

Advanced Clean Trucks (ACT) Rule FAQ

[Many of these responses were derived from an NRDC article.](#) This contains a list of frequently asked questions about the ACT. These are meant for allies and advocates to better understand the rule. Maryland specific portions are specified. 🚚 ⚡

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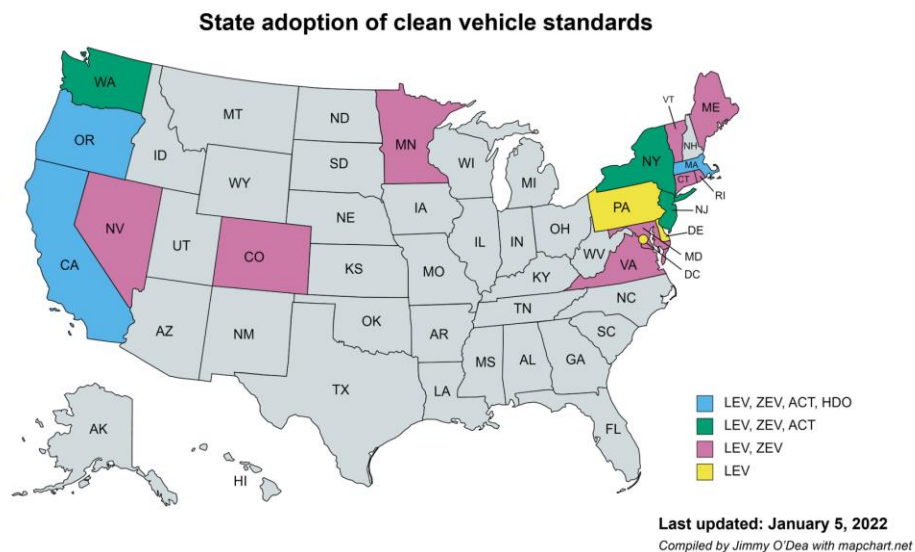
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About the ACT

Q: What other states have adopted the ACT?

A: Currently, California, Oregon, Washington, New Jersey, New York, and Massachusetts have adopted the ACT. Connecticut has legislation underway to give the agency authority to adopt the regulation. Other states are also considering the rule, with some discussions in Maine, Vermont, Rhode Island, Colorado, and Illinois. See <https://www.electrictrucksnow.com/states> and this map below.



Q: Are buses included in the ACT?

A: School buses are included in the sales requirements, while transit buses are not. School buses are exempt from the large entity reporting [requirement](#). Transit buses were exempted since they were accounted for in California's [Innovative Clean Transit rule](#).

Q: Without a requirement to buy ZEVs or sustained incentive programs for purchasing ZEVs, will ACT economically harm manufacturers and the public?

A: On the contrary—pent up demand for electric trucks is resulting in billions of dollars in preorders and driving massive investment from new manufacturing entrants such as Rivian, BYD, Arrival, and Tesla. The ACT simply ensures a minimum supply of ZEVs, while providing market certainty that can unlock additional investments. Moreover, in many states, incentive programs for ZEVs and supporting charging infrastructure do exist. Aside from the public health and climate benefits that the general public will enjoy from ZEVs, plugging in more electric trucks on

to the grid will help drive down electricity prices for all consumers, while fleets' fuel and maintenance cost savings can be reinvested and dispersed in local economies.

Q: Shouldn't this be something the federal government handles rather than leaving it to the states?

A: We should do both! But we can't wait for federal action. We need to immediately reduce our greenhouse gas and local air pollutants to avoid the worst of climate change and to remedy the environmental injustices that communities of color and low-income communities have faced for decades due to the freight industry. ACT is a critical policy tool that allows states to act now. Federal regulations also often have longer lead times and can be harder to fight for the same stringency. State policies can help push for a stronger federal rule.

Q: Won't manufacturers just leave our state to avoid the regulation? Truck operators too?

