Aligning Transportation Planning with State Climate Goals

Opportunities for State Departments of Transportation

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Introduction

As the agencies that oversee the planning, funding, and maintenance of most of the nation's transportation systems, state departments of transportation (DOTs) have a critical role to play in aligning transportation policies and practices with achieving state climate goals. By planning for and prioritizing investments in transportation projects that expand clean, affordable travel options and reduce the need to travel by car, state DOTs can make progress toward climate goals while also advancing important community-focused priorities, such as reducing transportation costs, improving air quality, and making it easier for people to get from place to place. State DOTs across the country are already taking important steps toward these combined goals, and more opportunities for progress lie within reach.

Transportation is the largest source of climate pollution in the U.S.[1] It also ranks as the second-highest average household expense.[2] By taking actions to accelerate vehicle electrification and expand the availability of affordable public transportation options, state DOTs have the ability to reduce emissions, lower household costs, and improve quality of life at the same time. While many state DOTs are already actively supporting the shift from gasoline- and diesel-powered vehicles to electric vehicles (EVs)—through investments in vehicle charging infrastructure, for example—this paper focuses on complementary strategies to reduce demand for travel by expensive, high-emissions vehicles, including by expanding options to travel by train, bus, bicycle, or foot.

State DOTs have the flexibility to invest in transportation infrastructure that supports a broad range of climate-related goals, but few states have policies or practices in place that prioritize emissions reductions alongside other key transportation priorities, such as safety or system reliability. For example, only a handful of states with statewide greenhouse gas (GHG) emissions requirements currently require that investments made by state DOTs align with those

[1] U.S. EPA, Inventory of U.S. Greenhouse Gas Emissions and Sinks, 1990–2022 (April 2024), https://www.epa.gov/system/files/documents/2024-04/us-ghg-inventory-2024-main-text_04-18-2024.pdf.

[2] Bureau of Transportation Statistics, Household Spending on Transportation: Average Household Spending, https://data.bts.gov/stories/s/ida7-k95k/.

state-level climate targets. Still, even in the absence of such regulatory requirements, state DOTs have many reasons to prioritize transportation investments that expand access to convenient, low-emissions transportation options.

In addition to their climate benefits, investments in public transit or other low-carbon modes of travel support a variety of other goals that are important to communities. For example, expanding the range of transportation options available to communities can reduce local air pollution, lower household transportation costs, and increase access to jobs and other daily essentials. Although this paper focuses on opportunities for state DOTs to help achieve state-level climate goals, the same opportunities could also support these and other goals.

More states than ever have taken steps to develop their own transportation-focused climate mitigation and resilience plans, spurred by several recent climate-focused federal funding programs, but, in many cases, translating those plans into actual projects requires state DOTs to update their investment decision-making practices. Although each state's approach to transportation planning and project selection is tailored to its own unique priorities, federal law establishes a national framework to guide state DOT decision-making. Under federal law, every state is required to adopt and implement a performance-based approach that uses system performance data to make transportation decisions that advance certain national goals, like safety and system reliability. In addition to demonstrating progress toward those national goals, states can take advantage of the flexibility of this approach to incorporate their own transportation priorities, including climate pollution reduction.

This issue brief outlines the general components of a data-driven, performance-based transportation planning framework and identifies key actions that state DOTs can take to incorporate climate-related considerations into each step of that planning process, including:

1. Taking stock of existing conditions and establishing performance measures to track progress toward climate-related goals;
2. Incorporating climate goals and GHG reduction strategies into transportation plans;
3. Identifying and prioritizing projects that expand travel options and support progress toward climate goals;
4. Mitigating the impacts of projects that are expected to increase travel demand or GHG emissions;
5. Monitoring performance and re-evaluating strategies as needed; and
6. Coordinating and collaborating with state, local, and community stakeholders.

At each of these steps, the paper also highlights some of the innovative actions being taken by state DOTs across the country to plan for and prioritize transportation investments that advance climate-related goals.

Background

Reducing transportation emissions is necessary to achieve climate and public health goals

Mitigating climate change and improving local air quality and health outcomes for communities requires reductions in the amount of pollutants emitted from on-road transportation. Transportation is the largest source of U.S. climate pollution—the sector accounts for nearly 30 percent of GHG emissions nationwide—and the vast majority of that pollution results from the combustion of petroleum-based fuels in on-road vehicles, including passenger cars and light-, medium-, and heavy-duty trucks.[3] On-road vehicles also emit a host of other pollutants—including carbon monoxide, nitrogen dioxide, and particulate matter—that contribute to dangerous air quality levels in areas near frequent vehicle travel, which has been linked to numerous health impacts and increased mortality rates.[4] Such air pollution tends to disproportionately affect communities of color and low-income communities, which are exposed to higher average levels of air pollution.[5]

Despite the importance of rapidly reducing transportation pollution, transportation emissions continue to grow nationwide. Between 1990 and 2022, transportation-sector GHG emissions increased by 19 percent.[6] This growth is primarily driven by travel activity, which increased by roughly 50 percent over the same time period.[7] Improvements to vehicle fuel efficiency and an increasing adoption of low-emission vehicles over time mean that cars today pollute less on a per-mile basis than before, but the pace of emissions reductions from technological improvements has so far struggled to keep up with growth in travel activity—as illustrated by the graph below.[8] Recent actions by the Trump Administration and Congress to roll back vehicle

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[3] U.S. EPA, Inventory of U.S. Greenhouse Gas Emissions and Sinks, 1990–2022 (April 2024), https://www.epa.gov/system/files/documents/2024-04/us-ghg-inventory-2024-main-text_04-18-2024.pdf.

[4] One study that aimed to quantify the health impacts from vehicle air pollution, conducted by the University of North Carolina at Chapel Hill's Institute for the Environment and the Center for Climate, Health, and the Global Environment at Harvard T.H Chan School of Public Health, found that on-road vehicle emissions led to thousands of annual premature deaths and billions of dollars in mortality-based damages across the Northeast and Mid-Atlantic. Calvin A. Arter et al., Mortality-based damages per ton due to the on-road mobile sector in the Northeastern and Mid-Atlantic U.S. by region, vehicle class and precursor, 16 Environmental Research Letters (2021).

[5] One study that investigated disparities in exposure to particulate matter across U.S. population and income groups found that the average particulate matter exposure for Black communities was roughly 14 percent higher than white communities and that the average exposure for low-income groups was 4 percent higher than high-income groups. Abdulrahman Jbaily et al., Air pollution exposure disparities across US population and income groups, 601 Nature 228 (2022).

