

National Caucus of Environmental Legislators

Transportation Briefing Book



NCEL

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Environmental Legislators





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Introduction

Transportation sector emissions are produced by light-, medium-, and heavy-duty vehicles, aircrafts, rail, and ships or boats. Tackling transportation emissions is critical to solving the climate crisis. In 2019, the transportation sector was the largest contributor to anthropogenic emissions in the United States, at [29% of the total](#). However, reducing emissions is not the only benefit from overhauling our current transportation system. Switching to cleaner and more varied forms of transportation increases quality of life in communities, decreases public health impacts from pollution, decreases motor vehicle injuries and fatalities, increases active lifestyles, increases mobility equity, and advances environmental justice. To achieve these benefits, it is critical that states employ transportation modes that center people in spaces, particularly people of color, rather than single-occupancy vehicles.

Transportation electrification is critical for decarbonization. States are working to make electric vehicles more affordable, charging stations more accessible, and public fleets less emissions-intensive. Moving away from internal combustion engines will improve air quality as well as reduce carbon emissions.

While electric vehicles are a key part of the solution to reducing transportation emissions, they are not the golden ticket to an improved transportation system. Single-occupant vehicles are not the most efficient form of transport, and reliance on cars requires significant infrastructure costs and resource extraction for car parts and batteries. Prioritizing active transportation and public transit are instrumental to creating thriving communities that work for everyone.

This briefing book breaks down several transportation policies being considered in states across the country. Each section includes a description of the policy, key facts and figures, and several examples of legislation passed or introduced on the state level. Sections include: [active transportation](#), [congestion pricing](#), [electric vehicles](#), [low carbon fuel standards](#), [medium- and heavy-duty vehicle electrification](#), [public transportation](#), [transit-oriented development](#), [the Transportation Climate Initiative](#), and [vehicle miles traveled](#).

In order to reduce greenhouse gas emissions at the rate necessary to prevent the worst effects of the climate crisis, these policies need to work in tandem to transition our transportation system to a low-carbon one.

*****Please note that all bills following two asterisks (**) indicates bipartisan support for the legislation*****



Overview

Active transportation is any self-propelled, human-powered mode of transportation, such as walking or bicycling.

Increasing access and prioritizing development of active transportation like walking and cycling reduces a household's reliance on single-occupancy vehicles and fossil-fuel dependent vehicles. Choosing a bike over a car just once a day reduces an average [individual's carbon emissions from transport by 67%](#). Increasing modes of active transportation also has implications for public health. Active commuting that incorporates cycling and walking is associated with an [11% reduction in cardiovascular risk](#).

[Communities of color are less likely to have access to safe biking and walking infrastructure](#), despite being dependent on forms of active transportation for essential travel [at higher rates than their white counterparts](#). For example, Chicago's white neighborhoods have [50% more bike lanes](#) than Black neighborhoods. Creating new bike lanes, walking paths, and other active transportation infrastructure in communities of color is critical to advancing environmental justice.

Strategies to Expand and Improve Forms of Active Transportation

- Encourage [Safe Routes to School programs](#) to enable children to walk and bike to school safely.
- Construct a [connected network of multi-use trails](#).
- Accommodate all roadway users with comprehensive street design measures such as "[complete streets](#)," including sidewalks, bicycle lanes, and share-the-road signs that provide safe and convenient travel for all users of the roadway.
- Separate motor-vehicle traffic from non-motorized traffic with physical barriers, such as the construction of [bicycle boulevards](#).
- Provide [safe and convenient bicycle and pedestrian connections](#) to public parks and recreation areas.
- Encourage [bicycle parking at workplaces and transit stops](#).
- Encourage the development of street-level shopping and restaurants along [pedestrian and bicycle routes](#). ([Center for Disease Control and Prevention](#))

Active Transportation Legislation

- **California S.B.99 (enacted 2013):** Created the Active Transportation program to increase the proportion of trips accomplished by walking and biking, increase the safety and mobility of non-motorized users, and provide a broad spectrum of projects to benefit many types of users, including disadvantaged communities.
- ****Colorado H.B.22-1104 (enacted 2022):** Allowed transmission providers to enter into contracts to construct and maintain public recreational trails covering transmission corridors.



- **Colorado S.B.22-193 (enacted 2022):** Created the community access to electric bicycles grant program to award grant money to local governments, tribal governments, and nonprofit organizations that administer a bike share/ownership program and the community access to electric bicycles rebate program to provides individuals in low- and moderate-income households rebates for purchases of electric bicycles and equipment used for commuting purposes.
- **Connecticut S.B.4 (enacted 2022):** Expanded electric vehicle rebate eligibility to electric bicycles to at least \$500 per bicycle and with a priority to residents of environmental justice communities.
- **District of Columbia B.23-0288 (enacted 2020):** Mandated that if a road segment undergoing construction has been pre-identified as a candidate for a protected bike lane, bus-only lane or private vehicle-free corridor, then it must be rebuilt with that new feature.
- ****Illinois H.B.0270 (enacted 2021):** Mandated that the state cover 100% of the cost of walking and biking infrastructure on state roads.
- **New York A.8936A (passed both chambers 2022):** Increases state funding for construction and improvements by the Department of Transportation where the municipality agrees to fund a complete street design feature as a component of the project.
- **New York S.7824 (enacted 2022):** Required the Metropolitan Transit Agency to develop a strategic action plan to improve bicycle and pedestrian access at bridges, stations, and other facilities operated by the authority or its affiliates or subsidiaries.

