

Multi-State Medium- and Heavy-Duty Vehicles MOU and Advanced Clean Trucks Adoption Toolkit

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All communities need and deserve clean air. It's time to build momentum for electrifying our medium- and heavy-duty sector - the polluting trucks and buses that disproportionately contribute to our ongoing climate and public health crisis and represent an environmental injustice.

Multi-State Medium and Heavy Duty MOU

On July 14, 2020, governors from 15 states and the Mayor of the District of Columbia released a [joint memorandum of understanding](#) on their commitment to truck and bus electrification, with the goal of eliminating toxic air pollution from medium and heavy-duty trucks and buses by 2050.

The states joining this effort are California, Colorado, Connecticut, Hawaii, Maine, Maryland, Massachusetts, New Jersey, New York, North Carolina, Oregon, Pennsylvania, Rhode Island, Vermont, and Washington, as well as the District of Columbia. These states collectively account for almost 50 percent of the U.S. economy and nearly 40 percent of goods moved by truck (by value).

California Advanced Clean Truck (ACT) Rule

The recently adopted Advanced Clean Trucks (ACT) rule requires manufacturers to produce zero-emission trucks beginning in 2024 and increases production targets through 2035; additionally, the rule aims to put 300,000 zero-emission trucks on the road by 2035. It requires that sales of MHDVs reach 30-50% by 2030, 40-75% by 2035, and 100% by 2045.



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OVERVIEW AND CAMPAIGN OBJECTIVES

For decades, the freight industry has unleashed harmful pollution to communities across the country, leading to adverse health impacts for millions of American, shortening lifespan, and disproportionately

One of the major sources of air pollution is the trucks and buses on US roads. 45 million Americans are exposed to truck and bus pollution by working, living, or attending school near major roads, airports, or railroads, and there are significant differences in the way in which different racial groups are impacted by vehicular pollution. A Union of Concerned Scientists [study](#) showed that Asian-American, Black, and Latino communities are being disproportionately burdened with air pollution from vehicles. Respectively, they face 34%, 24%, and 23%, higher exposures when compared with their white counterparts.

To combat this we need strong regulatory standards and policies for medium and heavy duty vehicles across the country that will promote an all electric future for this sector. Our goal is to achieve significant reductions in climate driven air pollution within the medium and heavy duty vehicle sector in order to provide justice and equity for communities across the country, ensuring access to clean air and providing new economic opportunities from the emergence of green technology.

Moment

- In 2020, states led the charge on progress. The recently ratified multi-state medium and heavy duty vehicle MOU commits states to achieving 30% of new sales by 2030 and 100% by 2050
- California also enacted the boldest truck and bus standard, called the Advanced Clean Trucks (ACT) rule, requiring sales to be between 30-50% by 2030 and 100% by 2045
- Following Biden's inauguration, over 30 environmental justice groups sent a letter to the administration urging them to clean up dirty truck and bus pollution and take action



National Campaign Objectives

- Ensure that the Biden-Harris administration's EPA grants California their waiver
- Advocate for 5 states who signed onto the MHDV MOU announce or commit to adopting California's ACT rule
- Ensure that at least three of these states begin rulemaking processes to enact California's ACT rule by end of 2021
- Recruit three new states from different regions to join the MHDV MOU
- Raise awareness and attention both national and at state level through blog posts and op-eds during critical campaign junctures to support California ACT adoption and pressure states to join the MHDV MOU
- Drive over 5,000 public comments from around the country to apply pressure and support these overarching goals



WHAT DOES THE MOU CALL FOR?

Multi-State Medium and Heavy Duty MOU

On July 14, 2020, governors from 15 states and the Mayor of the District of Columbia released a joint memorandum of understanding on their commitment to truck electrification and eliminating toxic air pollution from medium and heavy-duty trucks and buses by 2050.

The states joining this effort are ***California, Colorado, Connecticut, Hawaii, Maine, Maryland, Massachusetts, New Jersey, New York, North Carolina, Oregon, Pennsylvania, Rhode Island, Vermont, and Washington, as well as the District of Columbia***. These states collectively account for almost 50 percent of the U.S. economy and nearly 40 percent of goods moved by truck (by value).