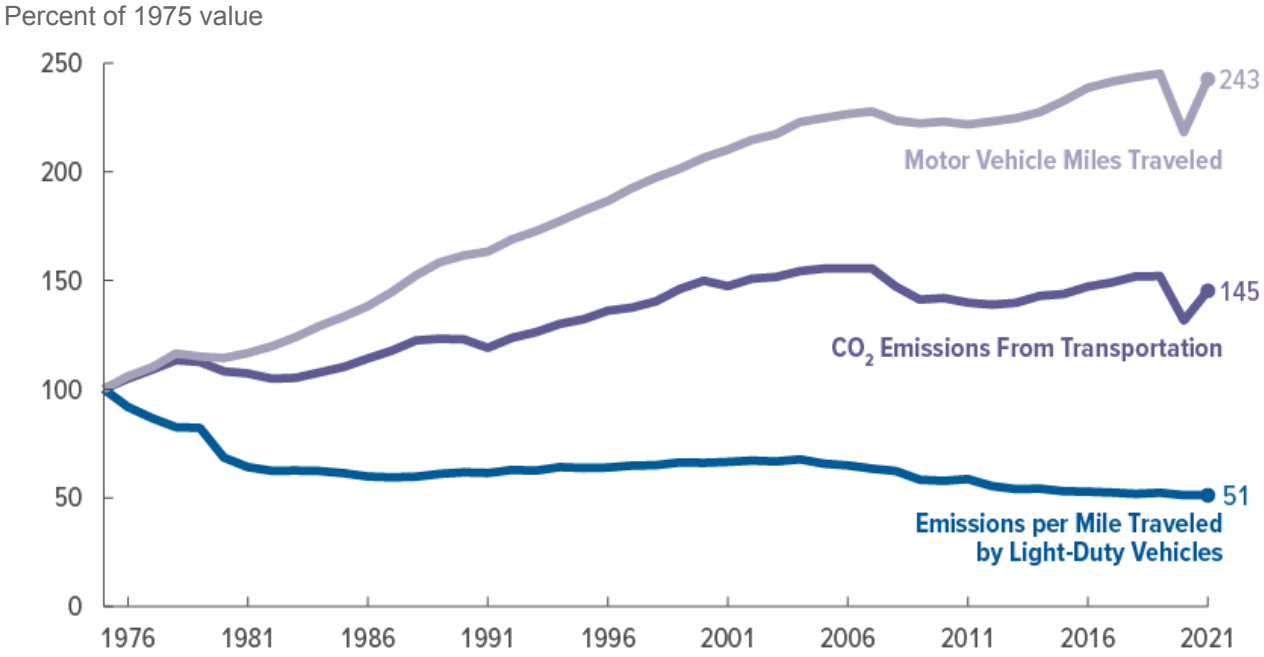
[6] U.S EPA, Transportation Sector Emissions Trends (Last updated March 31, 2025), https://www.epa.gov/ghgemissions/transportation-sector-emissions#trends.

[7] *Id*.

[8] The U.S. Energy Information Agency (EIA) projects an 11 percent increase in light-duty vehicle miles travelled between 2024 and 2050. EIA, Annual Energy Outlook 2025, Table 41. Light-Duty Vehicle Miles Traveled by Technology Type (2025),

regulations and revoke funding and tax incentives that support deployment of electric vehicles add to the challenge of achieving significant transportation emissions reductions.[9]

Figure 1: Transportation Sector CO_2 Emissions, Motor Vehicle Miles Traveled, and Emissions per Mile Traveled by Light-Duty Vehicles



Source: Congressional Budget Office https://www.cbo.gov/publication/58861

https://www.eia.gov/outlooks/aeo/data/browser/#/?id=51-AEO2025&region=0-0&cases=ref2025&start=2023&end=2050&f=A&linechart=~ref2025-d032025a.22-51-AEO2025&ctype=linechart&chartindexed=0&sourcekey=0.

[9] The EIA projects that Trump Administration transportation policies—including the revocation of the National Highway Traffic Safety Administration's Corporate Average Fuel Economy standards and EPA's vehicle tailpipe emission standards for model years 2027–2032—could result in roughly 357 MMT (28 percent) more emissions in 2050 compared to a reference scenario based on policies in place in December 2024. EIA, Annual Energy Outlook 2025, Table 70. Energy-Related Carbon Dioxide Emissions by End Use (2025), https://www.eia.gov/outlooks/aeo/data/browser/#/?id=22-AEO2025&region=0-0&cases=ref2025~hm2025~lm2025~highprice~lowprice~highogs~lowogs~highZTC~lowZTC~nocaa111~alttrnp~aeo2023ref&start=2023&end=2050&f=A&linechart=~~~~~~~~~~~~~~~~~~~~~~~~~ref2025-d032025a.79-22-AEO2025~alttrnp-d032125a.79-22-AEO2025&ctype=linechart&sourcekey=0.

Addressing the transportation climate pollution "gap" calls for a multi-strategy approach

Policymakers across various levels of government have acknowledged the importance of significantly reducing GHG emissions over the coming decades, but current policies are not sufficient to fully achieve emissions reduction goals. Roughly half of all states have adopted statewide GHG emissions reduction targets in some form.[10] Most state climate plans also acknowledge that reducing the amount of pollution from transportation is an important step toward achieving climate goals and creating economic and health benefits for communities.[11] However, most states are not on track to reduce transportation emissions at a pace that meets near-term climate targets.[12]

The disparity between emissions reduction targets and the current rate of transportation decarbonization represents a transportation climate pollution "gap" that states can work to close by adopting multi-pronged emissions reduction policies. Accelerating the deployment of EVs—for example, by incentivizing EV purchases and continuing to invest in charging infrastructure—is a critical step to closing the emissions gap.[13] However, even in states that have adopted ambitious vehicle electrification policies, many existing fossil-fuel powered vehicles will remain on the road for a decade or more.[14] This means that additional emissions reduction strategies will be needed to achieve near-term climate pollution reduction goals. For example, strategies that focus on expanding access to transit services by improving transportation planning processes and promoting complementary land uses can help achieve climate goals by reducing the amount of travel by vehicles that are already on the road.

In addition to their climate benefits, strategies that aim to reduce vehicle travel can also help achieve a variety of related transportation goals, which may offer additional justification for their

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[10] U.S. State Greenhouse Gas Emissions Targets, C2ES (last updated August 2025), https://www.c2es.org/document/greenhouse-gas-emissions-targets/.

[11] Transportation is the most represented sector among the climate pollution reduction strategies identified by states in the state Priority Climate Action Plans submitted to EPA under the Climate Pollution Reduction Grant Program. Molly Freed et al., "We Read 6,795 Pages of State Climate Plans. Here's a First Look at What We Found." RMI (Apr. 11, 2024), https://rmi.org/we-read-6795-pages-of-state-climate-plans-heres-a-first-look-at-what-we-found/.

[12] In 2023, RMI modeled GHG emissions reduction progress in 20 states and compared the states' current trajectories, based on state policies in place at the time, with pathways to achieve economy-wide emissions 50–52 percent below 2005 levels by 2030 (the national target set by the United States under the Paris Agreement). Of the states analyzed, RMI found that only Colorado and Washington were on track to achieve emissions reductions from the transportation sector that would be consistent with the national target. Drew Veysey et al., Closing the Transportation Climate Pollution Gap, RMI (July 11, 2023), https://rmi.org/closing-the-transportation-climate-pollution-gap/.

[13] *Id.*

[14] The average age of cars and trucks has steadily increased over time. In 2025, the average age of a passenger car on the road was 14.5 years, and the average age of a light-duty truck was 11.9 years. Average Age of Automobiles and Trucks in Operation in the United States, U.S. Bureau of Transportation Statistics (last updated Aug. 26, 2025), https://www.bts.gov/content/average-age-automobiles-and-trucks-operation-united-states.

adoption. A review by researchers at the University of California, Davis, found that reducing vehicle miles traveled can provide a broad array of benefits, including reductions in local air pollutants, improvements to safety, and savings of public and private costs.[15] Strategies that expand transportation options and reduce the need to travel by car, therefore, present a key opportunity for states to both make progress toward climate goals and address community needs.

