want stronger standards, they can only adopt standards identical to California's.¹⁶

The Advanced Clean Fleets rule is structured in a way that allows other states to adopt some or all of its regulations.

California Adopted The Advanced Clean Fleets Rule In April 2023.¹⁷

As of August 2023, no other states have adopted the rule.



WHAT ACTIVITY IS REGULATED BY CALIFORNIA'S ADVANCED CLEAN FLEETS RULE?

The Advanced Clean Fleets Rule contains three regulations for specific types of trucks and fleets. These specific trucks and fleets include:

1 Heavy-duty trucks that transport large loads to and from major shipping hubs. These are known as drayage trucks.

1. Owners of drayage trucks must register their vehicles in a state registry in order to drive them onto a port or railyard.
2. Starting on January 1st 2024, owners of drayage trucks may only register zero-emissions trucks in the state registry.¹⁸ This means that starting January 1st 2024, all new drayage trucks entering ports and railyards must be zero-emissions.
3. Older, diesel-fueled trucks in the state registry will age out over time. They must be removed from the list when they reach 13 years old and 800,000 miles, or the engine is 18 years old—whichever comes first.
4. After January 1, 2035 the state registry for drayage trucks will only allow zero-emissions vehicles. Diesel-fueled trucks can no longer operate drayage runs in California after this date.¹⁹

2 Fleets owned by state and local governments. These include all medium- and heavy-duty vehicles owned by state and local agencies, like garbage trucks and utility/service trucks.

1. By 2024, 50% of new truck purchases for state and local government-owned fleets must be zero-emission vehicles. Small municipalities are exempt from this requirement and do not need to begin following this rule until 2027.²⁰
2. By 2027, 100% of new truck purchases for state and local government-owned fleets must be zero-emission vehicles.²¹



3

Large commercial fleets and fleets owned by the federal government: large, or “high-priority” fleets are those that earn \$50 million+ per year, or that have 50+ trucks. These fleets can choose one of two zero-emission pathway options:²²

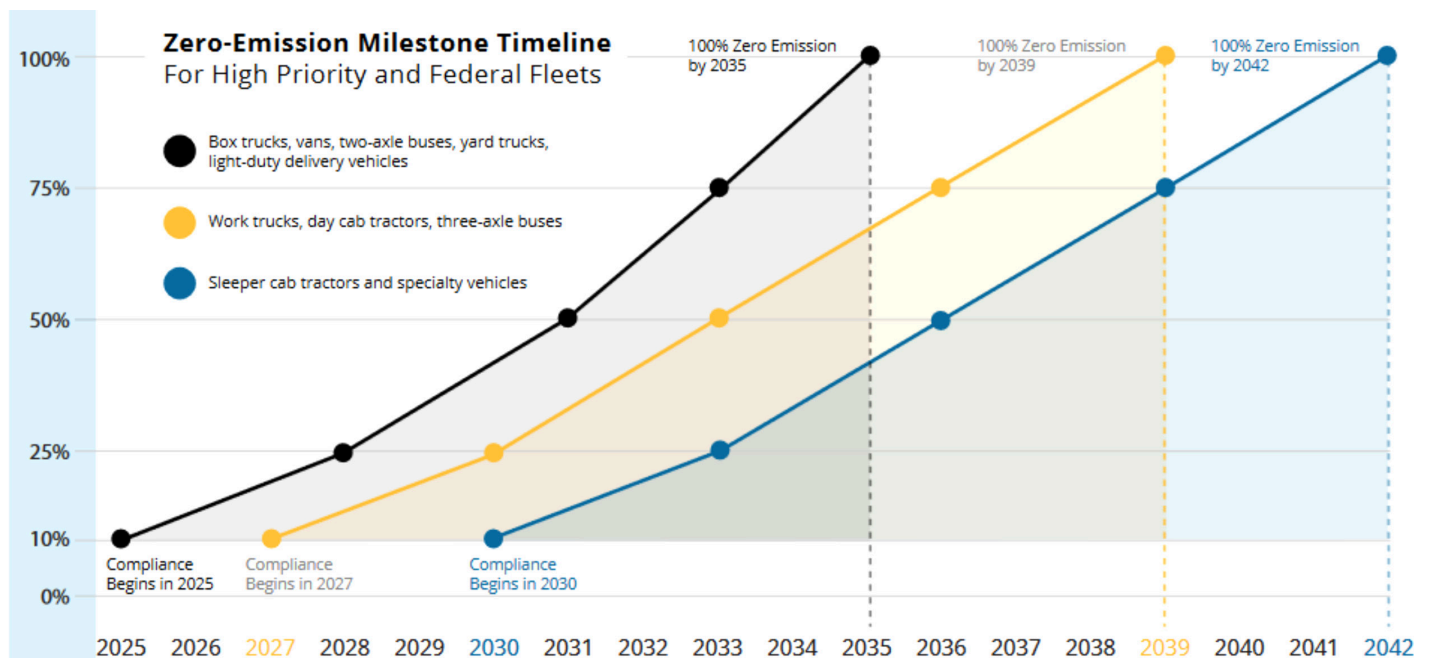
Option 1: by Model Year

1. Starting in 2024, these fleets may only purchase zero-emission vehicles.
2. Starting in 2025, these fleets must stop using non-zero-emission vehicles when they reach 18 years of operation or 13 years and 800,000 miles, whichever comes first.

