COLORADO TRANSPORTATION

VISION 2035

Colorado Transportation Vision 2035

Strategies to reduce pollution, advance affordability, and improve quality of life for all Coloradans

November 2024

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Introduction

Transportation is key to a sustainable and vibrant future for all Coloradans. Efforts such as the Greenhouse Gas (GHG) Pollution Reduction Roadmaps and the Greenhouse Gas Transportation Planning Standard have identified important state goals and actions that involve the transportation system, but the need for further transportation innovation remains. Outlining a systemic framework for expanded transportation choices is the purpose of this Colorado Transportation Vision 2035.

By 2035, Colorado aims to have a transportation system that:

- Improves air quality and improves public health by reducing planet-warming greenhouse gas (GHG) emissions and regional air pollution
- Saves people money by improving access to more affordable and reliable transportation options
- Fixes our roads and invests in maintenance of the system
- Ensures safe travel, whether by driving, walking, biking, or taking transit
- Improve access to jobs and services for all Coloradans, including those who don't drive, or prefer not to drive, such as seniors, adolescents, people with disabilities, and people who can’t afford car ownership
- Reduces congestion on the roads and improves driver safety
- Expands opportunities for physical activity and access to public places and the great outdoors
- Addresses transportation inequities for low-income residents, and rural and urban communities alike.

Vision 2035 focuses on identifying goals and strategies that expand transportation options to meet Colorado's climate, affordability, safety, and equity goals. It advances the state's opportunities to increase access to, and improve the quality of, transportation options over the next ten years. Coloradans deserve a genuine choice on how to move about and between our communities, rather than the status quo of minimal public transit services that are often inconvenient, and a built environment

that encourages driving for even short trips. To accomplish this, Vision 2035 sets goals for reliable transportation options such as transit, rail, biking, and walking that encourages mode shift.

What is *mode shift?* Mode shift means a traveler's choice to supplement or avoid driving to also use a lower cost and more convenient transportation modes such as transit, biking, walking, and carpooling.

How do we mode shift? As discussed further in the Strategies To Achieve Vision 2035 Goals section, Colorado will achieve our mode shift goals through:

1) Expansion of transit service,
2) Implementing policies to encourage compact land use and walkable communities to reduce the number and distance of vehicle trips
3) Increasing travel choices by investing in bicycle and pedestrian infrastructure and micro mobility services that assist with "first and last mile" connections to transit facilities.

Colorado's Climate and Transportation Goals

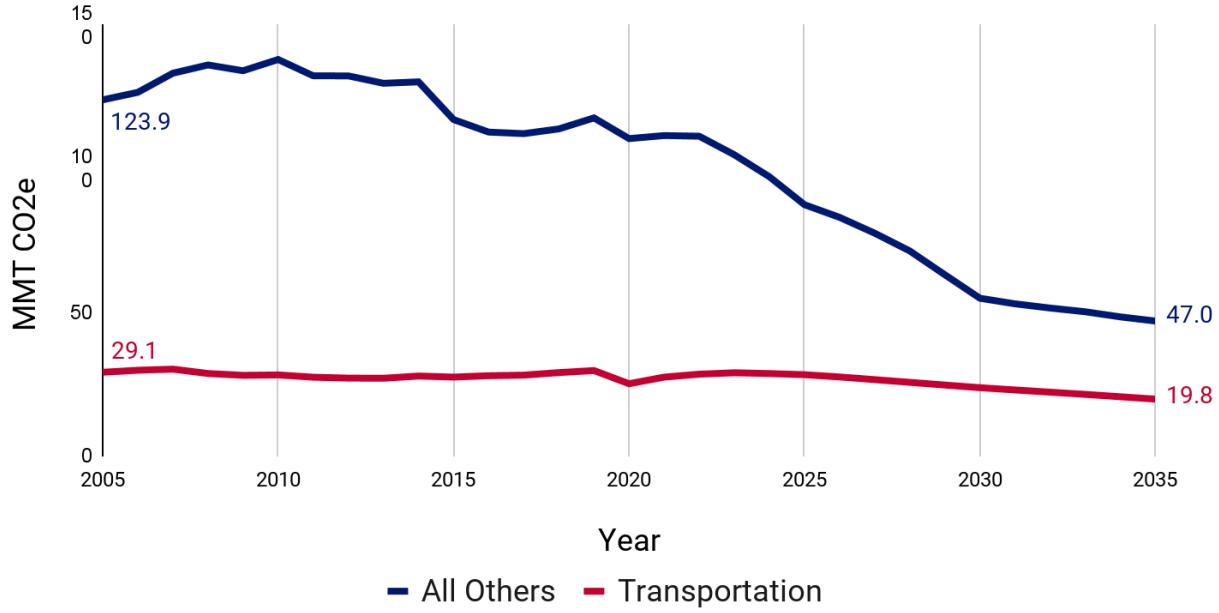
Colorado's 2035 economy-wide climate goal is to achieve 65% GHG reductions from 2005 levels, as established by SB23-016, *Greenhouse Gas Emission Reduction Measures*. Colorado has blazed a trail toward reducing emissions in the transportation sector wherever the state has jurisdiction to do so. Making emissions reductions in transportation has been a top priority from day one for Governor Polis; upon taking office he immediately signed his first policy executive order to accelerate the transition to electric vehicles. This initial effort was quickly followed by many legislative actions, investments in transit services like Bustang and nation-leading policies like the Greenhouse Gas Transportation Planning Standard that made great progress towards these goals both in the short and long term.

Transportation Sector Climate Goals

Figure I shows the change in annual GHG emissions from 2005 through 2035 from the transportation sector compared to all other sectors of the Colorado economy, with emissions from all other sectors declining significantly through 2030. These changes are forecasted in the Energy Policy Simulator (EPS) Near Term Action (NTA) scenario, which represents all currently enacted and proposed state policy in Colorado through 2026.