Additional Resources

- **The Department of Transportation** created a [Statewide Pedestrian and Bicycle Planning Handbook](#).
- **Safe Routes Partnership** released a new report entitled, "[Making Strides: 2022 State Report Cards on Support for Walking, Bicycling, and Active Kids and Communities](#)" to track each state's progress in supporting communities where people can easily be physically active.
- **Smart Growth America** has a resource on [Complete Streets policies nationwide](#).
- **The San Diego Association of Governments** has a [Mobility Solutions Toolkit](#) to understand mobility and environmental justice.
- **Street Plans** and **the Alliance for Biking and Walking** has an [Open Streets Guide](#).
- **The Transportation Research and Education Center** has a live [E-Bike Incentive Programs in North America table](#) to track e-bike purchase incentive programs in the United States and Canada.



Overview

[Congestion pricing](#) - sometimes called value pricing - is a way of harnessing the power of the market to reduce traffic congestion. Congestion pricing works by shifting some rush hour highway travel to other transportation modes or to off-peak periods, taking advantage of the fact that the [majority of rush hour drivers on a typical urban highway are not commuters](#). The Federal Highway Administration groups congestion pricing into two broad categories: (1) projects involving tolls; and (2) projects not involving tolls. By disincentivizing single-occupancy vehicles during rush hour, commuters will look to other forms of transportation, which generally produce less carbon emissions, like public transportation or biking. The revenue generated through congestion pricing is often rerouted into public transit, improving the ridership experience and incentivizing higher ridership.

Congestion pricing has been very successful in cities outside of the United States. By implementing congestion pricing in [its central business district](#), London reduced emissions of particulate matter and nitrogen oxides by 12% and fossil fuel consumption and carbon dioxide emissions by 20%. See to the right different strategies for congestion pricing in the United States.

Legislation

- **[Massachusetts H.3527 \(introduced 2022\)](#)**: Creates a temporary pilot congestion pricing program for East Boston.
- **[Massachusetts H.5248 \(sent to Governor 2021\)](#)**: Creates a special commission on roadway and congestion pricing to investigate, study and make recommendations on the development and deployment of comprehensive and regionally-equitable roadway pricing and congestion pricing mechanisms
- **[New York A.8211 \(introduced 2022\)](#)**: Provides an exemption from any congestion pricing fees for any clean fuel vehicle, electric vehicle, or vehicle that meets the clean vehicle standards.
- **[New York S.4264A/A.6967 \(introduced 2021\)](#)**: Requires the development of a scoping plan outlining the authority's recommendations for accelerating the reduction of regulated air contaminants from mobile sources, which must include congestion pricing as a strategy.
- **[New York R.672 \(enacted 2019\)](#)**: Allowed congestion pricing in New York state.

STRATEGIES INVOLVING TOLLS

- [High-Occupancy Toll Lanes \(Partial Facility Pricing\)](#)
- [Express Toll Lanes \(Partial Facility Pricing\)](#)
- [Pricing on entire roadway facilities](#)
- [Zone-based pricing, including cordon and area pricing](#)
- [Regionwide pricing](#)

STRATEGIES NOT INVOLVING TOLLS

- [High-Occupancy Vehicle lanes](#)
- [Parking pricing](#)
- [Priced vehicle sharing and dynamic ridesharing](#)
- [Pay as you drive - mileage-based fees](#)

Additional Resources

- **The Federal Highway Administration** has a [primer for institutional issues related to congestion pricing](#).
- **The Metropolitan Transportation Authority** in New York City is considering implementing congestion pricing. Look into their program [here](#).