- The new MOU calls for **at least** 30 percent of new truck and bus sales to be zero-emission by 2030 and 100 percent zero-emission by 2050.
- The states will have to report medium and heavy duty vehicle registration data to track progress toward meeting these targets. In 2025, the states agree to assess progress toward meeting the 2030 and 2050 targets and determine whether an adjustment to the 2030 interim sales target is appropriate.
- Over the course of the next six months, the ZEV Task Force will initiate an informal stakeholder process to solicit input from key organizations, including Sierra Club and other environmental organizations, labor and environmental justice groups, and businesses on the development of the state action plan.
- The state action plan will serve as a guidance for the signatory states of the MOU and will identify barriers and solutions to widespread electrification of medium to heavy duty vehicles to help states reach some of the goals articulated in the MOU.



What policies will be under consideration?

- Financial vehicle and infrastructure incentives;
- Non-financial vehicle and infrastructure incentives;
- Actions to encourage public transit and public fleet zero emission MHDV deployment;
- Effective infrastructure deployment strategies;
- Funding sources and innovative financing models to support incentives and other market enabling programs;
- Leveraging environmental and air quality benefits associated with adoption of the California Advanced Clean Trucks rule under Section 177 of the Clean Air Act;
- Coordinated outreach and education to public and private MHDV fleet managers;
- Utility actions to promote zero emission MHDVs, such as electric distribution system planning, beneficial rate design and investment in “make-ready” charging infrastructure;
- Measures to foster electric truck use in densely populated areas;
- Addressing vehicle weight restrictions that are barriers to zero emission MHDV deployment;
- Uniform standards and data collection requirements; and
- Any other initiative the Task Force deems appropriate.



California Advanced Clean Truck (ACT) Rule

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The Sierra Club California chapter and its volunteers were heavily involved in successfully pushing California to adopt the nation's first and most ambitious clean truck rule.

The recently adopted Advanced Clean Trucks (ACT) rule requires manufacturers to produce zero-emission trucks beginning in 2024 and increases production targets through 2035; it aims to put 300,000 zero-emission trucks on the road by 2035. By including large pickup trucks, delivery trucks and semi-trucks, the ACT Rule will help transform the entire freight industry to benefit our communities, especially those most burdened by air pollution.

The California ACT sets earlier transition targets for certain market segments including drayage trucks, last mile delivery trucks and public fleets by 2035; and refuse trucks, local buses and utility fleets by 2040.

The following chart shows the percent of new truck sales by Class that must be zero-emission through 2035:



Model year	Class 2b-3	Class 4-8	Class 7-8 Tractor
2024	5%	9%	5%
2025	7%	11%	7%
2026	10%	13%	10%
2027	15%	20%	15%
2028	20%	30%	20%
2029	25%	40%	25%
2030	30%	50%	30%
2031	35%	55%	35%
2032	40%	60%	40%
2033	45%	65%	40%
2034	50%	70%	40%
2035	55%	75%	40%

Source: NRDC

ACT benefits for public health, jobs, and the economy:

- \$8.9 billion in health savings from 2020 to 2040;
- 7,442 new jobs created by 2040;
- \$1.7 billion in avoided CO2 emission by 2040;
- \$5.9 billion in industry savings by 2040; and
- \$282 million added to state GDP by 2040

Federal law requires California to file a “waiver” request with the Environmental Protection Agency (EPA) so its regulations can enter into effect. It also authorizes states to adopt standards for new vehicles that are identical to the California standards. The next step of this process is that California should obtain a waiver from the EPA in order to enforce their new rule. We expect this waiver to be granted under the Biden administration.



CTFA GUIDANCE FOR ELECTRIFYING MHDVs

Signatory states

In consultation with our Environmental Law Program colleagues, when reading the MOU, it is our understanding that the 2030 target is a baseline target and is not a ceiling of what can be accomplished. The MOU clearly states that **at least** 30 percent of new truck and bus sales will be zero-emission by 2030.

We believe that the MOU language provides wiggle room for chapters to push their states to adopt higher sales targets by 2030. The MOU also states that one of the regulatory items states can consider adopting to reach or exceed the goals in the MOU is the California Advanced Clean Trucks (ACT) rule.