State DOTs and other transportation planning entities have opportunities to reduce climate emissions

State DOTs and local transportation planning agencies, including Metropolitan Planning Organizations (MPOs) and transit agencies, play key roles in implementing policies, programs, and projects with the potential to reduce GHG emissions. In particular, transportation agency investment decisions have a major influence on system efficiency, long-term development patterns, and the travel choices made by individuals and communities.[16] Investments by state DOTs and MPOs in walking, biking, and public transit networks can make these methods of travel more convenient and attractive, which can shift some travel from single-occupancy vehicles to less polluting, safer, and more cost-effective modes of transportation. On the other hand, investing in new roads or adding lanes to highways can lead to even more vehicle travel, more dispersed land use, increased emissions, and higher household costs.[17]

Some states and their DOTs already recognize this opportunity and are taking steps to incorporate climate-related considerations into their investment decision making processes.[18] For example, to help ensure that new projects provide options for people to drive less—not just faster—California has changed the way that it evaluates the traffic impacts of new development projects to focus on the amount of travel generated rather than effects on congestion.[19] In Colorado, a first-of-its-kind GHG transportation planning standard requires the state DOT and MPOs to ensure that transportation investments meet emissions reduction targets.[20] This paper highlights some of the key challenges and opportunities that DOTs may face when trying to align

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[15] Kevin Fang & Jamey Volker, Cutting Greenhouse Gas Emissions Is Only the Beginning: A Literature Review of the Co-Benefits of Reducing Vehicle Miles Traveled, UC Davis: National Center for Sustainable Transportation (2017), https://escholarship.org/uc/item/4h5494vr.

[16] Reducing Greenhouse Gas Emissions: A Guide for State DOTs, NCHRP WebResources (Mar. 2022), https://crp.trb.org/nchrpwebresource1/2-0greenhouse-gas-basics/#sec2-10.

[17] James Bradbury et al., Issue Brief: States Are in the Driver's Seat on Transportation Carbon Pollution, Georgetown Climate Center (Mar. 2024), https://www.georgetownclimate.org/blog/states-in-the-driver-eys-seat.html.

[18] Ryan Levandowski, A growing number of states are taking steps to align transportation planning decisions with climate targets, Georgetown Climate Center (Jan. 10, 2024), https://www.georgetownclimate.org/blog/a-growing-number-of-states-are-taking-steps-to-align-transportation-planning-decisions-with-climate-targets-eo.html.

[19] CEQA: Transportation Impacts (SB 743), California Governor's Office of Land Use and Climate Innovation, https://lci.ca.gov/ceqa/sb-743/.

[20] Greenhouse Gas (GHG) Program, Colorado Department of Transportation, https://www.codot.gov/programs/environmental/greenhousegas.

their decision making processes with climate goals, and provides an overview of innovative policies states can consider, with examples from states that are already implementing them.

Key challenges

State DOTs face a variety of challenges that can make it difficult to align transportation decisions with climate goals. Some of the greatest challenges stem from the fact that transportation decision making has historically prioritized road capacity and vehicle movement with limited consideration of climate-related impacts.[21] As a result, state DOT investment frameworks have generally contributed to an ever-increasing reliance on personal vehicles—improvements to convenience and travel times not only encourage people to drive more often, but also to live farther away from jobs and activity centers—and transportation decision makers may now find it difficult to break away from that pervasive cycle.[22] This section highlights some of the related challenges that state DOTs face, and it identifies actions that state DOTs may need to take to support a broader range of transportation options, including revising their investment priorities and reexamining their use of legal authorities, tools, and data.

Investments often based on metrics that aren't well aligned with climate goals

Some of the most common ways that state DOTs evaluate and prioritize potential transportation projects fail to capture key climate-related impacts. In particular, state DOTs often evaluate transportation investments based on how they affect speed of travel and levels of traffic congestion.[23] Such metrics tend to support expanding roadway capacity as a means of reducing congestion, despite the fact that congestion tends to return to previous levels over time—a phenomenon known as "induced travel demand."[24] Speed and congestion metrics also fail to capture important climate and community impacts, such as trips taken by transit, walking, or biking; household cost-savings; improved air quality; and the safety and economic benefits of

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[21] Sarah Wesseler, American society wasn't always so car-centric. Our future doesn't have to be, either., Yale Climate Connections (Oct. 3, 2023), https://yaleclimateconnections.org/2023/10/american-society-wasnt-always-so-car-centric-our-future-doesnt-have-to-be-either/.

[22] Chris McCahill, Transportation agencies are facing the consequences of induced demand, State Smart Transportation Initiative (Apr. 18, 2021), https://ssti.us/2022/04/18/transportation-agencies-are-facing-the-consequences-of-induced-demand/.

[23] The overall flow of traffic is often measured according to a metric known as "level of service," which is generally designed to convey the amount of traffic demand at a given time as compared to the capacity of a particular roadway section (often based on the level of demand during the busiest conditions). U.S. Department of Transportation, Evolving Use of Level of Service Metrics in Transportation Analysis (2017), https://www.transportation.gov/sites/dot.gov/files/docs/mission/office-policy/transportation-policy/266046/los-case-study-intro508_0.pdf.

[24] Amy Lee and Susan Handy, Leaving level-of-service behind: The implications of a shift to VMT impact metrics, 29 Research in Transportation Business & Management 14 (2018), https://doi.org/10.1016/j.rtbm.2018.02.003.

reduced travel speeds through communities.[25] Unless they incorporate a wider range of considerations into project evaluation metrics, state DOTs will find it difficult to align transportation investments with climate goals.

However, state DOTs have plenty of flexibility to implement project evaluation metrics that better incorporate climate- and community-related impacts. The federal laws that govern transportation planning do not require state DOTs to make investment decisions based solely on forecasted traffic conditions.[26] Instead, state DOTs can evaluate projects based on metrics that better reflect travel demand impacts, such as access to common destinations and opportunities.[27] By doing so, state DOTs can reframe transportation investment priorities in terms that are more meaningful to community members—traveling safely and efficiently, rather than simply moving quickly. Implementing appropriate metrics, however, requires state DOTs to define a new set of strategic goals for themselves and identify key measures of success to track progress toward those policy goals, which in turn may require new data gathering and analysis tools.

State DOTs influence some, but not all, factors behind travel demand

The amount that people travel and the types of transportation options that they choose are two of the primary factors influencing transportation emissions, and state DOTs often influence individuals' travel behaviors through their transportation decision making processes. Travel demand—the amount and type of travel that people would choose under specific conditions—is the product of a broad range of demographic, geographic, and economic factors.[28] For example, the locations of common destinations and the relative quality and price of transportation alternatives affect individuals' transportation choices. Although state DOTs generally lack direct control over important factors such as land use, they routinely influence travel demand in intended or unintended ways through decisions that affect the relative availability and affordability of transportation options. Understanding the extent to which transportation agency decisions affect travel behavior is an important element of planning to achieve climate goals.

Effectively managing travel demand will require state DOTs to adopt a broader approach to transportation planning and project evaluation. Conventional transportation planning tends to consider a relatively limited set of travel demand variables, which may fail to convey the full

[25] *Id.*

[26] The FHWA has previously advised transportation officials that "[a]lthough States may adopt [level of service] standards in their design manuals, FHWA does not have regulations or policies that require specific minimum [level of service] values for projects on the [National Highway System]." Robert B. Mooney, Memorandum re: Level of Service on the National Highway System (May 16, 2016), https://www.fhwa.dot.gov/design/standards/160506.pdf.

[27] Eric Sundquist et al., Measuring Accessibility, State Smart Transportation Initiative (2021), https://ssti.us/wp-content/uploads/sites/1303/2020/12/Measuring-Accessibility-Final.pdf.