A: Truck manufacturers operate in a global market and the electric vehicle market is rapidly expanding in the U.S. and internationally. Multinational automakers would not be acting in their own business interest to "abandon an expanding market just to invest exclusively in a dying one" ([Parks and Portillo](#)).

Many electric trucks will be cost-effective for a truck fleet's bottom line by 2025, when this rule would take effect, so we don't expect fleet owners to go to other states to buy these trucks. Rather, we've heard plenty of support [from](#) truck fleets that they want electric trucks to be more available. Also, truck fleets make decisions on where to get their vehicles on a [number of other factors](#), including location of their headquarters, fleet facilities, expected duty cycles and level of local delegation. The ACT is not likely to change these purchase decisions on the fleet side, given that it acts on the manufacturers. And to the extent that it does, future regulations such as the Advanced Clean Fleets rule can require fleets to purchase these vehicles on a gradual timeline.

Q: Will this affect the truck assembly plants in my state?

A: The ACT would only affect truck assembly plants indirectly by promoting the market for electric trucks. This industry can result in a number of good, green jobs. The rule applies to the manufacturer as a whole but not at the level of each facility.

For example, Maryland has a [Volvo Mack Trucks assembly plant in Hagerstown](#) that employs around 1,800 people. So for instance, Volvo inc. would need to report the vehicle registration numbers of Volvo trucks in Maryland. Out of state companies that sell trucks in Maryland would have to as well. They would all need to sell the same increasing percentage of trucks that are zero emission each year. They would be required to report their vehicle registration numbers to the Maryland Department of Environment.

Q: How will the ACT impact small businesses?

A: The regulation doesn't require fleet operators to purchase the vehicles, only manufacturers to sell an increasing percentage of them. There is a complementary regulation in development called the Advanced Clean Fleet rule which only applies to big fleets that have over \$50M in annual revenue or over 50 vehicles, and therefore would not require small businesses to purchase them.

Q: Why is my state using California's cost benefit analysis instead of conducting its own?

A: When developing the ACT rule, California Air Resources Board (CARB) conducted a thorough cost benefit analysis such that other states would not necessarily need to expend additional resources to conduct their own. However, many states are conducting their own analysis as well as reviewing the latest reports from industry leaders, including the International Council on Clean Transportation, MJ Bradley & Associates, and CALSTART--all of which definitively show that the ACT rule will have a net positive impact in states across the U.S. We have ample evidence to support that this rule is economically feasible and beneficial, so any calls for further analysis are merely attempts to delay the adoption process.

Q: What are the benefits of the ACT in my state?

A: There have been several reports illustrating the benefits of the ACT and subsequent regulations. [UCS/MJ Bradley/NRDC](#) and [ICCT](#) have some of the most recent ones. The benefits accounted for in these studies include:

- **Climate** benefits through reduced greenhouse gas emissions from gas and diesel truck tailpipes
- **Health** benefits resulting from decreased tailpipe pollution, particularly from dangerous fine particulate matter (PM2.5) and nitrogen oxides (NOx), which can lead to the production of soot and smog. These pollutants result in exacerbated respiratory illnesses like asthma and bronchitis, cancers, cardiovascular issues that can lead to heart attacks, and even premature death.
- **Fleet** benefits given that the total cost of ownership of electric trucks will be lower than their diesel counterparts when this rule goes into effect in 2025. Though the upfront cost of these vehicles is higher, there are huge savings to fuel and maintenance costs throughout the vehicle's lifetime.
- **Utility/ratepayer** benefits given the overall increase in electricity demand can lead to downward pressure on rates (i.e. savings on our electric bills). Electric trucks can be also be charged outside of peak demand and can even contribute grid benefits through vehicle-to-grid integration (i.e. truck batteries as energy storage).

- **Jobs** benefits by the addition of jobs in battery and electric component manufacturing, charging infrastructure construction, electricity generation – many electricians and electrical engineers.