FIGURE I: Forecasted Emissions Reductions from Transportation and All Other Sectors

Colorado EPS Near-Term Action Scenario



We expect emissions reductions in the oil and gas sector, as well as in power, to continue to meet and exceed economy-wide targets. Meanwhile, emissions from transportation are projected to decline by about a third from 29.1 MMT in 2005 to 19.8 MMT in 2035, despite population growth and increased demand for transportation services.

EV's Role In Reducing Transportation Sector Emissions

State transportation policies and investments will continue to focus on transitioning to electric vehicles, which will generate the majority of emissions reductions from transportation.

Electric vehicle adoption continues to accelerate in Colorado, and the state appears to be on track with the goals and actions laid out in the 2022 Clean Truck Strategy and 2023 EV Plan. These plans set forward ambitious near- and long-term electrification goals for the light-duty and medium-/heavy-duty vehicle sectors, as well as a holistic set of policies, incentives, infrastructure development, outreach and engagement strategies, and more to achieve them. As a core component of these strategies, the state has adopted clean car and clean truck standards that expand the availability and sales of zero-emission vehicles (ZEVs), resulting in Colorado being second in EV market sales in the country this year. Current EV policy is projected to reduce emissions from the transportation sector by about a third by 2035.

Types Of Vehicle Emissions

While the reduction from EVs is significant, increases in population and emissions from non-road modes means more needs to be done in transportation above and beyond electrification policy.[1] Figure II shows the breakdown of the 19.8 MMT transportation sector emissions in 2035 by vehicle type under the NTA policy forecast.

[1] As the Clean Air Act requires electrification sales standards be identical with rules adopted by other states, minimum ZEV sales cannot exceed the current rules through 2032. A minor exception to this is the period of 2033-2035 for the light-duty Clean Cars Standard; there will be an analysis of options and consideration of potential approaches as part of a review that will take place in 2028 and 2029.

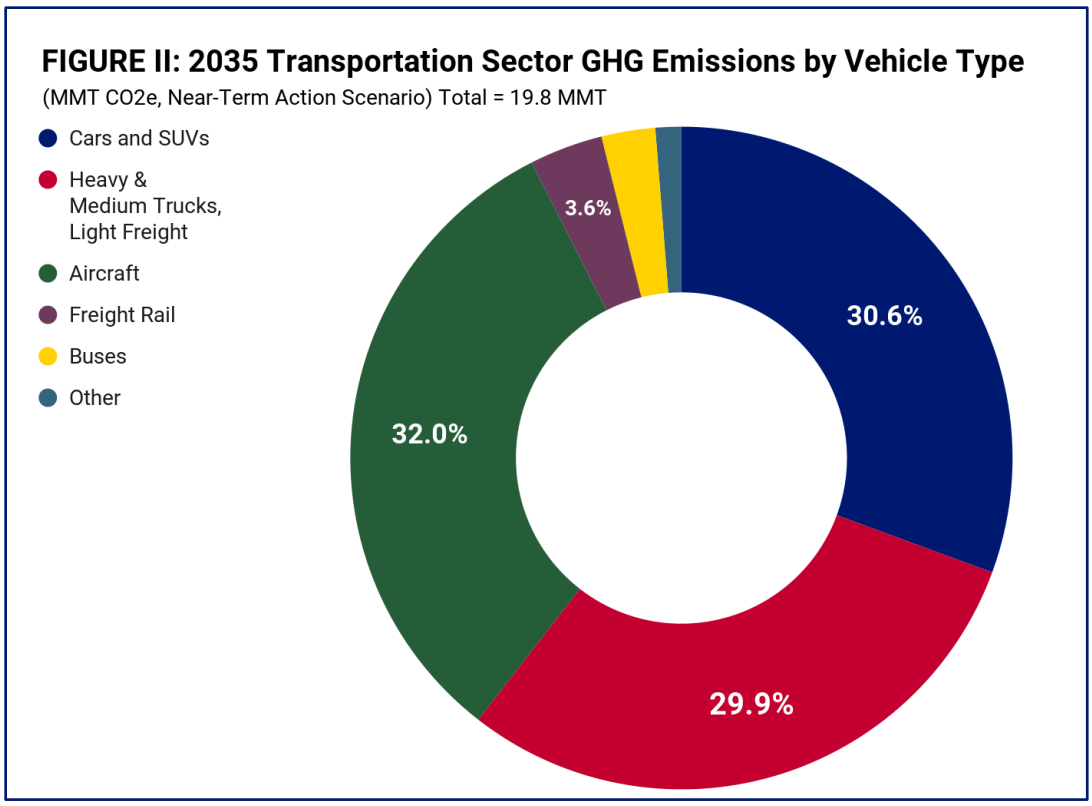


Figure II also shows that as progress continues on electrification of passenger vehicles and trucks, the share of emissions from sectors that the state of Colorado is largely federally preempted from regulating, such as aviation and freight rail, increases to approximately 35% of transportation emissions.

Meeting Our Transportation Sector Climate Goals

This section describes how Vision 2035 identifies the additional transportation emissions reductions needed to achieve 65% GHG reductions from 2005 levels to meet Colorado's climate goals. By 2035, the 19.8 MMT of transportation emissions under the NTA scenario will represent 30% of Colorado's total expected economy-wide emissions of 67 MMT CO2e. While policy actions already taken through legislation, rulemakings, and new programs and incentives, as well as the Near Term Actions in the Roadmap 2.0 have made significant progress toward our climate goals, analysis shows that an additional emissions reduction of 13.2 MMT is needed from all sectors.

Assuming that each sector should contribute emissions reductions proportional to their share, the 30% share of emissions from the transportation sector means that the transportation sector should aim to reduce emissions by an additional 3.9 MMT by 2035 to meet the state's climate goals. Acknowledging that 35% of 2035 transportation sector emissions will be from sources that are primarily federally regulated, such as interstate trucking, aviation, and rail, Vision 2035 focuses on the emissions that state, regional, and local policies and investments can impact by the year 2035 beyond vehicle electrification alone.