[28] Todd Litman, Understanding Transport Demands and Elasticities: How Prices and Other Factors Affect Travel Behavior, Victoria Transport Policy Institute (Sept. 18, 2025), https://www.vtpi.org/elasticities.pdf.

range of investment options and impacts to individual travel choices and emissions.[29] As a result, transportation planners may assume that travel demand is relatively fixed—and, in many cases, constantly growing—which often leads state DOTs to invest in additional roadway capacity to meet that anticipated consumer demand. However, if planning processes and travel demand analyses are expanded to consider a broader range of variables, such as the impacts that transit service quality improvements and land use changes could have on travel behavior, then transportation decision makers will be able to choose from a wider variety of strategies to address transportation needs.

Reliable data and methods needed to predict the effects of transportation decisions on climate goals

Revising state DOT planning processes in order to incorporate a broader range of climate-related considerations likely requires new data and tools since some of the most common analytical tools used to forecast future travel demand and compare different transportation policy scenarios are not sensitive to certain travel behavior characteristics that have an effect on emissions. For example, many existing travel demand models—tools commonly used to predict future travel behavior and transportation system performance—are limited in their ability to accurately forecast key environmental and mobility outcomes, such as changes to vehicle miles travelled (VMT).[30] The models are generally not capable of analyzing certain types of projects, including bicycle and pedestrian facilities, and they typically rely on uncertain predictions of future conditions, like land use patterns, without accounting for how those conditions are likely to be affected in turn by changes to the transportation system.[31] Importantly, the models also tend to underestimate the long-term increase in travel activity that consistently results from expanding highway capacity.[32] Access to new data sources, more advanced models, and customized project evaluation tools developed through research and peer exchange will help state DOTs more accurately estimate the climate-related impacts of transportation investment decisions.[33]

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[29] One common limitation of conventional planning is a tendency to focus on easily quantifiable factors, such as travel speed, with less attention paid to qualitative factors, like comfort and convenience. Todd Litman, Build for Comfort, Not Just Speed: Valuing Service Quality Impacts in Transport Planning, Victoria Transport Policy Institute (Mar. 11, 2025), https://www.vtpi.org/quality.pdf.

[30] Keuntae Kim et al., Travel Demand Modeling and the Assessment of Environmental Impacts: A Literature Review, UC Davis: National Center for Sustainable Transportation (2024), https://ncst.ucdavis.edu/project/investigation-abilities-and-limitations-travel-demand-modeling-informing-decision-making.

[31] *Id.*

[32] Jamey M. B. Volker et al., Induced Vehicle Travel in the Environmental Review Process, 2674 Transportation Research Record 468 (2020), https://doi.org/10.1177/0361198120923365.

[33] For an overview and assessment of common GHG evaluation tools, see Reducing Greenhouse Gas Emissions: A Guide for State DOTs, Appendix B: Greenhouse Gas Evaluation Tools, NCHRP WebResources (2022), https://crp.trb.org/nchrpwebresource1/appendix-b/.

Opportunities to incorporate climate-related considerations into transportation planning

Although the challenges discussed above tend to limit the consideration of climate-related impacts during transportation decision making, agencies have tools and opportunities to better integrate such considerations into their planning processes. In particular, state DOTs generally already have robust planning and investment prioritization frameworks that can be leveraged to support a broader range of policy goals. This section identifies opportunities for state DOTs to incorporate climate-related considerations into each step of a typical transportation planning cycle. It also highlights innovative approaches that state DOTs are taking to account for the emissions-related impacts of transportation decisions, including examples of policies and practices established by legislation, executive order, or other legal mechanism.

State DOTs already follow a "performance-based" approach to transportation planning that can be used to define future transportation goals, including VMT or emissions reductions, and make data-driven decisions that advance those goals. Federal law requires state DOTs and MPOs to implement a comprehensive performance-based decision-making process to achieve certain national transportation goals, which include safety, congestion reduction, and environmental sustainability (although federal environmental performance targets currently focus on improvements to local air quality and exclude GHG emissions).[34] This process involves a continuous cycle of evaluating progress toward those national transportation system goals based on a set of national performance metrics defined by federal regulations.[35] State DOTs, MPOs, and transit agencies are required to set their own performance targets based on the national metrics and then program transportation investments that are expected to result in achievement of the targets.[36] State DOTs are also required to submit periodic performance reports to the U.S. Department of Transportation (USDOT), which USDOT uses to determine whether significant progress has been made toward achieving performance targets.[37] If USDOT determines that a state DOT has not made significant progress toward achieving their performance targets, then that State DOT must identify additional actions to achieve the targets in future performance cycles.[38] The image below illustrates a typical performance-based decision-making cycle.

[34] The seven statutory national performance goals are safety, infrastructure condition, congestion relief, system reliability, freight movement and economic vitality, environmental sustainability, and reduced project delivery delays. 23 U.S.C. § 150(b).

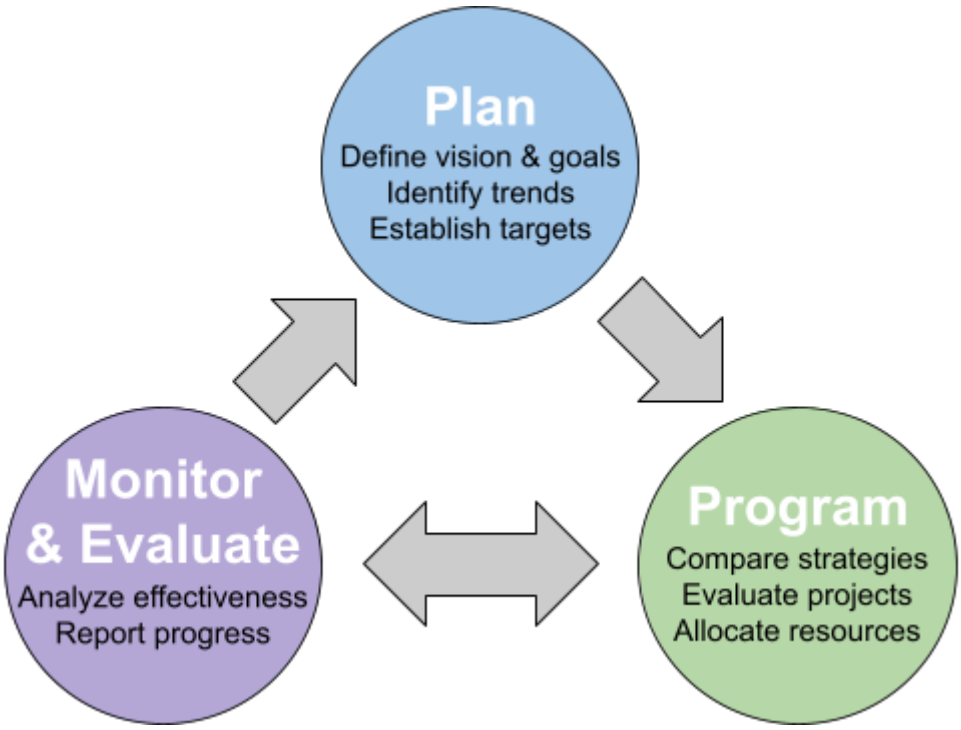
[35] See 23 C.F.R. § 490.101 et seq. For more information and resources on the federal transportation performance management process, see FHWA, Transportation Performance Management Toolbox, https://www.tpmtools.org/.

[36] 23 U.S.C. §§ 134, 135; 23 C.F.R. § 490.105(a).

[37] 23 C.F.R. § 490.107.

[38] 23 C.F.R. § 490.109(f)(1).