Overview

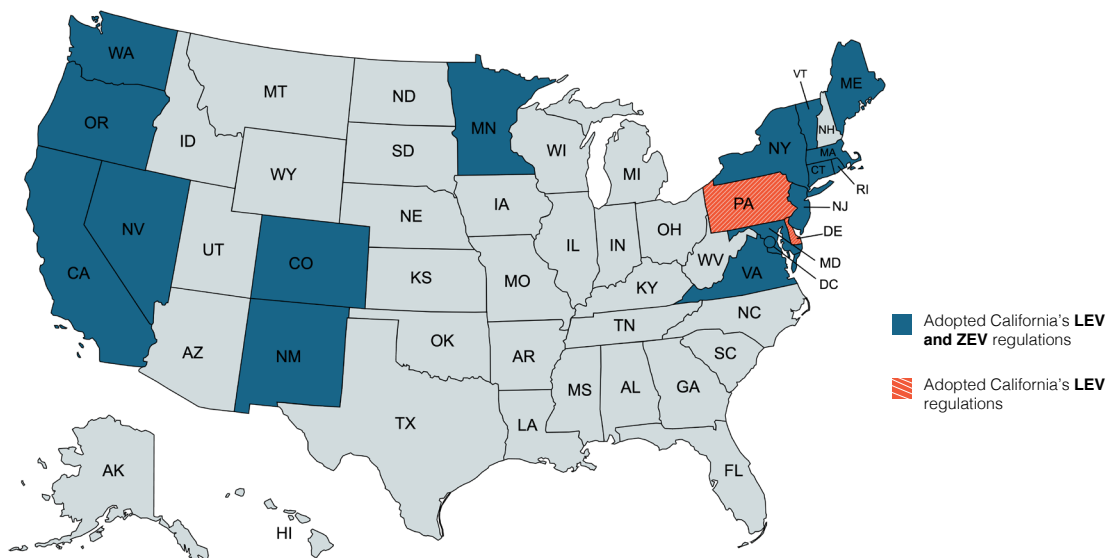
Price volatility of fossil fuels and a growing emphasis on reduction of greenhouse gas (GHG) emissions make electric vehicles (EV) and hybrids an attractive alternative to conventional internal combustion engine vehicles. States have utilized multiple policy mechanisms to spur deployment and adoption of EVs at the commercial scale, capitalizing on benefits to energy security and both environmental and human health. This page gives an overview of Low Emission Vehicle (LEV) and Zero Emission Vehicle (ZEV) Programs, while the following three pages outline policy options for batteries, charging infrastructure, electric school buses, direct sales, electrifying state fleets, multi-family housing charging, incentives, and rural access.

Low Emission Vehicle (LEV) Program

California adopted the first [Low-Emission Vehicle \(LEV\) regulations](#) in 1990, including three components: 1) tiers of exhaust emission standards for increasingly more stringent categories of low-emission vehicles, 2) a mechanism requiring each auto manufacturer to phase-in a progressively cleaner mix of vehicles from year to year with the option of credit banking and trading, and 3) a requirement that a specified percentage of passenger cars and light-duty trucks be zero-emission vehicles (ZEVs) with no exhaust or evaporative emissions. The most recent phase of regulation ([LEV III](#)) includes gradually stricter requirements for greenhouse gas and particulate emissions from 2015 to 2025. [Sixteen states](#), including the District of Columbia, have adopted California's LEV regulations.

Zero Emission Vehicle (ZEV) Program

California adopted the [Zero Emission Vehicle \(ZEV\) Program](#) in 1990 with a key update in 2012. The program assigns each automaker ZEV credits, which are required to consist of an increasing percentage of their total vehicle sales. The credit requirement is 7%, until it rises to 22% in 2025. Plug-in hybrid vehicles, battery electric vehicles, and hydrogen fuel cell vehicles are eligible under this program; however, different types of vehicles are worth varied amounts of credits. [Fourteen states](#), including the District of Columbia, have adopted California's ZEV regulations.





Electric Vehicles Legislation

Batteries

- **California A.B.2832 (enacted 2018):** Created an Advisory Group to advise the legislature on the recovery and recycling of vehicular lithium-ion batteries. The Advisory Group released its [draft report with policy recommendations](#) at the end of 2021.
- **New Jersey A.1273 (introduced 2022):** Requires manufacturers of electric vehicles to establish and implement electric vehicle battery management plans.
- **Illinois H.B.5160 (introduced 2022):** Provides that manufacturers of electric vehicles that contain hazardous components and batteries must begin to implement a collection program that facilitates the removal of hazardous components and batteries from end-of-life vehicles.

Charging Infrastructure

- **Colorado S.B.22-1218 (enacted 2022):** Required commercial buildings and multifamily residences to include electric vehicle charging for at least 10% of the parking spaces if the building is 25,000 square feet or more; etc.
- **Hawaii S.B.2196 (passed both chambers 2022):** Requires cooperative housing corporations, homeowners associations, planned community associations, and condominium associations to develop plans to integrate electric vehicle charging stations onto their properties and make funds available for that purpose.
- **New York A.8409A/S.6692B (passed Senate 2022):** Requires electric vehicle charging stations to be installed at gasoline stations in an amount equal to or greater than the number of new gas dispensing motor fuel pumps being installed.
- ****Oregon H.B.2180 (enacted 2021):** Amended state building code to require that new construction of certain buildings include provisions for electrical service capacity for specified percentage of parking spaces.
- **Rhode Island H.B.5031/S.B. 994 (enacted 2021):** Required the department of transportation to develop a plan for a statewide electric vehicle charging station infrastructure in order to make electric vehicle charging stations more accessible to the public.

Direct Sales

- **Michigan S.B.268 (enacted 2015):** Allowed manufacturers to offer direct sales of electric vehicles.
- **New Jersey A.B.3216 (enacted 2015):** Allowed a manufacturer to directly buy from or sell to consumers a zero emission vehicle (ZEV) at a maximum of four locations.



Direct Sales (Continued)

- **Utah H.B.369 (enacted 2018):** Provided for a direct-sale manufacturer license for only manufacturers that sell exclusively new electric, hydrogen fuel cell, or other vehicles fueled by “other non-fossil fuel sources” and manufacturers that are located in the United States.
- **The National Conference of State Legislatures** examines each [state’s status for vehicle direct sales](#).