Naturally, the ACT rule requires higher sales targets in 2030, but also has a goal of reaching 100% zero-emission sales by 2045, five years faster than the goal of 100% by 2050 in the MOU. Most of the states signed onto the multi-state MHDV MOU are currently following the California light-duty LEV/ZEV standards; it would not be without precedent to follow their MHDV standard.

It is important to note that the MOU itself is non-binding, thus it is critical to push for a process to create a legally binding rule. We advise that chapters push for adoption of the California ACT rule. Please refer to the MHDV campaign planning and the California ACT resources materials sections for more information.

Non-Signatory states

If your state is not signed onto the MOU, we ask that you look into developing a strategy to convince your governor to sign onto the MOU. There are currently broad efforts from the national coalition which includes Sierra Club, NRDC, EDF, UCS, Moving Forward Network, Green for All, Ceres, and NESCAUM to target and recruit other states to join. We are currently targeting states with Democratic governors to join, but ultimately it is the state based organizations that will make the difference in getting commitments from your respective governors. We are happy to partner and work with you during this process.

Please refer to the MHDV campaign planning and the multi-state MOU resources materials sections for more information.



2021 MHDV CAMPAIGN PLANNING

Information building and understanding the landscape:

Before you begin concrete planning, please research and identify answers to some of the key questions. This will prepare you to have a better understanding of how you should approach the medium and heavy duty work in your state. For example, is your state a signatory or not a signatory of the MOU? Does your state require legislative approval for regulatory standards of medium and heavy duty vehicles?

Signatory

- *Has your state begun a stakeholder process?*
- *Has your state opened up solicitation for public comments relating to the MOU?*
- *Which state agency is spearheading the MOU efforts and who is the lead staffer?*
- *How can we push for bold policy adoption for our state to reach our goals?*

Non-Signatory

- *Does your state have an emissions reduction goal?*
- *Who are the relevant stakeholders and partners to help you advocate for MHDV electrification?*
- *Why did your Governor not sign onto the MOU originally?*

Proposed Strategies:

In order to achieve our goals, we need to identify what the main goals should be and what resources will be needed to accomplish them. This is the place to begin initial brainstorming with colleagues, volunteers, and coalition partners.

Signatory

- *How can we push for our state to adopt our own Advanced Clean Trucks (ACT) rule?*
- *How do we ensure that our state exceeds the NESCAUM model plan?*
- *What feasibility studies, messaging, and reports will be required to support these efforts?*



Non-Signatory

- *How can we push for our Governor to sign and join the multi-state MHDV MOU?*
- *Is there another state in my region that is signed on?*
- *How do the goals of the MOU intersect or help us reach our state's climate goals?*
- *What communities and organizations stand the most to benefit from zero-emission MHDVs? How can we partner with them?*

Parallel Campaign Goals and Priorities:

This is the place to begin conversations with colleagues from other Sierra Club campaigns and partners from other organizations.

Guiding questions include:

- *What other MHDV campaigns are active in your community or state?*
- *Do these campaigns have strategies, goals, or targets that overlap with your campaign priorities?*
- *What are the other campaign's targets? Do they align with ours? Are they different?*

Proposed MHDV Team:

The team is the core group who will be part of the campaign planning and execution. This group can include chapter staff, national staff, volunteers, and relevant external partners. Identify your MHDV Team.



RESOURCES

Medium- and Heavy-Duty Vehicle Reports and Studies

- ***Total Cost Ownership studies***
- [Benefits of adopting California medium- and heavy-duty vehicle regulations in New York State \(2021\) - ICCT.](#)
- [How Manufacturers are Positioned for Zero Emission Commercial Trucks and Buses in North America \(2020\) - EDF.](#)
- [New Report Shows Significant Health, Economic, and Environmental Benefits of Medium and Heavy Duty Vehicle Electrification \(2020\) - Charge EVC](#)
- [California's Advanced Clean Trucks regulation: Sales requirements for zero-emission heavy-duty trucks \(2020\) - ICCT.](#)
- [Paying for Electric Buses: Financing Tools for Cities and Agencies to Ditch Diesel \(2018\) - Environment America.](#)
- [Electric Buses in America: Lessons from Cities Pioneering Clean Transportation \(2019\) Environment America.](#)
- [Electric Buses: Clean Transportation for Healthier Neighborhoods and Cleaner Air for all \(2018\) - Environment America.](#)
- [High Potential Regions for Electric Truck Deployment - \(2020\) - NACFE.](#)
- [Transforming Transit, Realizing Opportunity - \(2020\) - Jobs to Move America Forward.](#)
- [Estimating the Infrastructure Needs and Costs for the Launch of Zero Emission Trucks \(2019\) - ICCT](#)
- [A Global Snapshot of the Air Pollution-Related Health Impacts of Transportation Sector Emissions in 2010 and 2015 \(2019\) - ICCT](#)