Figure 2: Simplified performance-based process



Based on: Boston Region MPO, Performance-Based Planning and Programming (2017)[39]

This method of decision-making offers a robust and flexible framework that state DOTs can adapt and expand to meet an even broader range of transportation goals, including GHG emissions reductions. Although state transportation planners have not historically included reducing GHG emissions or expanding access to low-carbon transportation options among the key goals and objectives informing their planning process, the performance-based approach is flexible enough to incorporate those and other state priorities. Federal law does not require state DOTs and MPOs to monitor the GHG emissions performance of the transportation system, but transportation agencies can choose to voluntarily measure and assess GHG emissions as part of their transportation planning process. In April 2025, the Federal Highway Administration (FHWA) rescinded a proposed requirement that state DOTs and MPOs establish declining GHG emissions targets for the transportation system and report on progress toward those targets, but the agency also stated that federal law "does not prohibit State DOTs and MPOs from choosing voluntarily to measure and assess [carbon dioxide] on the [National Highway System] or other roads."[40]

[39] Boston Region MPO, Performance-Based Planning and Programming (2017). https://www.bostonmpo.org/data/html/programs/performance/PBPP2017/PBPP.html.

[40] National Performance Management Measures; Assessing Performance of the National Highway System, Greenhouse Gas Emissions Measure, 90 Fed. Reg. 16463 (Apr. 18, 2025), https://www.federalregister.gov/documents/2025/04/18/2025-06664/national-performance-management-measures-assessing-performance-of-the-national-highway-system.

The following six actions represent potential opportunities to integrate climate-related considerations and coordinate efforts to address travel demand across each step of the transportation planning cycle.[41] Some key actions include establishing strategic performance targets based on state climate goals, evaluating and mitigating the emissions and travel demand impacts from individual projects, and implementing complementary policies that shift investment priorities toward a broad range of transportation options. The actions are accompanied by examples of where individual states have already taken advantage of the opportunity to better integrate climate-related considerations into transportation decision-making.

1. Take stock and set performance targets to track progress toward state climate goals

The first step in evaluating progress toward achieving state climate goals is to understand the existing conditions and performance of the transportation system, including how much people drive. Information about the current transportation context, such as the availability of various travel options and the demographic and economic factors that contribute to travel demand, is necessary for agencies to more accurately consider transportation trends and establish a baseline to measure future performance against.[42] In order to assess progress toward climate goals, some transportation agencies also measure certain key indicators like VMT per capita and tailpipe CO_2 emissions.[43] Even state DOTs that haven't yet established specific methods to track progress toward climate goals typically collect and report relevant data, including information on fuel sales and travel for a variety of vehicle types.[44]

With adequate information about current system conditions and travel trends, transportation agencies can set ambitious yet achievable performance targets that are aligned with policy objectives, including climate goals. State DOTs regularly use targets based on key performance metrics to evaluate progress toward national and state policy goals, including improvements to

[41] The FHWA's TPM Guidebook identifies six primary components of a comprehensive performance management framework: (1) strategic direction, (2) target setting, (3) performance-based planning, (4) performance-based programming, (5) monitoring and adjustment, and (6) reporting and communication. FHWA, TPM Guidebook, https://www.tpmtools.org/guidebook/.

[42] FHWA, TPM Guidebook, Component 1: Strategic Direction, https://www.tpmtools.org/guidebook/chapter-01/chapter-01-steps/.

[43] Performance Measure Dashboard, Vehicle Miles Traveled per Capita, Minnesota Department of Transportation, https://www.dot.state.mn.us/measures/vehicle-miles-traveled.html; Washington State Department of Transportation, WSDOT, MPOs collaborate to set initial target for new National Highway System GHG measure (Jan. 2024), https://wsdot.wa.gov/sites/default/files/2024-01/TPM%20New%20GHG%20measure%20folio%20Jan2024.pdf.

[44] State DOTs routinely report transportation data to the FHWA, including statistical information on "motor fuel, motor vehicle registrations, driver licenses, highway user taxation, highway mileage, travel, and highway finance." Highway Statistics Series, FHWA (last updated June 2025), https://www.fhwa.dot.gov/policyinformation/statistics/2023/.

safety, infrastructure condition, and local air quality.[45] By establishing targets for climate- and travel-related metrics that are aligned with state climate goals—such as net-zero economywide emissions by 2050 or other interim targets—state DOTs can measure their progress over time.

Washington State DOT voluntarily tracks and reports progress toward transportation-specific GHG emissions targets alongside federally required performance measures

The Washington State Department of Transportation (WSDOT) plans to voluntarily track and report on GHG emissions performance in the absence of a federal requirement. In 2023, the FHWA finalized a rule that would require state DOTs and MPOs to establish and report progress toward declining performance targets for tailpipe CO_2 emissions on national highways.[46] Although the national GHG performance rule never went into full effect due to legal challenges, some states had already taken steps to comply with the target-setting provisions of the final rule. In Washington, WSDOT and MPOs worked together to set an initial target—a 19.8 percent reduction below 2022 levels by 2025—that is based on the state's statutory commitment to reduce economy-wide emissions to 45 percent below 1990 levels by 2030.[47]

In the state's 2025–2028 State Transportation Improvement Program (STIP), WSDOT acknowledges that the measure is no longer required by federal law but also says that it plans to continue "voluntarily calculating and submitting emissions reduction targets based on the Washington State Legislature's GHG limits."[48]

WSDOT's GHG emissions performance measure provides a transparent method of tracking progress toward state climate goals. The measure relies on publicly available data related to fuel consumption, emissions factors, and VMT to inform a straightforward calculation of the change in tailpipe carbon emissions.[49] Although the measure relies on relatively simple methods and is applicable only to emissions on Washington's portions of the National Highway System, it nevertheless provides an important indicator of WSDOT's progress on reducing transportation emissions.

[45] The FHWA's State Performance Dashboard contains data reported by every state DOT related to 17 national performance measures. State Performance Dashboard and Reports, FHWA (last updated Apr. 14, 2023), https://www.fhwa.dot.gov/tpm/reporting/state/.

[46] National Performance Management Measures, 23 C.F.R.§ 490 (2024).

[47] Washington State Department of Transportation, WSDOT, MPOs collaborate to set initial target for new National Highway System GHG measure (Jan. 2024), https://wsdot.wa.gov/sites/default/files/2024-01/TPM%20New%20GHG%20measure%20folio%20Jan2024.pdf.

[48] Washington State Department of Transportation, 2025-2028 Statewide Transportation Improvement Program, https://wsdot.wa.gov/sites/default/files/2021-10/LP-STIP-Document.pdf.

[49] *Id.*

WSDOT's performance measure also supports accountability. Ordinarily, under the federal performance management framework, if a DOT fails to show significant progress toward performance targets, then it must document actions it will take to achieve the targets in the future.[50] Although this is not required for the state's GHG measure, WSDOT has the option to use future performance reports to outline additional actions, if needed.

2. Incorporate climate targets and GHG reduction strategies into transportation plans

At the long-range planning stage, when agencies typically identify overarching policy goals and propose strategies to meet those goals, state DOTs have an important opportunity to set the foundation for transportation decisions to achieve climate targets. Under federal law, each state is required to develop a long-range statewide transportation plan that identifies how the transportation system will meet certain economic, transportation, and sustainability goals over a period of twenty years or more.[51] Incorporating state climate goals, such as those identified in state statutes or climate action plans, at the long-range planning stage can provide a strong foundation to guide the investment of public transportation funds in ways that support emissions reductions.[52] However, because these plans are more representative of long-term strategies than concrete action plans, state DOTs will need to take additional actions to ensure that climate goals are adequately connected to performance-based planning tools.

