

# Advanced Clean Fleets

## Accelerating Zero-Emission Truck Markets

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This is a summary of the draft Advanced Clean Fleets (ACF) regulation, part of a broader strategy to deploy medium- and heavy-duty zero-emission vehicles (ZEV) everywhere feasible. The regulation is still being developed and is subject to change.

### Why do we need the ACF regulation?

The ACF regulation is part of a comprehensive statewide strategy to reduce emission from transportation to protect public health and meet climate goals including [economy-wide Carbon Neutrality by 2045](https://www.ca.gov/archive/gov39/wp-content/uploads/2018/09/9.10.18-Executive-Order.pdf) (<https://www.ca.gov/archive/gov39/wp-content/uploads/2018/09/9.10.18-Executive-Order.pdf>). The primary goal of the ACF regulation is to accelerate the market for zero-emission trucks and buses by requiring fleets that are well suited for electrification to transition to ZEVs where feasible. The regulation would contribute to the goal of achieving the [Governor's Executive Order N-79-20](https://www.gov.ca.gov/wp-content/uploads/2020/09/9.23.20-EO-N-79-20-text.pdf) (<https://www.gov.ca.gov/wp-content/uploads/2020/09/9.23.20-EO-N-79-20-text.pdf>) to reach:

- 100 percent ZE drayage trucks by 2035
- 100 percent ZE off-road vehicles and equipment by 2035, where feasible
- 100 percent ZE medium and heavy-duty vehicles by 2045, where feasible

### Which fleets would the ACF regulation affect?

The regulation would apply to owner-operators and other fleets performing drayage operations, public agencies, federal governments, and high-priority fleets that own, operate or direct vehicles with a gross vehicle weight rating (GVWR) greater than 8,500 lbs. High priority fleets include any entity with \$50 million or more in gross annual revenue, or any broker or other fleet owner that in combination owns, operates, or dispatches vehicles under common ownership and control that totals 50 or more vehicles.

### What regulatory concepts are being explored?

Staff are exploring several concepts for certain fleets to begin making a full transition to ZEVs and supporting the Governor's Executive Order. The following is a summary of the draft requirements:

- Public Fleets
  - City, county, special district, and state agency fleets would be required to purchase ZEVs when they make new purchases
- Drayage Fleets
  - Starting late-2023, only ZE drayage trucks would be eligible to be added to the CARB drayage truck registry.
  - By 2035, all drayage trucks would be required to be zero-emission.
- High-Priority and Federal Fleets
  - High-priority fleets would meet ZEV targets as a percentage of the total fleet starting with vehicle types that are most suitable for electrification.
- Increase ZEV Sales in 2040

- Would set requirements for all new medium- and heavy-duty vehicle sales to be ZEVs starting 2040

## **How will disadvantaged communities benefit from the proposed ACF regulation?**

Communities located near seaports, railyards, warehouses, and distribution centers are disproportionately affected by high truck traffic from medium and heavy-duty trucks. Public fleets' emissions are imbedded directly within the communities served and offer similar electrification opportunities to those being achieved in transit electrification. This regulation will accelerate the deployment of ZEVs and the benefits they offer to those communities most impacted by harmful truck emissions.

## **Are there incentives for purchasing zero-emission trucks?**

Yes, several funding programs are available to support the use of advanced technologies administered by state agencies, federal agencies, and local air districts. For example, the Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project (HVIP) provides point-of-sale rebates to offset the upfront cost of advanced technologies like fuel cell electric and battery electric vehicles. A list of all zero-emission vehicles that are currently eligible for funding is available at [California HVIP](https://www.californiahvip.org/) (https://www.californiahvip.org/). For more information about additional funding opportunities, visit [CARB Incentive Programs](https://ww2.arb.ca.gov/our-work/topics/incentives) (https://ww2.arb.ca.gov/our-work/topics/incentives) and the US Department of Energy's [Alternative Fuels Data Center](https://afdc.energy.gov/laws/state) (https://afdc.energy.gov/laws/state).

## **Can I save money with zero-emission trucks?**

Yes, zero-emission trucks have lower operating costs than conventional trucks that can help offset the higher initial purchase price. Today, the total cost of ownership in California can be comparable to conventional trucks for certain duty cycles and applications without grants or rebates. As components and battery prices fall and technology continues to improve, the total cost of ownership is expected to become more favorable. More information on [cost assumptions and methodology](https://ww2.arb.ca.gov/sites/default/files/2020-12/201207costdisc_ADA.pdf) (https://ww2.arb.ca.gov/sites/default/files/2020-12/201207costdisc\_ADA.pdf) is available at the ACF meetings and events page.

The electricity cost to charge battery electric trucks varies based on how fast they charge, the utility rate, and the time of day. A calculator for estimating electricity cost is available at [Battery-Electric Truck and Bus Charging Cost Calculator](https://ww2.arb.ca.gov/resources/documents/battery-electric-truck-and-bus-charging-cost-calculator) (https://ww2.arb.ca.gov/resources/documents/battery-electric-truck-and-bus-charging-cost-calculator). In many cases, a fleet owner may have little to zero net electricity cost after Low-Carbon Fuel Standard credits are included.

Technical and financial assistance for infrastructure is available through a number of programs. The California Public Utilities Commission has approved plans for California utilities to support heavy duty charging infrastructure installation pursuant to [Senate Bill 350](https://www.cpuc.ca.gov/sb350te/) (https://www.cpuc.ca.gov/sb350te/). The California Energy Commission is also working to [accelerate medium and heavy-duty vehicle infrastructure](https://efiling.energy.ca.gov/GetDocument.aspx?tn=237549&DocumentContentId=70758) for both charging and hydrogen refueling (https://efiling.energy.ca.gov/GetDocument.aspx?tn=237549&DocumentContentId=70758).

## **Where can I get more information?**

Information about the draft ACF Regulation and upcoming meetings, workshops, and events is available at [ACF Website](https://ww2.arb.ca.gov/our-work/programs/advanced-clean-fleets) (https://ww2.arb.ca.gov/our-work/programs/advanced-clean-fleets). If you have questions or wish to obtain this document in an alternative format or language, call (916) 323-2927. For TTY/TDD/Speech-to-Speech users, dial 711 for the California Relay Service.