In Maryland the ACT would result in (ICCT):

- **178,000** more electric vehicles on the roads by 2050, around 48% of the total medium- and heavy-duty vehicle population.
- Cumulative emissions reductions from 2020-2050 of 69,640 short tons of NO_x, 613 short tons of PM_{2.5}, and 7.2 million metric tons of greenhouse gases.
- Based on health modeling of these numbers, the ACT would bring over **\$1.6 billion** in public health benefits to Maryland from 2020-2025, from avoiding over **230** hospital admissions and emergency room visits, **270** premature deaths, and **116,200** cases of minor illnesses.

And for those who are wary of the costs of this legislation, the costs of *doing nothing* are the same, but in reverse.

Electric Truck Technology

Q: Are electric trucks available?

A: Yes, and increasingly so. The zero emission MHDV market has undergone significant growth in the last two years, with fleets committing to electrification as well as vehicle manufacturers producing prototype vehicles and pilot fleets, announcing commercial launch dates, and taking commercial orders for electrified models. There are over [100 different models of trucks from over 30 manufacturers](#) either in production already or within the next 2 years, covering every truck class most duty cycles (i.e. use cases). By 2025, when this rule would take effect, [virtually all market segments could be fully mature](#), with rapid technological advancements made for even the most demanding duty cycles (e.g. long-haul).

Q: Do you have any real world examples of electric trucks in use?

A: Yes, the recent [Run on Less-Electric](#) demonstration project completed earlier this year collected operational data from real world electric truck fleets in several applications, including delivery vans, box trucks, port terminal tractors, and heavy-duty semi-tractor-trailers. The 13 companies that participated in the demonstration project found that electric trucks not only “perform[] better than recent diesel” models, but in the applications tested, did not inhibit operations due to range or refueling needs.

Q: Aren't ZEVs way more expensive than internal combustion vehicles?

A: It's true that the up-front cost of an electric truck is higher today than its comparable diesel option. However, over the lifetime of the vehicle, many electric trucks are currently competitive with diesel trucks due to fuel savings and lower maintenance costs (Parks and Portillo). Since batteries are the single most expensive components of a new electric truck, upfront costs are falling as battery prices continue to decline.

There have been multitudes of studies confirming the rapidly decreasing total cost of ownership, and the advantage of zero-emission trucks over diesel counterparts:

- O'Dea, Jimmy. 2019. *Ready for Work: Now Is the Time for Heavy-Duty Electric Vehicles*. Cambridge, MA: Union of Concerned Scientists.
<https://www.ucsusa.org/resources/ready-work>
- MJ Bradley, Union of Concerned Scientists, and Natural Resources Defense Council. *Trucks Pollution in the United States (2021-2022)*
<https://www.ucsusa.org/resources/truck-pollution-united-states>
- M.J. Bradley & Associates, *Medium- and Heavy-Duty Vehicles: Market Structure, Environmental Impact, and EV Readiness*, July 2021.
<https://www.mjbradley.com/sites/default/files/EDFMHDVEVFeasibilityReport22jul21.pdf>
- EDF and Roush Industries. *Technical Review of: Medium and Heavy-Duty Electrification Costs for MY 2027- 2030*. Feb 2022.
http://blogs.edf.org/climate411/files/2022/02/EDF-MDHD-Electrification-v1.6_20220209.pdf
- Americas Commercial Transportation Research, *Charging Forward*. 2022.
<https://www.truckinginfo.com/10161524/act-half-of-class-4-8-sales-to-be-bev-by-2035>

Q: How do fleet operators feel about electric trucks?

A: Electric trucks have many benefits for fleet operators themselves. Drivers have reported that they enjoy the lower interior and exterior noise levels, better acceleration (they're actually *fun* to drive!), simpler operation (there's only one pedal, no shifting needed), avoided difficulties in refueling (just plugging it in), no idling emissions, ease of charging at depots, no smells, less fatigue, and novelty and a positive brand image. See <https://nacfe.org/run-on-less-electric-report/>

Q: Is the timeline too ambitious?

A: After the ACT rule is adopted, manufacturers have two years to prepare before the rule goes into effect. The annual new sales requirements start low and ramp up gradually while new types

of electric trucks and buses continue to enter the market. The rule includes measures to help manufacturers comply with the new requirements, such as rewards for early action and flexibility mechanisms to count extra ZEV sales from one vehicle type toward meeting the standards for another type that is not progressing towards electrification as quickly.