Although most states take the opportunity to establish their own transportation priorities at the long-range planning stage, relatively few states fully integrate these priorities into broader transportation planning and project selection processes. Researchers with the Brookings Institution found that over 80 percent of state DOTs include goals in their long-range plans that go beyond the seven national goals established by federal law, but less than 20 percent have associated performance measures and targets for all goals.[53] Without specific performance

[50] "If FHWA determines that a State DOT has not made significant progress toward the achieving of [National Highway Performance Program] targets, then the State DOT shall include as part of the next performance target report under 23 U.S.C. 150(e) [the Biennial Performance Report] a description of the actions the State DOT will undertake to achieve the targets related to the measure in which significant progress was not achieved." 23 CFR 490.109(f).

[51] 23 U.S.C. § 135(f); 49 U.S.C. § 5304(f).

[52] For example, Maryland's long-range transportation plan, the 2050 Maryland Transportation Plan, includes environmental stewardship as one of four overarching goals, along with objectives ("Minimize fossil fuel consumption, reduce greenhouse gas emissions, and improve air quality") and strategies ("Implement policies and incentives to encourage mode shift") to promote that goal. 2050 Maryland Transportation Plan, Maryland Department of Transportation (2024), https://www.mdot.maryland.gov/OPCP/MTP_Playbook_web.pdf.

[53] Adie Tomer and Ben Swedberg, Connecting the DOTs: A survey of state transportation planning, investment, and accountability practices, Brookings (Nov. 12, 2024), https://www.brookings.edu/articles/connecting-the-dots-a-survey-of-state-transportation-planning-investment-and-accountability-practices.

metrics to track and prioritize progress toward policy goals, disconnects between long-range plans and the actual transportation projects selected for construction become much more likely.

To actually achieve climate goals included in long-range plans, states will also need to take steps to ensure that the transportation strategies identified in their plans support GHG emissions reductions. Effective state transportation plans generally identify specific metrics or actions that connect transportation strategies with their overarching goals. In some cases, states can draw from existing state climate plans, which often evaluate GHG emissions reduction strategies in detail and take into account other complementary state efforts like land use planning, zoning reforms, and bolstering the electrical grid.[54] Massachusetts DOT directly connects the climate goals outlined in its 2050 Beyond Mobility plan to a set of metrics associated with "supporting clean transportation," including number of EV charging stations, non-single-occupant-vehicle mode share, and percent of statewide GHG emissions attributable to transportation sources.[55] For clarity and to further promote accountability, some state plans take the additional step to assign responsibility for implementation of specific actions to individual agencies or partners. For example, the 2050 Maryland Transportation Plan is accompanied by an "action plan," which identifies the agency responsible for implementing each transportation strategy.[56]

Colorado's GHG Transportation Planning Standard requires statewide and regional transportation plans to meet emissions reductions targets

In Colorado, state rules governing the transportation planning process direct the state DOT (CDOT) and MPOs to cooperatively develop transportation plans that provide more travel options and reduce GHG emissions.[57] In 2021, the Colorado state legislature passed legislation directing the state DOT to develop procedures that better account for GHG pollution and VMT in statewide and MPO planning processes.[58] In response, the state's Transportation Commission approved a GHG Transportation Planning Standard that requires CDOT and MPOs to achieve individually apportioned GHG emissions reductions targets that are

[54] For examples of transportation-related strategies that can be implemented in combination to reduce GHG emissions, see the USDOT Climate Strategies that Work Playbook, https://climate-strategies-that-work-usdot.hub.arcgis.com/.

[55] Massachusetts Department of Transportation, Beyond Mobility: The Massachusetts 2050 Transportation Plan, https://www.mass.gov/beyond-mobility.

[56] Maryland Department of Transportation, 2050 Maryland Transportation Plan, Appendix: Action Plan (2024), https://www.mdot.maryland.gov/OPCP/Appendix_F_Posted_MTP_Action_Plan_Winter_2024.pdf.

[57] Colorado Transportation Commission, 2 CCR 601-22, Rules Governing Statewide Transportation Planning Process and Transportation Planning Regions, https://www.sos.state.co.us/CCR/GenerateRulePdf.do?ruleVersionId=11562&fileName=2%20CCR%2601-22.

[58] See S.B. 21-260 (Colo. 2021), https://leg.colorado.gov/bills/sb21-260.

aligned with statewide climate goals.[59] To demonstrate compliance with the emissions reduction targets, the agencies must model their existing networks and any future projects included in their transportation plans in order to estimate emissions levels in 2025, 2030, 2040, and 2050.

If a plan would result in climate pollution above the allowable level, based on regionally allocated GHG emissions limits that are consistent with achieving statewide goals, then the planning agency may opt to comply by changing the mix of projects in their transportation plans and/or implementing one or more mitigation measures—additional projects or project elements that reduce GHG emissions and improve access to equitable transportation options. If the compliance options are insufficient to meet GHG reduction levels, then the agency may be required to direct other funding sources toward mitigation efforts.

The GHG Transportation Planning Standard is designed to achieve significant emissions reductions, and it is an important component of Colorado's strategy to meet its climate goals. CDOT expects most of its transportation emissions reductions (at least 8 MMT by 2030) to come from the combination of low-emission vehicle regulations and investments in electrification. However, the planning standard complements Colorado's EV strategy by requiring transportation plans to incorporate a broader range of transportation options. The resulting reduction in VMT is expected to account for an additional 1.5 MMT of GHG emissions reductions by 2030.[60]

3. Identify and prioritize projects that expand travel options and support progress toward climate goals

When selecting individual projects to fund, state DOTs have another key opportunity to identify and prioritize investments that expand transportation options and support state climate goals. At this stage, DOTs can implement methods to estimate the GHG emissions and travel-related impacts of specific projects, and they can use that information to prioritize projects that advance climate targets and other transportation objectives. While not focused explicitly on climate outcomes, states like Kentucky,[61] North Carolina,[62] and Virginia[63] have developed project selection programs that offer models for data-driven transportation decision-making. In

[59] Greenhouse Gas (GHG) Program, Colorado Department of Transportation, https://www.codot.gov/programs/environmental/greenhousegas.

[60] Colorado Department of Transportation, Carbon Reduction Strategy (Nov. 2023), https://www.codot.gov/programs/environmental/greenhousegas/assets/colorado-carbon-reduction-strategy-repaired.pdf.

[61] Strategic Highway Investment Formula for Tomorrow (SHIFT), Kentucky Transportation Cabinet, https://transportation.ky.gov/SHIFT/Pages/default.aspx.

[62] Strategic Mobility Formula, North Carolina Department of Transportation, https://www.ncdot.gov/initiatives-policies/Transportation/stip/Pages/strategic-mobility-formula.aspx.