Electric School Buses

- **Colorado S.B.22-193 (enacted 2022):** Created the electrifying school buses grant program to award grant money to school districts to help finance the purchase and maintenance of electric-powered school buses, the conversion of fossil-fuel-powered school buses to electric-powered school buses, charging infrastructure, and upgrades for electric charging infrastructure and the retirement of fossil-fuel-powered school buses.
- **Maryland H.B.0696 (enacted 2022):** Established an electric school bus pilot program administered by the Public Service Commission; authorized investor-owned electric companies to implement an electric school bus pilot program with a participating school system.
- **Virginia H.B.2118 (enacted 2021):** Established the Electric Vehicle Grant Fund and Program for the purpose of awarding grants on a competitive basis to public school divisions for replacing diesel school buses with electric school buses, implementing recharging infrastructure, and providing training to support the maintenance, charging, and operation of such electric school buses.

Electrifying State Fleets

- **California S.B.498 (enacted 2017):** Established a statutory requirement for the Department of General Services to ensure that at least 50% of the light-duty vehicles purchased for the state fleet each fiscal year are zero-emission vehicles.
- **Maine L.D.1579 (enacted 2022):** Required the Central Fleet Management Division to reduce greenhouse gas emissions of the state fleet of light-duty motor vehicles by 75% by 2035; and transition 100% of the state fleet of light-duty motor vehicles to zero-emission vehicles by 2040.
- **Virginia S.B.575 (enacted 2022):** Required, beginning 2023, all agencies of the Commonwealth to utilize the total cost of ownership calculator prior to purchasing or leasing light-duty vehicles and to purchase electric vehicles unless the calculator clearly indicates that purchasing or leasing an internal combustion-engine vehicle has a lower cost of ownership.
- **ACEEE** has a [State Policy Tracker for State Fleet Electrification](#), and the **Electrification Coalition** has a [State Plug-In Adoption Resource Kit](#) for fleet managers and other state government officials.



Multi-Family Housing Charging

- **Maryland S.B.0144/H.B.0110 (enacted 2021)**: Mandated that the Homeowner's Association shall process an application to install EV charging equipment in the same manner as for an approval of an architectural modification; required that if the application is not denied within 60 days of the application being submitted, the request shall be considered approved.
- **Utah S.B.152 (enacted 2022)**: Prohibited a community association from prohibiting a unit owner from installing or using a charging system.
- **Vermont H.433 (enacted 2021)**: Authorized up to \$1 million to the Interagency Electric Vehicle Supply Equipment Grant Program for a pilot program for charging stations at multi-unit affordable housing and multi-unit dwellings owned by a nonprofit.

Incentives

- **Hawaii H.B.1585 (enacted 2019)**: Established a rebate program for installation of eligible new or upgraded multi-user electric vehicle charging systems. Authorized the Public Utilities Commission to contract for third-party administration of the rebate program.
- **Maine L.D.347 (enacted 2021)**: Directed transmission and distribution utilities to submit a proposed incentive rate schedule to promote the installation of electric vehicle charging stations by November 2021.
- **Virginia H.B. 1979 (enacted 2021)**: Created a rebate program for the purchase or lease of new and used electric vehicles for a \$2,500 rebate applied toward payment for the purchase and an additional \$2,000 rebate for households with income not exceeding 300 percent of the federal poverty level.
- **Vermont H.433 (enacted 2021)**: Created a high fuel efficiency vehicle incentive program to provide point-of-sale vouchers through the State's network of community action agencies and set income eligibility for the voucher at 80 percent of the State median income.

Rural Access

- **Nebraska L.B.1257 (introduced 2022)**: Appropriates available federal funds to the Nebraska Department of Transportation for the purpose of establishing an electric vehicle charging station grant program with a focus on rural areas and areas unserved or underserved by charging stations.
- **Ohio S.B.32 (introduced 2021)**: Creates a grant and rebate program for entities that buy charging stations, including in rural areas.
- **Virginia H.B.2282 (enacted 2021)**: Directed the State Corporation Commission to report on policy proposals to accelerate transportation electrification specifically in low-income, minority, and rural communities.
- **The U.S. Department of Transportation** created "[Charging Forward: A Toolkit for Planning and Funding Rural Electric Mobility Infrastructure.](#)"



Additional Resources

- **The Regulatory Assistance Project** has a [roadmap](#) for electrifying transportation with legislative and policy guides.
- **The Georgetown Climate Center** maintains [state policy resources](#) on electric vehicles.
- **The Center for Climate and Energy Solutions** has a map for [U.S. State Clean Vehicle Policies and Incentives](#) tracking.
- **The Sierra Club** produced [AchiEve: Model Policies to Accelerate Electric Vehicle Adoption](#).
- **The National Conference of State Legislatures** examines each [state's status for vehicle direct sales](#).
- **ACEEE** has a [State Policy Tracker for State Fleet Electrification](#), and the **Electrification Coalition** has a [State Plug-In Adoption Resource Kit](#) for fleet managers and other state government officials.