Option 2: By Milestone

1. Fleets owners can choose to gradually phase in zero-emissions vehicles into their fleets. Smaller, easier-to-electrify vehicles like box trucks will phase-in quicker than tractor trucks.

ZERO-EMISSION MILESTONE TIMELINE



Source: PG&E, Advanced Clean Fleets Rule

Major truck manufacturers must sell only zero-emission medium- and heavy-duty trucks by 2036.²³ This is known as the manufacturer sales requirement and builds off of the regulations that California proposed in the earlier Advanced Clean Truck Rule.

How will the states ensure compliance?

In California, fleet owners can be fined for not meeting their purchase and truck retirement requirements in a given year.²⁴ Fleet owners must submit annual compliance reports each year, and the government can request to review the records of any regulated fleet at any time.²⁵



WHAT SHOULD EJ COMMUNITIES KEEP IN MIND?

What gaps exist in current regulations?

- ✓ With the exception of drayage fleets, the ACF rule does not regulate how small (those that earn under \$50 million per year or that have under 50 trucks), private fleets use medium- and heavy-duty trucks. Small fleets represent over 95% of motor carriers in the United States.²⁶ Policymakers in California are working to address this gap, but it will be many years before those regulations are in place.²⁷
- ✓ States outside of California will need to adopt a 100% sales mandate that is “identical” to the California ACF Rule.²⁸ There is some potential for flexibility for states to adopt other components of the ACF Rule that apply to “in-use” instead of “new” trucks (e.g., fleet thresholds),²⁹ or apply to state-owned fleets.³⁰
- ✓ The ACF Rule cannot be enforced until two years after it adopts the rule,³¹ and cannot be enforced until after the EPA grants a waiver to California specific to the ACF Rule.³²

What happens to old trucks?

- ✓ The ACF does not require old trucks to be scrapped. Government fleets and large fleets may sell their old trucks to small (unregulated) fleets, meaning that old, dirty trucks may still remain on the road, especially in EJ communities.³³

How can we ensure that EJ communities benefit from truck regulations?

- ✓ The Moving Forward Network demands zero emissions throughout the freight transportation system. The coalition mobilizes grassroots efforts to advocate for policies that require all new trucks are zero-emission by 2035 and retire all diesel trucks before 2045.

ENDNOTES

- 1 <https://ww2.arb.ca.gov/resources/fact-sheets/advanced-clean-fleets-regulation-summary>
- 2 <https://www.liebertpub.com/doi/10.1089/env.2021.0075>
- 3 <https://www.ucsusa.org/resources/diesel-engines-public-health>
- 4 <https://envhealthcenters.usc.edu/wp-content/uploads/2016/11/Impact-Project-Ports-issue-brief-2012-1.pdf>
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- 6 <https://www.epa.gov/pm-pollution/health-and-environmental-effects-particulate-matter-pm>
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- 11 https://www.cdc.gov/air/particulate_matter.html
- 12 <https://www.ucsusa.org/sites/default/files/2023-02/federal-clean-trucks-report.pdf>
- 13 <https://www.lung.org/getmedia/e1ff935b-a935-4f49-91e5-151f1e643124/zero-emission-truck-report>
- 14 <https://www.epa.gov/greenvehicles/fast-facts-transportation-greenhouse-gas-emissions>
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- 18 <https://www.nrdc.org/bio/heather-kryczka/california-accelerates-its-fight-against-freight-pollution>
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- 20 <https://www.nrdc.org/bio/heather-kryczka/california-accelerates-its-fight-against-freight-pollution>
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- 23 <https://ww2.arb.ca.gov/resources/fact-sheets/advanced-clean-fleets-regulation-summary>
- 24 <https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2019/act2019/fro2.pdf>,
<https://law.justia.com/codes/california/2021/code-hsc/division-26/part-5/chapter-2/article-2/section-43212>
- 25 <https://www.government-fleet.com/10201691/16-things-to-know-about-carbs-advanced-clean-fleets-rule>
- 26 <https://www.trucking.org/economics-and-industry-data>
- 27 <https://blog.ucsusa.org/sam-wilson/clean-fleets-rule-slated-to-deliver-healthier-air-for-californians>
- 28 42 U.S.C. § 7507
- 29 See 42 U.S.C. § 7543(a), (b) (prohibiting non-California states from regulating “new motor vehicles or new motor vehicle engines,” but not mentioning in-use vehicles or their engines).
- 30 See Engine Mfrs. Ass’n v. S. Coast Air Quality Mgmt. Dist., 498 F.3d 1031, 1048 (9th Cir. 2007)
- 31 42 U.S.C. § 7507.
- 32 42 U.S.C. § 7543(b)
- 33 <https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2022/acf22/isor2.pdf>