[63] Virginia SMART SCALE, https://smartscale.virginia.gov/.

particular, Virginia's SMART SCALE program stands out for its transparency and focus on concrete scoring criteria, which include air quality and environmental effects, access to multimodal transportation choices and transportation-efficient land use.[64] A study by researchers from the State Smart Transportation Initiative and the Civil and Environmental Engineering Department at the University of Wisconsin-Madison evaluated transportation project prioritization programs across the U.S. and found that Virginia's SMART SCALE program promoted consideration of a broad range of multimodal transportation alongside more traditional highway projects.[65]

In order to accurately consider the impacts of proposed projects, state DOTs can take advantage of a variety of tools to predict travel demand and GHG emissions effects. For example, Georgetown Climate Center's Transportation Evaluation and Carbon Reduction Tool (TEA-CART) provides planning-level analysis to estimate how transportation investments will affect future emissions as a result of vehicle electrification, changes in travel demand, transit use, "fix-it-first," and other strategies.[66]

Some states have also developed their own analytical tools to evaluate transportation impacts. For example, Minnesota developed a Carbon Emissions Tool to evaluate the emissions reduction potential of twenty-six types of transportation projects that aligned with the state's Carbon Reduction Strategy.[67] Through research and peer exchange, DOTs and planning partners can work together to develop new data sources, more advanced models, and other tools that support more accurate and context-sensitive evaluation of climate-related impacts.[68]

If resources are limited, or as an initial screen, state DOTs can also apply more qualitative measures to proposed investments to identify and compare potential impacts on progress toward climate goals, such as whether transportation projects are more likely to increase or decrease GHG emissions and/or travel demand.[69] Such qualitative evaluations can also be incorporated as additional factors to consider alongside more quantitative project scoring and

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[64] Smart Scale Technical Guide (Revised Feb. 2024), https://smartscale.virginia.gov/media/smartscale/documents/508_R6_Technical-Guide_FINAL_FINAL_acc043024_PM.pdf.

[65] David Noyce et al., Modern Project Prioritization for Transportation Investments (2021), https://rosap.ntl.bts.gov/view/dot/56131.

[66] TEA-CART: A Tool for Making Climate-Smart Transportation Investments, Georgetown Climate Center (Dec. 5, 2025), https://www.georgetownclimate.org/blog/tea-cart-landing.html.

[67] Greenhouse gas emissions analysis, Minnesota Department of Transportation, https://www.dot.state.mn.us/sustainability/ghg-analysis.html.

[68] For example, under the Biden Administration, the FHWA conducted research and facilitated peer exchange through the Every Day Counts program. Integrating GHG Assessment and Reduction Targets in Transportation Planning, FHWA (2022), https://www.fhwa.dot.gov/innovation/everydaycounts/edc_7/docs/EDC-7FactsheetGHG.pdf.

[69] For an example of qualitative evaluation, see Oregon Department of Transportation's "climate lens." Process for Evaluating the GHG Emissions Implications of the Statewide Transportation Improvement Program, Oregon Department of Transportation (June 2021), https://www.oregon.gov/odot/Programs/Documents/ODOT%20STIP%20GHG%20Evaluation%20Process-June%202021.pdf.

prioritization processes. For example, projects that are likely to reduce travel demand or shift travel to cleaner modes of transportation can be awarded points that raise their overall evaluation scores. Conversely, projects that are expected to increase travel demand or emissions may have points deducted, lowering their overall evaluation scores.

Oregon DOT applies both quantitative and qualitative analysis to evaluate the GHG emissions impacts of transportation projects

In March 2020, Oregon Governor Kate Brown issued Executive Order 20-04, directing the Oregon Department of Transportation (ODOT) to develop and apply a process for evaluating the GHG emissions implications of transportation projects in the Statewide Transportation Improvement Program (STIP).[70] In response, ODOT established a Climate Office and tasked the office with integrating climate-related considerations across multiple phases of agency decisionmaking.[71] To accomplish this, the Climate Office developed a "climate lens" to inform and influence ODOT decisions at three key points: program-level funding allocation, project-level analysis, and GHG emissions reporting.[72]

First, at the program funding and project analysis phases of STIP development, ODOT applies a mix of quantitative and qualitative measures to evaluate climate-related outcomes. When deciding how to allocate discretionary funding between programs, ODOT uses past investment performance data to evaluate the effects of various funding scenarios on priority outcomes, including GHG mitigation, congestion relief, and multimodal mobility.

Next, when translating funding allocations to identification of individual projects, ODOT applies a qualitative "GHG Index" to evaluate whether proposed projects advance emissions reduction goals, challenge those goals, or maintain the status quo (without quantifying the magnitude of those emissions impacts). This approach addresses the challenges posed by the large number and wide variety of projects considered at the project selection phase, as well as the limited project-level details available.

Finally, after a set of projects have been identified in a draft STIP, ODOT takes additional steps to quantify and report the GHG emissions impacts of all projects.

[70] Executive Order No. 20-04, Directing State Agencies to Take Actions to Reduce and Regulate Greenhouse Gas Emissions (Mar. 10, 2020), https://www.oregon.gov/gov/eo/eo_20-04.pdf.

[71] Process for Evaluating the GHG Emissions Implications of the Statewide Transportation Improvement Program, Oregon Department of Transportation (June 2021), https://www.oregon.gov/odot/Programs/Documents/ODOT%20STIP%20GHG%20Evaluation%20Process-June%202021.pdf.

[72] Process for Evaluating the GHG Emissions Implications of the Statewide Transportation Improvement Program, Oregon Department of Transportation (June 2021), https://www.oregon.gov/odot/Programs/Documents/ODOT%20STIP%20GHG%20Evaluation%20Process-June%202021.pdf.

ODOT has developed a methodology that uses a mix of modeling tools to forecast the effects that projects will have on emissions generated by transportation systems users, as well as emissions generated by the construction of those projects. In 2023, ODOT completed its GHG analysis of the 2024–27 STIP.[73] ODOT's analysis finds that, compared to the previous STIP, the newer one invests more in projects that have beneficial emissions outcomes, but quantitative analysis predicts only a small decrease in GHG emissions. In its report, ODOT recommends a set of next steps to enhance climate integration in future planning cycles, including intervention at earlier points in project planning and development, identification of clear emissions targets for STIPs, and various enhancements to the GHG analysis.

4. Mitigate the impacts of projects that are expected to increase travel demand or GHG emissions

State DOTs also have options to mitigate the impacts of projects that are expected to increase travel demand or emissions. Because states are balancing multiple priorities, including safety and system preservation, they sometimes need to invest in projects that could increase vehicle travel and emissions. In such cases, state DOTs can consider a variety of strategies, from revising project scopes to incorporating additional project components that mitigate the impacts of those projects. For example, when a state DOT determines that construction of additional lanes is necessary, it might be appropriate to incorporate strategies to manage travel in those new lanes, such as by designating them for use by high-occupancy vehicles or reversing the direction of travel based on time of day. The state DOT could also provide for additional transit or active transportation investments, such as bike lanes and walkways, near the project area. In other cases, a DOT might consider other more behavioral strategies, such as pricing road use or parking, offering transit or micro-mobility incentives, or partnering with local authorities to change land use patterns. To guide agency decision-making when it becomes necessary to counteract traffic impacts from new projects, the California Department of Transportation (Caltrans) has developed a "mitigation playbook" that contains a variety of quantifiable approaches to reduce VMT.[74]

[73] Oregon Department of Transportation, Greenhouse Gas Emissions Evaluation of the 2024–2027 Statewide Transportation Improvement Program (Nov. 2023), https://www.oregon.gov/odot/climate/Documents/STIPghgEvalReport_FINAL_11012023.pdf.

[74] Caltrans, SB 743 Program: Mitigation Playbook (July 2022), https://dot.ca.gov/programs/sustainability/sb-743/-/media/8f4b7a70ee2a48dbaa1e93b7861544ed.ashx.

California and Minnesota require transportation decision makers to mitigate the impacts of projects that increase travel demand and climate pollution

In California, state law mandates that transportation officials evaluate projects based on their effects on travel demand and related environmental impacts, including GHG emissions. In particular, Senate Bill 743 establishes VMT as the primary metric used to measure transportation impacts under the California Environmental Quality Act (CEQA), replacing previous evaluation metrics that focused on traffic congestion and automobile delay.[75] Under the new guidelines, if proposed transportation projects are expected to significantly increase VMT—as a result of expanded highway capacity, for instance—then California agencies must consider actions to mitigate the additional driving and, consequently, the GHG pollution it produces.