Transportation Vision 2035 Mode Shift Goal

Vision 2035 sets two key goals for the transportation sector beyond electrification. These goals are for *non-auto trip* modes of travel: **transit, active transportation,**[2] **and walking**. First, in order to identify the appropriate share of emissions reductions from non-auto modes of travel, the 30.6% share of transportation sector GHG emissions from cars and SUVs in 2035 (Figure II) was applied to the 3.9 MMT of emissions reductions needed from the transportation sector in 2035. This results in a goal for 1.2 MMT of additional reductions from non-auto modes of travel.

Second, Vision 2035 identifies sub-goals for strategies that boost trips made by non-auto modes of travel, which analysis has shown can achieve the 1.2 MMT GHG reduction goal by 2035. Doubling Colorado's non-auto mode share from today's level of 9.6% to 19.2% by 2035 is one sub-goal. This means that the percentage of trips in Colorado where people choose to take transit, walk, bike, or roll (instead of driving alone) would slightly more than double between 2024 and 2035. For transit, reaching this sub-goal would necessitate an increase in transit service of 83% (measured by transit revenue miles) from the current level of 79 million transit revenue miles to 145 million in 2035.

Vision 2035 also sets additional enabling sub-goals:

[2] Active transportation includes bicycles, velomobiles, e-bikes, electric scooters, electric skateboards, shared bicycle fleets, and electric pedal assisted (pedelec) bicycles.

- **Bicycles:** A 81% increase in bicycle infrastructure statewide, which would result in 3,540 miles of new bicycle routes (1,770 new miles of bicycle lanes and 1,770 new miles of separated bicycle paths and lanes).
- **Sidewalks:** A 3.4% statewide increase in sidewalks, resulting in 1,345 new miles of sidewalk on existing streets that currently lack sidewalks.
- **Transit-Oriented Development (TOD):** At least 52% of new housing units in transit-oriented areas, and 77% within existing Census Urban Areas.
- **Note:** Transportation Demand Management (TDM) efforts like carpooling and active transportation programs (e.g., bike or scooter sharing) are important to the state's mode shift goal. However, data on baselines and potential impact of these strategies is incomplete and thus this goal has not been quantified for this vision.

Details for how these sub-goals were calculated, including assumptions and uncertainties, is included in the Appendix. Ultimately these goals may be refined in partnership with state agencies and stakeholders as we implement strategies to reach them, but represent a reasonable order of magnitude target based on current best analysis. These are ambitious goals that are achievable through a strategy that invests in enhanced public transit services and greater transit service frequency along with a housing strategy that ensures that transit connections are a part of planning for walkable and bikeable neighborhoods. ***While the state will do its part, these goals cannot be achieved through state action alone***. Shared state, regional, and local planning is critical to an integrated transportation system; local support for new and expanded transit governance, services, and funding are critical.

All Levels of Government Working Together

The General Assembly and the Polis Administration have established science-based emissions reduction goals to measure our progress. State policy efforts to support EV adoption have been very successful, putting the state on a pathway to widespread electrification of cars and trucks. The state has also done groundbreaking work to link transportation planning to emissions reductions, support transit-oriented

development, and increase state investment in transit. But it is clear that we have much more to do at the intersection of land use, transit, and multimodal transportation planning and policy. In order to achieve Colorado's climate and transportation goals, it is important to recognize the differing opportunities for action at the federal, state, and local levels.

Federal Role

In 2035, Colorado's overall climate goal is to achieve 65% GHG reductions from 2005 levels, as established by SB23-016. However, 35% of these emissions in the transportation sector in 2035 are projected to originate from sources that the state of Colorado is largely federally preempted from regulating, such as aviation and interstate rail. While faster and more convenient regional rail and bus service can reduce some demand for costly intra-state flights, the need for GHG reductions from aviation highlights that the state of Colorado can not achieve these goals alone. We need to continue to engage our federal delegation and federal government on supporting technology advances in low- or zero-carbon aeronautical powertrains and sustainable aviation fuels.[3] Colorado remains a hub of innovation and will continue to do its part to foster companies leading these technologies.

In 2021 and 2022, Congress took extraordinary action with the passage of the Infrastructure Investment and Jobs Act (IIJA) and Inflation Reduction Act (IRA). These landmark achievements make critical investments in transitioning the transportation sector to lower emissions options. However, IIJA expires in 2026 and it will be important for Congress to act to sustain these levels of investments in transitioning our transportation sector, starting with the over $30B allocated to the expansion of passenger rail.

[3] For example, Colorado is home to Cosmic Aerospace and Bye Aerospace, both working on electric aircraft, and Gevo and the National Renewable Energy Lab are pioneering work on sustainable and low-carbon aviation fuels.

The IIJA included significant provisions for vehicle electrification, including the $5B National Electric Vehicle Infrastructure (NEVI) program as well as grant funding through the $2.5B Charging and Fueling Infrastructure Grants, the Clean School Bus Program, and other initiatives.

The IRA established nationwide electric vehicle tax credits up to $7,500 per light duty vehicle purchased by individuals and businesses through 2032. The IRA also enacted for the first time a used EV tax credit of up to $4,000 or 30% of the sales price of vehicles under $25,000 for income-qualified applicants. It also includes tax credits for commercial and heavy-duty electric vehicles, as well as incentives for charging equipment. The anticipated impact of these federal policies is already accounted for in emissions forecasts for Colorado in terms of accelerated electrification of trucks and passenger vehicles in the NTA scenario.