Multi-State MHDV MOU Materials

Background

- [Multi-State Medium- and Heavy-Duty Zero Emission Vehicle Memorandum of Understanding](#)
- [Multi-State MOU Memo](#) by Hieu Le and Alejandra Nunez

Letters

- [Thank you letters](#)

Press Releases

- [15 Governors and Mayor of Washington, DC Commit to Electrification of Medium and Heavy Duty Trucks](#) - Sierra Club 7/14/2021



- [Businesses Applaud Largest Multi-State Effort to Expedite Decarbonization of Medium- and Heavy-Duty Vehicles](#) - Ceres
- [New Multi-State Agreement on Zero-Emission Trucks and Buses is Major Step for Clean Air](#) - EDF

Blogs

- [Breathing in Discrimination's Toxic Legacy](#) by Sierra Club's Hieu Le - 5/7/21
- [15 States Take Historic Action on Transportation Pollution](#) - NRDC - 7/14/20

Op-eds and Editorials

- Bridge Michigan: [Michigan must invest in electric trucks for the health of families](#) by Detroit Community Organizer Theresa Landrum 4/27/21

California Advanced Clean Truck (ACT) Materials

Factsheet

- [Sierra Club National Factsheet](#) (2021)
- [Sierra Club CA Factsheet](#) (2020)

Coalition Website

- [ElectricTrucksNow.com](#)

Reports

- [Benefits of adopting California medium- and heavy-duty vehicle regulations in New York State](#) (2021) - ICCT.
- [Clean Trucks, Big Bucks](#) by EDF, Energy Innovations - June 2020
- [Ready for Work: Now Is the Time for Heavy-Duty Electric Vehicles](#) by Jimmy O'Dea, UCS - 12/11/19

Blogs

- [It's Been One Year Since Two Historic Actions on Electrifying Trucks and Buses. Where Are We Now?](#) by Sierra Club's Hieu Le and Ramón Cruz - 7/14/21
- [Breathing in Discrimination's Toxic Legacy](#) by Sierra Club's Hieu Le - 5/7/2021
- [A Coalition Effort: The Work Behind the Nation's First Clean Trucks Rule](#) by Katherine García, Sierra Club California - 7/7/20
- [The Biggest Step To-Date on Electric Trucks](#) by Jimmy O'Dea, UCS - 4/29/20
- [CA Takes a Step Forward with New Clean Truck Proposal](#) (English & Spanish) by Patricio Portillo, NRDC - 4/25/20



- [Letter from Sacramento: The Push to Get Filth Out of the Air: A Truck Story by Kathryn Phillips, Sierra Club California](#) - 11/24/19
- [A Policy to Increase the Availability of Electric Trucks](#) by Jimmy O'Dea, UCS - 10/25/19

Op-Eds and Editorials

- [Trucks are spewing filth in our neighborhood | Opinion](#) by Renée Pollard of Sierra Club's New Jersey chapter and Maria Lopez-Nuñez of Ironbound Community Corporation - 7/24/21
- [Filthy trucks are making us sick | Opinion](#) by local doctors in New Jersey (coordinated through UCS) - 7/10/21
- [The California Air Resources Board's support of electric trucks is a step in the right direction](#) by Sierra Club California - 7/1/20
- [California weighs controversial rule to tackle truck tailpipe pollution](#) by CalMatters - 12/11/19
- [California needs a bolder electric-truck standard](#) by Sierra Club California - 12/10/19
- [Editorial: California needs zero-emission trucks and it needs them now](#) by LA Times - 11/27/19

Public Comment Letters

- California: [ACT Coalition Letters](#)
- New Jersey: [Sierra Club New Jersey letter to DEP](#)
- New York: [Coalition letter to New York DEC](#)