Overview

A Low Carbon Fuel Standard (LCFS) is a market-based policy used to reduce the carbon intensity of transportation fuels over time using decreasing benchmarks. Fuels that have a carbon intensity below the benchmark for a given year generate credits, and fuels above the benchmark generate deficits. Fuel suppliers must demonstrate to their assigned state agency that the fuels they supply altogether meet the benchmark.

What is Carbon Intensity?

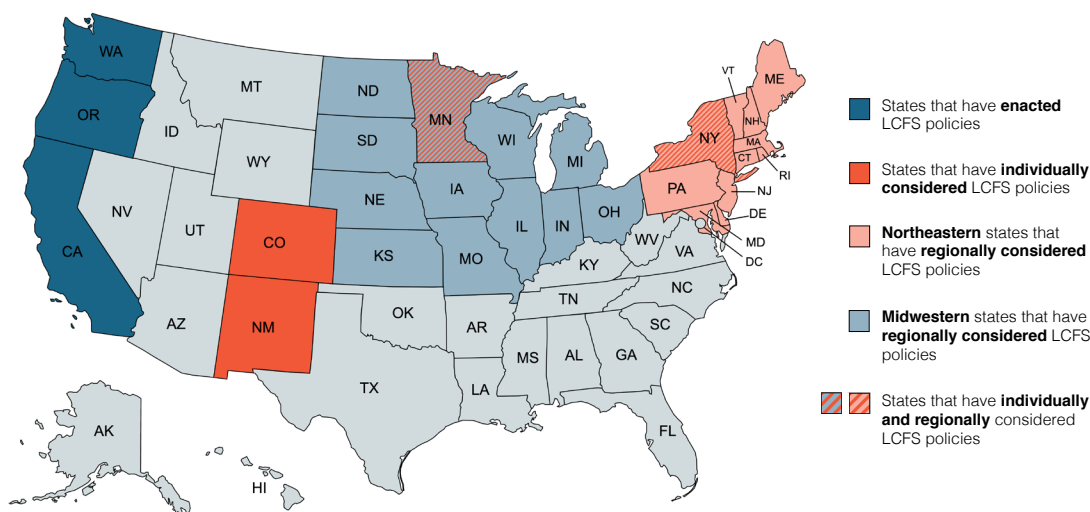
- The carbon intensity of a fuel measures the greenhouse gas emissions associated with its production, transportation, and use. Each fuel's carbon intensity is annually assessed and compared to the declining benchmark for each year.

Which states have adopted this policy?

California was the first state to adopt this policy via Executive Order in 2007, and Oregon and Washington followed suit with legislation in 2015 and 2021, respectively. California's LCFS is the most ambitious with a goal of reducing the carbon intensity of California's transportation fuels by at least 20% by 2030. In 2008, British Columbia also established a [LCFS](#) which was inspired by California's policy and was fully implemented in 2013.

Which states have considered this policy?

The Northeast/Mid-Atlantic and Midwest regions have both considered regional LCFS policies. Eleven Northeast/Mid-Atlantic states signed a [framework](#) to commit to participating in an effort to analyze low carbon fuel supply options and develop a framework for a regional LCFS in 2008. The Midwestern Governors Association advisory group on low carbon fuel policy issued a [2010 report](#) recommending an LCFS regional approach. No states in these regions have implemented an LCFS. Four states (Colorado, Minnesota, New Mexico, and New York) have recently considered implementation of state-wide LCFS.





Low Carbon Fuel Standard Legislation

- **[New Mexico S.B.14](#) (passed Senate 2022):** Requires a minimum emissions reduction level of 20% below 2018 levels by 2030 and by a minimum of 30% below 2018 levels by 2040; creates credits that reduce cumulative impact and benefit disproportionately impacted, environmental justice, and rural communities.
- **[Washington H.B.1091](#) (enacted 2021):** Directed the Department of Ecology to launch the clean fuels program by the start of 2023, with a mandate for a 20% reduction in the carbon intensity of transportation fuels by 2038.
- **[Oregon S.B.324](#) (enacted 2015):** Removed the sunset on the low carbon fuel standard (LCFS) established in 2009, allowing for full implementation requiring a 10% reduction in carbon intensity in fuels by 2025.
- **[California Executive Order S-01-07](#) (enacted 2007):** Established a goal to reduce the carbon intensity of California's transportation fuels by at least 10% by 2020. In 2018, the California Air Resources Board increased the standard to a [reduction of 20% by 2030](#).

Additional Resources

- **[California Air Resources Board website](#)** on the Low Carbon Fuel Standard.
- **The Center for Climate and Energy Solutions** has a [Low Carbon and Alternative Fuel Standard map](#) for state policy tracking.
- **The Berkeley Center for Law, Energy & the Environment** has a [fact sheet](#) on California's Low Carbon Fuel Standard.



Overview

Medium- and heavy-duty vehicles are classified as vehicles that weigh more than 10,000 pounds and include school and public transit buses, freight, and other fleet vehicles. These trucks and buses make up only 5% of vehicles on the road but account for about [24% of U.S. transportation emissions](#) and more than [60% of tailpipe nitrogen oxide \(NOx\) and particulate \(PM\) emissions](#) from active vehicles.