State Role

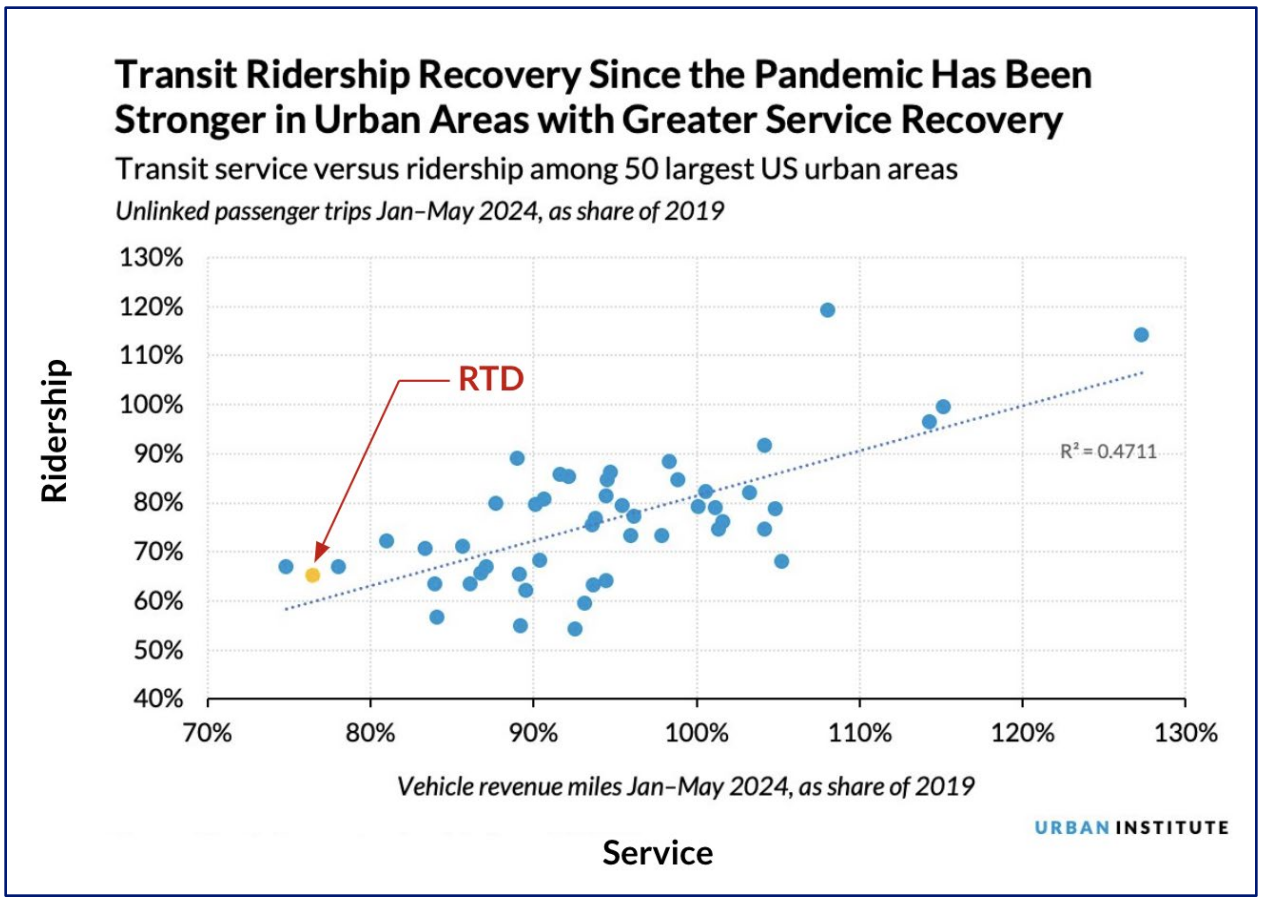
The State of Colorado plays an important role in providing the roadmap and vision for how to achieve our GHG goals and to collaborate across all levels of government to achieve them. The state has also prioritized the expansion of EV adoption with our state tax credits, SB21-260 transportation electrification enterprises, utility transportation electrification requirements, funding to electrify school buses, and adoption of ZEV standards for light- and medium- and heavy-duty vehicles. Colorado has also led the country in efforts to shift mode share, such as the first in the nation GHG Transportation Pollution Reduction Planning Standard. Moreover, the General Assembly and the Polis Administration have recently passed important land use and housing policies to foster transit-oriented communities to enable more transportation options in a more convenient way for more people.

In addition to setting statewide policies, Colorado rapidly stood up regional and long distance bus services in Bustang and Snowstang. Bustang launched in July 2015 as a Monday through Friday commuter-focused service along the Front Range I-25 corridor as well as the I-70 corridor to Grand Junction. CDOT added rural Bustang Outrider Service in 2018, Snowstang mountain ski resort service during winter weekends in

2019, and year round Pegasus mountain ski resort daily service. Over the past three years CDOT implemented a pilot service expansion, which has seen a corresponding increase in ridership. Since taking office, the Polis administration, in partnership with state legislators, has secured nearly $200 million annually in new funding for transit and rail services and has been moving to stand up intercity passenger rail service on routes that are of statewide impact. However, there is more work to be done to collaborate across all levels of government to expand transit and rail services and to ensure the policies, incentives, and innovative funding options are in place for more transit-oriented housing and mobility hubs.

Regional And Local Role

Expanding and improving regional and local transit and rail service is essential to the state of Colorado achieving our climate goals. Without improved service and complementary land use policies at the regional and local levels, the state of Colorado cannot grow transit ridership and achieve GHG emissions reduction goals. Regional and local transit agencies not only have a role to play in increasing transit services that result in increased ridership, they along with school districts are the owners and purchasers of the lion's share of bus fleets, making their efforts in the EV transition critically important. For example, there are less than 1,500 transit buses in the state of Colorado and RTD (the Regional Transportation District) owns nearly 1,000 of those buses. RTD, a construct of the state legislature, is also the primary large-scale transit provider for over 3 million people in the most urbanized area of the state where we are most likely to achieve mode shift and grow ridership. As the state looks to grow transit ridership, we must acknowledge the significant impact COVID-19 pandemic had with transit agencies across the country seeing a decrease in transit ridership of 81 percent between April 2019 and April 2020. However, as national transit ridership levels have recovered to 79 percent of pre-pandemic levels, and a number of high-performing systems now exceed pre pandemic ridership, as of April 2024, RTD has significantly lagged behind national trends.