Q: Don't we need charging infrastructure first?

A: States will need to continue building charging infrastructure to support a full transition to an electric truck fleet. But it doesn't need to happen overnight. And several states are already expanding charging networks to support existing transportation electrification targets. Across the nation, electric utilities are investing hundreds of millions of dollars on charging infrastructure, with an increasing number of truck and bus-specific programs. There's also over [\\$7.5 billion](#) in funding from the federal Bipartisan Infrastructure Law dedicated to EV charging infrastructure across the country. Companies are interested too—Daimler, NextEra, and BlackRock recently announced [\\$650 million](#) in funding for commercial vehicles.

Further, adopting the Advanced Clean Truck rule will give states leverage to secure more investments in charging infrastructure, especially higher-power charging stations that many heavy-duty trucks will need. And new infrastructure investments can support good, in-state jobs. ([Parks and Portillo](#)).

Q: Can the grid handle it?

A: Given the gradual phase-in of the rule, meeting the electric infrastructure needs for zero-emissions trucks is feasible. The charging needs of trucks adopted in the early years of the ACT rule can likely be met by existing grid infrastructure and vehicle-grid integration strategies that avoid the need for some distribution upgrades. Furthermore, adoption of the ACT rule will provide some certainty and a baseline trajectory for truck adoption around which electric utilities in the state can plan for and implement necessary grid upgrades and service extensions. That trajectory also provides a timeline for utilities, truck operators, and EV service providers to plan and install the chargers that will serve trucks adopted under the ACT rule.

Other Policy Details and Complements

Q: What is the large entity reporting requirement?

A: California's original ACT rule includes a one-time reporting requirement for fleet owners with 50 or more trucks. The information collected through this process will allow the state to develop policies and recommendations to equitably accelerate a large-scale transition to zero-emission

medium- and heavy-duty vehicle fleets. With this additional information on truck fleet operations, state officials can target zero-emission truck use to overburdened communities who most urgently need relief from transportation pollution.

The reporting requirement is also crucial to addressing truck driver misclassification, whereby truck drivers are wrongfully classified as independent contractors and forced to front operational and equipment costs. This financial burden ultimately leads to low compliance of pollution regulations because workers simply cannot afford to upgrade their equipment. Moving forward, information on trucking operations and industry practices will be pivotal in creating high-road labor standards that center both economic and environmental justice when addressing disparities.

Q: How about purchase mandates?

A: During the beginnings of discussion around this rule, there was pushback in CA on purchase mandates on the premise that “electric trucks aren’t available yet”. The ACT is meant to make these electric trucks available, and set the path for more electric truck policies in the future. In CA, they’re currently in the rulemaking process for the [Advanced Clean Fleets](#) rule, which would require zero-emission truck purchases for different vehicle classes.

Q: What about vehicle or charger incentives?

A: The ACT can also provide certainty for incentives programs to further encourage the market. In Maryland, there is a small \$1 million [Clean Fuels Incentive Program](#) that has helped with the purchase of some electric vehicles (e.g. school buses). The TEAM act ([HB894](#)), introduced by the MEA, would expand some of these incentive programs.

Q: What other policies should we be considering?

A: ACT is just one step of many in cleaning up our transportation sector and cleaning up the air for those who experience transportation pollution first and worst. The [Heavy Duty Omnibus](#) rule has been adopted by 3 other states and would reduce NOx emissions by over 90 percent by increasing the stringency of existing emissions standards. The [Advanced Clean Fleets](#) rule would require all medium and heavy duty truck sales to be zero-emission by 2040, and would require fleets to purchase these vehicles. An [Indirect Source Rule](#) could require warehouses themselves to decrease the pollutant emissions that they create, and has been implemented in the South Coast Air Quality Management District (around Los Angeles). All of these rules are complements to the ACT which can be implemented this year.