Minnesota has adopted a similar transportation impact assessment framework to ensure that transportation investments are aligned with the state's climate goals.[76] Legislation passed in 2023 and 2024 requires the Minnesota DOT (MnDOT) to establish interim transportation GHG emissions reduction targets and to assess the emissions and VMT impacts of proposed capacity expansion projects over a 20-year period.[77] MnDOT and MPOs are further required to mitigate any net increase in GHG emissions or VMT by interlinking capacity expanding projects with offsetting investments, such as transit expansions or service improvements, active transportation infrastructure, or land use changes.

6. Monitor performance and re-evaluate strategies as needed

To take full advantage of the performance management framework and ensure consistent progress toward long-term climate targets, DOTs will have to monitor the effectiveness of strategies and use that information to make adjustments during future planning cycles. Tracking progress toward climate targets in this way can provide valuable information to agency staff, including what is working and what can be improved. In many cases, this will likely require access to new or more granular data. In particular, accurate information on not only total VMT but also trip origins, destinations, and times will be important to understand the effect that climate-minded transportation strategies have on overall travel trends. Based on the

[75] California Senate Bill No. 743 (2013), https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201320140SB743.

[76] Transportation Greenhouse Gas Emissions Impact Assessment, Minnesota Department of Transportation, http://www.dot.minnesota.gov/sustainability/ghg-assessment.html.

[77] Relevant state statutes transportation emissions reduction legislation, Minnesota Department of Transportation, http://www.dot.minnesota.gov/sustainability/ghg-relevant-statutes.html.

information gathered at this stage, agencies can re-evaluate emissions reductions strategies, update GHG inventories, and adjust targets as needed.

Additionally, regular reporting on progress toward climate targets can promote transparency and accountability. Agencies already report progress across a range of policy goals, as directed by federal, state, and local requirements, and GHG emissions reductions can be integrated into these existing performance reporting frameworks. For example, as discussed above, Washington DOT has indicated that it will continue to voluntarily track and report progress toward state GHG emissions reduction targets alongside federally required performance metrics.[78]

California tracks and reports on implementation of the state's guiding transportation plan via an online dashboard

In California, Caltrans has taken steps to promote transparency and accountability by establishing an online portal to publicly report on implementation of the state's overarching transportation plan. The California Transportation Plan establishes the long-range vision for the state's transportation system.[79] The plan includes a broad array of statewide transportation goals, including achieving statutorily mandated GHG emissions reductions.[80] Based on the goals identified in the plan, Caltrans developed a set of recommended strategies, such as expanding access to transit and active transportation options, to support progress toward achieving the plan's vision. Furthermore, each recommendation is accompanied by individual actions to implement the strategy.

Caltrans publicly tracks the status of plan implementation via the online California Transportation Plan Implementation Portal.[81] The dashboard-style webpage contains information on more than fifty individual actions related to the fourteen recommended strategies identified in the plan, including links to specific agency efforts and updates on their status ("not started," "ongoing service," "in progress," or "complete").

[78] Washington State Department of Transportation, 2025-2028 Statewide Transportation Improvement Program, https://wsdot.wa.gov/sites/default/files/2021-10/LP-STIP-Document.pdf.

[79] California Transportation Plan 2050, Caltrans (Feb. 2021), https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/ctp-2050-v3-a11y.pdf.

[80] The California Transportation Plan Act (SB 391) requires Caltrans to show how the state will achieve a statewide reduction of GHG emissions to 1990 levels by 2020 and 80 percent below 1990 levels by 2050. California Senate Bill No. 391 (2009), http://www.leginfo.ca.gov/pub/09-10/bill/sen/sb_0351-0400/sb_391_bill_20091011_chaptered.html.

[81] California Transportation Plan Implementation Portal, https://app.smartsheet.com/b/publish?EQBCT=57d776a4c1dc40ad99f3451172510bdc.

7. Coordinate and collaborate with other state entities and local stakeholders

Throughout the planning process, state DOTs should seek to engage with external partners and the public on planning activities and strategies to reduce GHG emissions and expand travel options. At the state level, coordination with other agencies, including environmental and energy agencies, is important to ensure that transportation investments are aligned with broader climate and clean energy strategies. Some state DOTs are also taking advantage of interagency partnerships to better understand and plan for the various ways that communities live, work, and travel. For example, in California, the State Transportation Agency (CalSTA)—the cabinet-level agency that oversees Caltrans and other transportation-related state departments—and the Business, Consumer Services, and Housing Agency established a formal Transportation and Housing Coordination Workgroup, which is tasked with maximizing the co-benefits of the state's housing and transportation planning functions.[82] Similarly, in Oregon, ODOT entered into a multi-agency partnership with the Department of Land Conservation and Development, Department of Environmental Quality, and Department of Energy to collaborate on actions to reduce transportation GHG emissions and VMT.[83]

It is also important to ensure that state DOT plans and project selections adequately reflect community goals and needs. Regional planning organizations and local governments typically play key roles in connecting local transportation priorities to statewide transportation planning processes, but state DOTs should also look for opportunities to incorporate direct public input into their processes. A recent review of climate-accountable transportation planning conducted by researchers at Brookings found that although state DOTs are increasingly engaging in climate-focused planning, they generally offer few opportunities for the public to offer input on long-range mitigation and resilience strategies.[84] Incorporating additional opportunities for communities to provide input on planning and project prioritization will help state DOTs to identify investments that both support progress toward statewide climate goals and provide health, mobility, and cost-savings benefits to communities.

Conclusion

State DOTs have an important opportunity to accelerate transportation emissions reductions and provide key benefits to communities by harnessing the performance-based planning and programming framework. By integrating climate considerations early and often, including when setting goals, allocating funding between programs, selecting projects, and evaluating investment performance, transportation planners and decision makers can set the stage for better outcomes from transportation investments.

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[82] Transportation and Housing Coordination, CalSTA, https://calsta.ca.gov/subject-areas/transportation-housing.

[83] Every Mile Counts, Oregon Department of Transportation, https://www.oregon.gov/odot/Programs/Pages/Every-Mile-Counts.aspx.

[84] Adie Tomer and Ben Swedberg, Climate Accountable Planning, Brookings (Jan. 28, 2025), https://www.brookings.edu/articles/climate-accountable-planning/.

In particular, state DOTs can:

1. Take stock and establish performance measures to track progress toward climate-related goals;
2. Incorporate climate goals and GHG reduction strategies into transportation plans;
3. Identify and prioritize projects that expand travel options and support progress toward climate goals;
4. Mitigate the impacts of projects that are expected to increase travel demand or GHG emissions;
5. Monitor performance and re-evaluate strategies as needed; and
6. Coordinate and collaborate with state, local, and community stakeholders.

Implementing these practices can help states overcome some of the key challenges that they face when trying to reduce emissions from travel. Initially, evaluation of investments may be limited by readily available data and project information, but iteration over time can identify data needs and necessary areas for capacity building, so that DOTs can better incorporate new information sources and tools to enhance analysis and improve climate-related outcomes. Similarly, although DOTs may have a limited number of levers to pull that directly influence travel demand, their actions can influence broader trends in land use and travel behavior that could make it easier to reduce emissions over time. Most importantly, incorporating climate-related considerations throughout transportation decision making can evolve the DOT funding paradigm and help to refocus investment decisions in terms that promote safety, health, cost-savings, and increased transportation options.