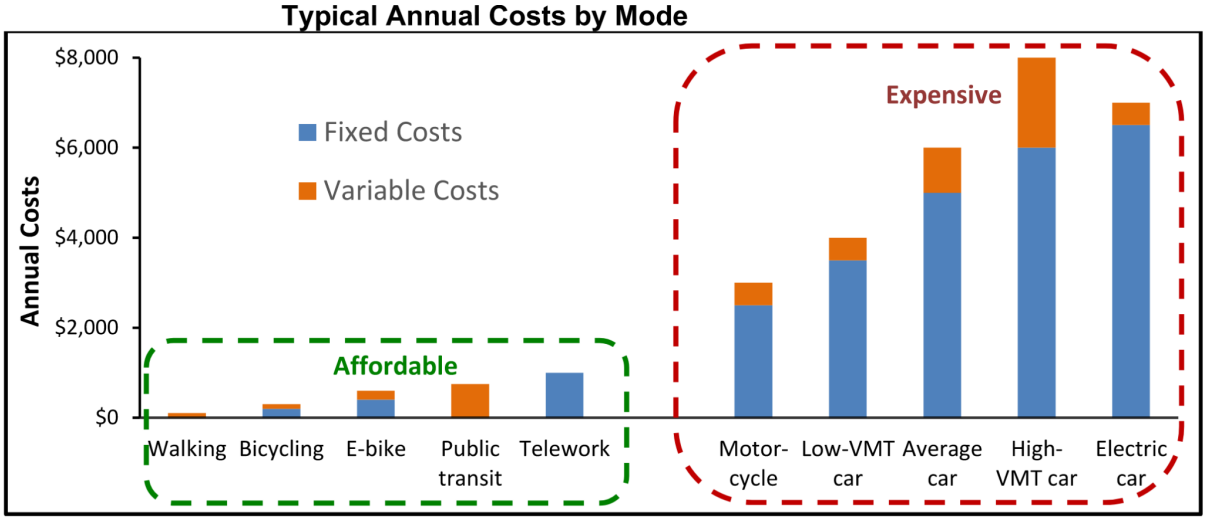
While RTD is the largest transit agency in the state providing service to the majority of our population, in recent years new regional transit agencies have been established by local ballot initiatives around the state, providing much needed local funding and services to additional areas. Forming more regional transit agencies and successfully securing local revenue sources will be needed to achieve the goals of Vision 2035. Actual accountability for service expansion, best practices in governance, and more aggressive expansion of convenient service by existing regional and local transit agencies such as RTD, is needed to meet the unmet demand of transit services as we move to reduce congestion on our highways and meet our climate goals. As more regional transit authorities are created and expanded, the state's role in coordinating services and connectivity will also increase.

Benefits To Expanding Transportation Options

Saving People Money

In Colorado, transportation is one of the top household expenses after housing. A single adult can expect to spend nearly $10,000 per year on transportation, while a family of four may pay over $16,000.

In contrast, alternatives like transit, biking, and walking are far less costly. The annual cost to own and operate a car in Colorado is around $11,451 for new vehicles and $6,000 for used ones, which translates to monthly costs between $500 and $950. In contrast, a monthly RTD pass costs $88 and just $27 for seniors, people with disabilities, and low-income customers, and increased sales can drive even lower costs for consumers. A bicycle costs roughly $300 or less upfront with minimal ongoing expenses, and walking has almost no cost. Currently, about ⅔ of households in Colorado have one or two cars. If those households were able to replace just one of those cars with transit, biking, and walking trips, they'd save $5,000 to $10,000 per year on transportation that they could use for other priorities.



Source: [*Evaluating Transportation Affordability*]

For low-income families, transportation costs are especially onerous, taking up about 30% of income. However, low-income households without a car spend just 5% of their

incomes on transportation. Walking, bicycling (including e-bikes) and public transit are much more affordable than automobile travel. Most vehicle costs are fixed so vehicle owners save little from marginal reductions in annual mileage. Only with adequately affordable and reliable alternatives to driving can Coloradans make the choice to reduce their reliance on personal vehicles.

Healthier Communities

Transportation is one of the top two sources of ozone-forming pollution, and promoting multimodal transportation helps reduce tailpipe emissions that can make our air healthier to breathe. More active transportation modes like walking and biking also improve health by increasing physical activity.

Improving Safety

Colorado has faced significant challenges in meeting its Vision Zero safety goals, particularly for Vulnerable Road Users, such as cyclists, pedestrians, and others traveling outside of a car, for whom fatalities increased by 30% in 2023. Data indicates that a higher percentage of traffic deaths and serious injuries occur in Disproportionately Impacted Communities, further emphasizing the potential for traffic) reduction strategies, such as pedestrian safety projects, to advance both our climate and health equity objectives.

Equity And Access To Opportunity

There’s pent-up demand for alternatives to driving. In a typical community, 20-40% of residents cannot, should not, or prefer not to drive, either because they’re seniors, adolescents, people with disabilities, low-income, or would rather avoid the stress of driving on busy roads. These residents will continue to struggle to access jobs, education, medical appointments, social events, and other destinations without better transportation options.

Estimating The Total Economic Benefits For Colorado

Reducing transportation emissions by 1.2 MMT by 2035 through mode shifting would result in significant cost savings for Coloradans,[4] including:

- **Vehicle Operating Costs:** $6.3 billion in consumer savings from lower vehicle fuel and maintenance costs.
- **Safety:** $9.1 billion from lower costs associated with traffic fatalities or injuries such as medical costs, insurance, vehicle property damage, lost workplace productivity.
- **Traffic Delays:** $8.5 billion from decreased travel time for commuting, errands, personal travel and freight movement.
- **Air Pollution:** $225 million in lower healthcare costs from less local air pollution.
- **Social Cost of Carbon:** $854 million avoided financial losses and costs to pay for damages caused by climate change.
- **Physical Inactivity:** $298 million in improved health and decreased medical costs from more physical activity such as walking and biking.

Actions On Electrification And Mode Shift To Date

Progress In Electrification Efforts

The state EV Plan envisions the large-scale transition of Colorado's transportation system to ZEVs. This includes increasing the market share of light-duty electric vehicles to nearly 100% by 2050, transitioning 100% of medium- and heavy-duty vehicles to ZEVs, and expanding adoption of electric active transportation and shared options. The EV plan also focuses on expanding access to, and benefits of, this transition to all Coloradans and businesses, especially those in disproportionately impacted and rural communities.