Targeting medium- and heavy-duty electrification is critical for reducing transportation emissions, but also for addressing historical environmental injustices. Communities of color and low-income communities are more likely to reside nearby transit centers and highways and face the brunt of the tailpipe pollution from these vehicles. Electrifying medium- and heavy-duty vehicles would prevent up to [57,000 premature deaths through 2050 and save \\$485 billion in health and environmental benefits](#) as a result of pollution reduction.

California Advanced Clean Trucks (ACT) Rule

In June 2020, California adopted the Advanced Clean Trucks (ACT) Rule requiring manufacturers to begin sales of zero-emission medium- and heavy-duty trucks in 2024, with sales decreasing to between 30-50% by 2030, 40-75% by 2035, and 100% by 2045. Since then New York, New Jersey, Massachusetts, Oregon, and Washington have adopted the rule through either legislation or regulation. Sixteen states and the District of Columbia have signed a [Memorandum of Understanding](#) committing to make sales of all new medium- and heavy-duty vehicles zero emission vehicles by no later than 2050.

Why Can California Set Its Own Vehicle Standards?

- Congress carved out an [exemption in the Clean Air Act](#) that required the Environmental Protection Agency to allow California to apply its own vehicle regulations originally due to California's public health crisis from extreme smog in the 1960s. The exemption has remained as the state has continued to innovate ambitious vehicle regulations. Other states are not allowed to create their own standards under the Clean Air Act but are able to adopt California's more stringent regulations.

Legislation

- **California S.B.372 (enacted 2021):** Established a statewide program to make financing tools and non financial supports available to operators of medium- and heavy-duty vehicle fleets to enable those operators to transition their fleets to zero-emission vehicles.
- **Hawaii H.B.552 (enacted 2021):** Required that agencies purchasing or leasing medium- and heavy-duty vehicles prioritize electric and alternative fuel vehicles.
- **New York A.4302/S.2758 (enacted 2021):** Set a statutory goal for all new light-duty vehicles sold to be zero-emissions by 2035 and all new medium- and heavy-duty vehicles by 2045.

Additional Resources

- **The Natural Resources Defense Council** has an expert blog on [Medium- and Heavy-Duty Vehicle Electrification](#)
- **The Clean Air Association of the Northeast States (NESCAUM)** has a page to track the [Action Plan Development Process](#).



Overview

Public transportation, including buses, subways, light rail, commuter rail, trolleys, and ferries, has an essential role to play in the toolbox of transportation solutions available. Not only will increased ridership significantly reduce emissions, but increased public transportation usage results in better air quality, less traffic congestion, fewer accidents, and decreased noise pollution. Electrifying public transportation has become increasingly important as a tool to further reduce emissions and air quality impacts from carbon-intensive fuels.

Public Transportation and Environmental Justice

Environmental justice communities have long suffered from increased air pollution due to disproportionate proximity to highways and traffic hot spots. Communities of color also tend to rely more on public transportation, so transit policies have significant impacts on these households. Public transportation is also an instrumental tool to increase independence for the elderly and disabled population and one that is currently underutilized, with [68% of older adults and 79% of younger adults with disabilities](#) believe locating “alternative transportation” if they could not drive would be “very difficult” or “somewhat difficult.”

Legislation

- **[Colorado SB22-180 \(enacted 2022\)](#)**: Created the ozone season transit grant program to provide grants to regional transportation districts (RTD) and transit associations in order to provide free transit services for at least 30 days during ozone season.
- **[New York S.8006C \(enacted 2022\)](#)**: Required the Department of Transportation to create a zero-emission public transportation system and school bus roadmap for the state; created a program to provide technical assistance to school districts, school bus fleet operators, and public transportation systems on managing zero-emission vehicle fleets.
- **[New Jersey A.1484 \(introduced 2022\)](#)**: Establishes “New Jersey Transit Bus Riders’ Bill of Rights;” ensures riders will have the right to reliable, affordable, and on-time transportation; safe buses, bus stops, and bus terminals; and protects against discrimination based on race, color, or national origin; safe buses, bus stops, and bus terminals; etc.
- **[**Louisiana S.B.467 \(enacted 2022\)](#)**: Required the Department of Transportation and Development to initiate the necessary engineering, financial, and other studies to begin passenger rail service between Baton Rouge and New Orleans and along the Interstate 20 corridor.
- **[Washington S.B.5974 \(enacted 2022\)](#)**: Created a green transportation capital grant program to aid any transit authority in funding cost-effective capital projects to reduce the carbon intensity of the Washington transportation system.

Additional Resources

- **Smart Growth America**
- [The Innovative DOT: A handbook of policy and practice](#)
- **National Conference of State Legislatures**
- [On Track: How States Fund and Support Public Transportation](#)
- **GoEV City** - [Electrify Public Transportation: Policy Toolkit](#)





Overview

Transit-oriented development (TOD) is the creation of compact, walkable, pedestrian-oriented, mixed-use communities centered around high-quality train systems. When individuals have easier access to their daily activities, not only is their quality of life improved by spending less time in traffic, it also reduces the carbon footprint of that individual's daily transportation needs. TOD can also increase the public health of a community by decreasing congestion, harmful air pollutants, and deaths and injuries from motor vehicle accidents. TOD facilitates more active forms of transportation like biking and walking, which reduces obesity and the likelihood of Type 2 diabetes or heart disease.