[4] Adapted from CDOT's 2021 Cost-Benefit Analysis

The increased adoption of lower and zero-emission cars, trucks, buses, ebikes, and freight vehicles is being achieved through a variety of efforts, which are further detailed in the state's Clean Truck Strategy and most recent EV Plan. These efforts will continue to comprise a major component of the state's strategy to reduce transportation emissions, and progress is detailed in annual reports to the legislature. For more information, please visit the Energy Office's website.

Progress In Mode Shift Efforts

2021 GHG Transportation Pollution Reduction Planning Standard

As directed by SB21-260, CDOT implemented a groundbreaking new rule, the GHG Transportation Pollution Reduction Planning Standard, targeted at improving air quality, reducing smog, and providing more transportation options for Coloradans. The standard takes a novel approach by setting requirements for CDOT and the state's five Metropolitan Planning Organizations (MPOs) to set GHG reduction levels over time. This requires CDOT and MPOs to critically evaluate their plans for transportation projects and develop long-range transportation plans that support travel choices that reduce GHG emissions. As part of CDOT's effort, the Transportation Commission adopted Policy Directive 1610 on GHG Mitigation Measures, which provides an additional compliance mechanism for CDOT and the state's five MPOs to meet GHG Reduction Levels. This collaboration has led to a suite of innovative multimodal projects that have paved the way for Minnesota and other states to explore replicating Colorado's planning standard. For more information, please visit the Colorado Department of Transportation's website.

Increasing Funding For Transit And Multimodal Options

In recent years Colorado has successfully developed multiple new sustainable long-term funding sources that has resulted in historic new state funding for transit, and has begun the planning and implementation for several new types of transit service. Key initiatives to advance multimodal options include:

- Funding for capital-only projects has been increased through SB21-260, and through multiple federal grants and other funding sources pursued by CDOT and local governments.
- More than $200M annually in funding that is available to both capital projects and transit operations through landmark legislation such as SB24-230, SB24-184, SB21-260.
- SB22-180, *Programs To Reduce Ozone Levels Through Transit*, provided funding to Bustang for a three-year pilot program to increase service and to transit agencies statewide to provide free or reduced fares during times of year when ozone metrics are above healthy levels.
- Eagle County voters approved the Core Transit regional transportation authority in 2022 and the agency increased service by 40% in 2023 leading to a 60% growth in ridership in 2024.
- CDOT's Office of Innovative Mobility and Division of Transportation Development provides grants (including the Revitalizing Main Streets Program) to support transportation demand management efforts, and infrastructure to make it easier to walk and bike.
- CEO's Climate Pollution Reduction Grant from the EPA will provide $60M to support local governments to adopt and implement policy that reduces GHG emissions, including sustainable land use and transportation strategies such as transportation demand management policies, parking reduction, and investments in bike and pedestrian infrastructure.
- $10M invested in e-bike rebates for low and moderate-income Coloradans, and now a $450 tax credit redeemable at the point of sale for e-bikes for all Coloradans.
- CDOT investments in Bustang and mobility hubs have increased interregional and intercity transit service.
- CDOT, DRCOG, and local governments have set aside funding and are planning for Bus Rapid Transit (BRT) along the Colfax Avenue, Federal Boulevard, and Colorado Boulevard corridors.

- Service Development Plans are underway for both Mountain Rail from Denver to Craig and Front Range Passenger Rail.

Reducing GHG Emissions Through Land Use and Housing Reform

Colorado's success with land use reform in 2024 will boost the effectiveness of transit and multimodal strategies by increasing housing opportunities near transit stations, near job centers, and within walkable neighborhoods. Building more housing in Transit-Oriented Communities, removing parking minimums, allowing accessory dwelling units in urban areas, and incentivizing Neighborhood Centers in rural areas and greenfield areas will provide significant synergies with transit and multimodal strategies.

New research of land use and building policies from the Colorado Energy Office finds significant GHG reductions from new residential development expected by 2050 in both the buildings (about 10-30% reduction) and transportation sectors (about 4-14% reduction). This research modeled some similar policies to those adopted by the 2024 legislature such as accessory dwelling units, transit-oriented development, and parking reform. It also modeled additional land use policies that in the medium- to long-term could achieve additional shift to modes like transit, walking and biking, and the resulting mode shift and GHG benefits. Overall, the full package of policies modeled (including both those similar to already-adopted policies plus additional ones) is estimated to result in around 5-6% reduction in total VMT and GHG emissions from the transportation sector in 2050.

Strategies To Achieve Vision 2035 Goals

The strategies listed here are intended to achieve the GHG reduction goals by maximizing transportation options. In order to achieve the Vision 2035 mode shift goal of doubling the current 9.6% of trips from transit, biking, and walking, these modes of transportation must be made more attractive and convenient options for Coloradans through improvements in frequency, speed, and reliability. We must ensure transit goes to the places people want to go when they want to go there. Despite record new

investments in transit and rail in the 2024 legislative session and important land use reform, current funding and policies are not sufficient to accomplish these new goals. To achieve a near doubling of transit ridership over the next ten years, regional and local ballot initiatives, such as ballot initiatives to fully fund front range passenger rail or to establish new local and regional transit agencies, will secure funding for additional transit and rail service. Innovative financing for train stations and mobility hubs that are commercial centers coupled with housing will also facilitate increased ridership. Vision 2035 recognizes that the success of these strategies will rely on contextual integration to fit the unique needs of urban, rural, and resort regions and communities.

TOD, Neighborhood Center, And Infill Strategies

These strategies are intended to provide more Coloradans with the choice to live near jobs and opportunities for transit, walking, and biking. The strategies include a focus on both maximizing the effectiveness of tools created in the 2024 legislative session, and additional actions and investments:

- Ensure successful implementation of key 2024 Land Use Laws, including HB24-1152 Accessory Dwelling Units, HB24-1313 Transit-Oriented Communities, and HB24-1304 Minimum Parking RequirementsImplement the statutory direction from SB24-174 for state agencies to provide incentives to local communities to make changes to their zoning code that support Neighborhood Centers and Transit-Oriented Communities, allowing residents to satisfy their day-to-day needs at nearby establishments at distances where active modes are attractive.
- Identify opportunities to build productive engagement and partnerships between local, regional, and state entities to increase the efficiency of the state's development patterns, such as the Strategic Growth planning process.
- Seek creative and innovative funding strategies for affordable housing and housing-related infrastructure in TODs.

- Seek creative and innovative funding strategies for mixed use mobility hubs that create community center services connecting people with housing and transit and rail.
- Increase support of TOD through implementation of CDOT's Greenhouse Gas Transportation Planning Standard.
- Prioritize policies that will eliminate barriers and promote more infill development, such as allowing point access blocks to be built, which will allow more family-sized units (3 bedrooms or more) and that allow for more units overall on small parcels than current regulations allow.
- Remove barriers for faith-based organizations, non-profit educational institutions, and school districts to provide housing their communities desperately need, especially close to transit and job centers.
- Reduce regulatory barriers to innovative housing strategies such as offsite construction to lower costs, reduce greenhouse gas emissions, and provide faster and more energy efficient alternatives to traditional construction.

Transit Strategies

In order to achieve an 83% increase in transit service to reach 145 million revenue miles by 2035, and for this increase to translate into supporting the state's GHG reduction goals, a focus on increasing transit-oriented housing, and also transit ridership through more frequent, reliable, and affordable statewide public transit is a cornerstone of this vision. This will require aggressive actions from transit agencies across the state, especially from RTD which serves more than 50 percent of the state's population. These strategies include:

- Improving personal safety, consumer experience, service levels, speed, reliability, and frequency of local and regional services
- Improving connections to existing and growing centers and better integrate other local and state transit networks
- Ensuring adequate staffing for the expanding transit system

- Redesigning service schedules to serve all trips instead of primarily focusing on commuters, expanding state-sponsored long-distance and interregional bus service and bus rapid transit (BRT)
- Completing planned transit service such as Northwest Rail and the N Line
- Expanding inter-city, regional and commuter rail service (service development plans are underway for Front Range Passenger Rail and Mountain Rail)
- Securing sustainable funding sources for new transit and rail services
- Investing in low- or zero-emission buses and trains, electric charging/fueling infrastructure, and maintenance facilities and staff to support them
- Assisting transit agencies with zero-emission transit planning activities to ensure that they are well prepared for the arrival of zero emission vehicles; and
- Align governance with best practices to achieve ridership goals

Bicycle, Sidewalk, And TDM Strategies

Strategies to achieve higher levels of biking and walking include:

- Investing in complete street infrastructure (pedestrian and bicycle improvements) in areas that improve safety and access such as:
  - first and last mile to transit stations
  - areas with dense residential and mixed-use development; and
  - connections between key destinations such as downtowns and neighborhood centers
- Investing in transportation demand management (TDM) programs and policies to support increased carpooling, ridesharing, and parking management
- Continue investing in rebates and tax credit programs to support e-bike adoption, per the 2023 EV Plan
- Building partnerships between state, local, and regional entities to identify shared mode shift goals and strategies
- Addressing operational and policy barriers within state and local entities that impede improvements to walking and biking

Conclusion

The State of Colorado plays an important role in providing the vision, the roadmap, and the data-informed plan on how to achieve our climate goals. But it will take new investments and actions at all levels of government in order to achieve the GHG emission reductions needed in the transportation sector to prevent catastrophic climate change and protect our Colorado way of life. This includes everything from local and regional transit agencies moving to electrify vehicles to providing new and improved services; it further includes local decisions on land use and convenient housing that increases ridership demand for transit and rail services. The state will continue to provide the policy framework, expand long distance bus services and intercity passenger rail services, and provide a regulatory and incentive environment conducive to these wide ranging goals. And we need the federal government to continue to provide the needed funding for electrification transition, expansion of transit and rail, and policies for cleaning up aviation and interstate travel. It's going to take all of us working together to achieve these bold goals.

While the state of Colorado has made an enormous amount of progress, there is still more work to do to support the creation of mobility hubs, transit-oriented and infill housing, and ensure our local and regional transit partners are set up for success.

Appendix

Background On GHG Policy Efforts To Date

The Polis administration has made bold progress on reducing GHG emissions economy wide through the following efforts.

2019 Statewide Climate Action Plan

Colorado has been a national leader in this space starting with HB19-1261, the Climate Action Plan to Reduce Pollution, which set statutory science-based targets of reducing economy-wide greenhouse gas pollution over time.

2021 Greenhouse Gas Pollution Reduction Roadmap

Governor Polis directed state agencies to develop a comprehensive Greenhouse Gas Pollution Reduction Roadmap to ensure that Colorado continues to make progress toward its GHG targets. The first roadmap was released in January 2021 – since then, more than 95% of the Near Term Actions have been initiated or completed.