Legislation

- **Hawaii S.B.2898 (enacted 2022)**: Established the transit-oriented development infrastructure improvement district under the Hawaii community development authority.
- **Massachusetts H.5250 (enacted 2021)**: Required cities and towns in the MBTA service area to create at least one zoning district that legalizes modest multi-family housing construction of at least 15 units per acre.
- **Maryland H.B.0710/S.B.0516 (passed Senate 2022)**: Creates tax incentives for businesses located in a transit-oriented development area; established the Transit-Oriented Development Capital Grant and Revolving Loan Fund.
- **Utah S.B.140 (enacted 2022)**: Allowed housing and transit reinvestment zones around light rail and bus rapid transit facilities.
- **Utah H.B.462 (enacted 2022)**: Amended the list of strategies that municipalities and counties can consider and use within the moderate income housing requirements including: zoning for higher density or moderate income residential development in commercial or mixed-use zones near major transit investment corridors, created a housing and transit reinvestment zone, develop and adopt a station area plan as a requirement for areas with a fixed guideway transit station, etc.
- **Utah S.B.272 (enacted 2010)**: Developed a mechanism for public-private partnerships to help spur TOD and transit ridership by increasing density along transit routes, enabling easier access to Utah Transit Authority services, and increasing ridership.

DESIGNS THAT FOSTER TOD:

- Walkable design with pedestrians as the highest priority
- Train stations as a prominent feature of town centers
- Public squares fronting train stations
- Regional nodes containing a mixture of uses in close proximity (office, residential, retail, civic, etc.)
- High density, walkable districts within a 10-minute walk circle surrounding transit stations
- Transit systems including streetcar, light rail, and buses, etc
- Easy use of bicycles and scooters as daily support transport
- Ride-in bicycle parking areas within transit stations
- Bikeshare rental systems and bikeway networks integrated into transit stations
- Reduced and managed parking inside a 10-minute walk circle around a town center or transit station
- Specialized retail at stations serving commuters and locals including cafes, grocery stores, dry cleaners, etc ([Transit-Oriented Development Institute](#))

Additional Resources

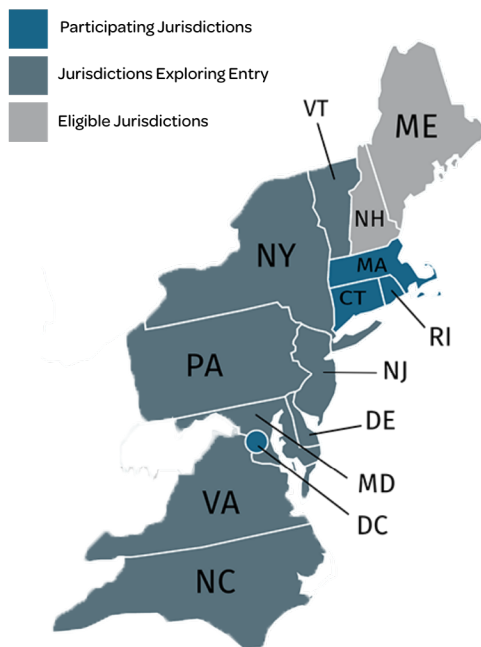
- **Smart Growth America** has a resource entitled, "[The Innovative DOT: A handbook of policy and practice.](#)"
- **The Department of Transportation** has a website page of resources on [Transit-Oriented Development guidance](#)
- **The TOD Institute** has several reports on [Transit-Oriented Development](#).



TCI Overview

The [Transportation & Climate Initiative Program \(TCI-P\)](#) is a collaboration of Connecticut, the District of Columbia, Massachusetts, and Rhode Island to reduce greenhouse gas emissions from transportation. Other states that are [exploring entry](#) into the program are Delaware, Maryland, New Jersey, New York, North Carolina, Pennsylvania, Vermont, and Virginia. The TCI-P creates a shared [cap-and-invest program](#) to achieve regional transportation emissions reductions. By setting a carbon price on fuel producers and distributors, states can fund transportation priorities and reduce emissions. The program has not yet been implemented, but state legislators have plans to revisit TCI-P in future sessions.

How States Join TCI



Ensuring Equitable, Healthy Transportation

Low income and communities of color bear the brunt of transportation pollution, while simultaneously lacking access to reliable transit. The MOU requires that a minimum of 35% of TCI revenues benefit overburdened and underserved communities. Each participating state will need to establish an Equity Advisory Body to guide investments. If implemented equitably in all eligible states, TCI-P could provide up to [\\$11.1 billion in annual health benefits by 2032](#).

KEY POINTS

- At **40%**, the transportation sector is the greatest source of greenhouse gas emissions in the Northeast and mid-Atlantic. TCI-P will cap transportation emissions by 30% in participating states between 2023-2032.
- Modeled after the [Regional Greenhouse Gas Initiative \(RGGI\)](#), the TCI-P will charge fuel suppliers for emissions, trade emissions allowances, and invest the revenue in climate friendly transportation initiatives.
- TCI-P **could** create up to 9,000 new jobs and generate \$0.5-2 billion in income annually for local transportation programs if implemented in all eligible jurisdictions.
- The final [Model Rule](#) was released in June 2021 after a period of public comment. In addition to the Model Rule, a [Framework for Public Engagement](#) and a [TCI-P Model Implementation Plan \(MIP\) for Low-Carbon Transportation](#) were introduced.

Resources

- Final [MOU](#), [program design](#), and [modeling summary](#) for TCI-P
- [List of complementary policies](#) in TCI-P-eligible states that can enhance equity
- [Recorded webinar](#) by TCI-P leadership on program design and modeling
- [Study slide deck](#) detailing the health benefits of TCI



Overview

As the United States examines ways to reduce its emissions from the transportation sector, it is important to consider not only how to make existing transportation cleaner, but also how to decrease the miles driven overall. Personal vehicles in the U.S. account for [three trillion vehicle miles traveled \(VMT\)](#) each year, totaling over 14,000 miles for each licensed driver. Studies show that [the U.S. must reduce VMT by 20% before 2030](#) to limit warming to 1.5°C regardless of an ambitious increase in electric vehicle usage.

There are many co-benefits to reducing VMT, including alleviating traffic congestion, improving access to jobs and services for residents without a personal vehicle, enabling communities to reclaim streets and parking lots currently used for travel or parking, and reducing injuries and fatalities from motor vehicle accidents ([Metropolitan Area Planning Council](#)).

States have created programs to replace fuel taxes and other vehicle fees with a VMT fee or a road user fee. Other states have incorporated a reduction in VMT into the responsibility of its Department of Transportation or other state agencies.

Vehicle Miles Traveled (VMT) Legislation

VMT Fees/Road User Fees

- [Nevada A.B.483 \(enacted 2019\)](#): Created a pilot program to collect odometer readings when motorists sell or register their cars to measure total miles driven statewide in pursuit of a mileage fee.
- ****[Oregon S.B. 810 \(enacted 2013\)](#)**: Created a permanent voluntary program in which up to 5,000 vehicles would pay 1.5 cents per mile in lieu of the fuels tax. In 2019 subsequent legislation ([Oregon H.B.2881](#)) removed the cap on the number of vehicles that could enroll in the Road User Fee Program; indexed the road usage charge rate to 5% of the per gallon state fuels tax rate; and excluded inefficient vehicles from the program.
- [Utah S.B.72 \(enacted 2019\)](#): Created a voluntary road user charge program for electric and hybrid vehicles; required the Utah Department of Transportation to submit annual reports on the program and submit a plan to enroll all vehicles by Dec. 31, 2031.

Agency Directives

- ****[Colorado S.B.21-260 \(enacted 2021\)](#)**: Required Colorado Department of Transportation to determine the total pollution and greenhouse gas emission effect expected from future transportation projects and take steps to ensure that greenhouse gas emission levels do not exceed set reduction amounts.



Agency Directives (Continued)

- **[Maryland H.B.0141 \(sent to Governor 2022\)](#)**: Requires that equity be considered when state transportation plans, reports, and goals are developed; requires the Department of Transportation to conduct transit equity analyses and consult with certain communities before proposing service changes.
- **[Virginia H.B.2241/S.B.1331 \(enacted 2017\)](#)**: Created a project prioritization system with environmental quality as a factor to be considered in the state transportation funding plan.
- **[Vermont H.552 \(introduced 2022\)](#)**: Requires all employers with 50 or more employees in the State to design, adopt, and implement a transportation demand management plan that includes measures to reduce vehicle miles traveled.
- **[Washington H.B.1099 \(passed Both Chambers 2022\)](#)**: Requires the largest and fastest-growing counties and cities to choose from a list of actions developed by the Department of Commerce to reduce their vehicle miles traveled and greenhouse gas emissions to meet state goals.

Department of Transportation Actions

- **The Minnesota Department of Transportation** set a preliminary statewide goal in 2021 for a [20% Vehicle Miles Traveled reduction statewide and per capita by 2050](#).
- **The California State Transportation Agency (CalSTA)** [released a plan to use infrastructure development to reduce Vehicle Miles Traveled](#) including: developing new ways to mitigate increases in VMT from highway projects; leveraging transportation funding to incentivize low-VMT land use policies; and converting underutilized highways into multimodal boulevards.

Additional Resources

- **The National Conference of State Legislatures** has a [State Road Usage Charge Toolkit](#).
- **Smart Growth America** has a report entitled, [Driving Down Emissions: Transportation, Land Use, and Climate Change](#).
- **ChangeLab Solutions** reports on [How Measuring Vehicle Miles Traveled Can Promote Health Equity](#).
- **The Department of Transportation** created a [Handbook for Estimating Transportation Greenhouse Gases for Integration into the Planning Process](#), a resource library on [Mileage-based User Fees \(VMT Fees\)](#), and a fact sheet on [VMT Per Capita](#).
- **The Washington Department of Transportation** conducted a study on the Impact of [VMT Reduction Strategies on Selected Areas and Groups](#).
- **Street Smart** cultivated a library of resources on [Vehicle Miles Traveled](#).