2024 Greenhouse Gas Pollution Reduction Roadmap 2.0

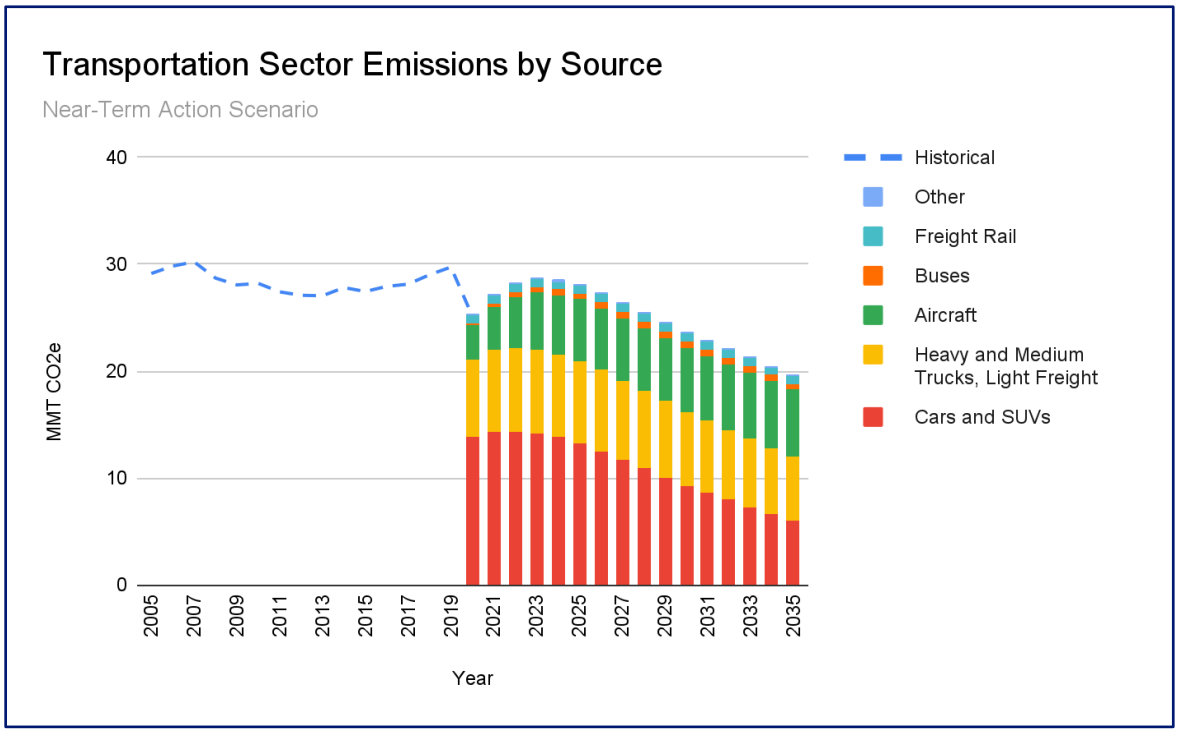
By December 2022, more than 95% of the Near Term Actions identified in the first Roadmap were complete, along with dozens of other policies and programs not even considered in the Roadmap. At the same time, new federal legislation – specifically, the Infrastructure Investment & Jobs Act (IIJA) in 2021 and the Inflation Reduction Act (IRA) in 2022 - provide billions of dollars in tax incentives and program funding to accelerate decarbonization in Colorado and across the country.

This update to the original Roadmap, referred to as Roadmap 2.0, has two major objectives. First, it updates and revises modeling from the initial Roadmap to estimate Colorado's emissions trajectory and evaluate progress toward the State's statutory emission reduction targets. Second, it lays out an ambitious set of new Near

Term Actions for the State to prioritize in 2024, 2025, and 2026, and estimates the additional emission reductions, and other benefits, that are likely to result from these Actions. Modeling for Roadmap 2.0 was conducted through Energy Innovation and RMI's *Energy Policy Simulator (EPS)* and shows the state is likely to meet its 2025 economy-wide GHG target by 2026, and 2030 target by 2031, assuming no new policy is adopted after 2026. The EPS is open-source and available for public use; it is also the tool used to inform Vision 2035.

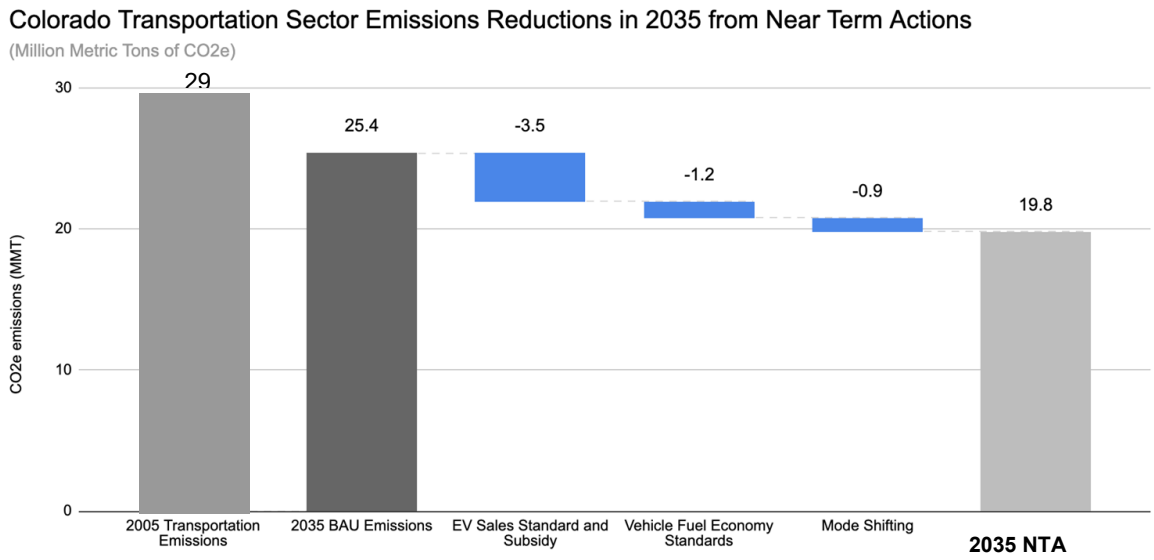
Emission Reduction Projections from Current Policies

Based on already-adopted policies, the graph below highlights significant reductions in the light-duty (cars and SUVs) segment of the transportation sector. While more reductions will be needed, additional reductions in the medium- and heavy-duty and aviation segments will also be needed.



The graph below demonstrates transportation emissions reductions through 2035 that are anticipated to occur based on existing and ongoing policy actions at the state and federal levels in the NTA scenario in the GHG Roadmap 2.0. Note that BAU stands for

"Business As Usual" scenario.



The tables below show forecasts for sales and fleet composition of battery electric and PHEV vehicles in Colorado through the coming decade.

Table I. Projected sales of battery electric and PHEV on-road vehicles in Colorado, EPS NTA Scenario

	2025	2030	2035
Cars and SUVs	20.6%	75%	88%
Buses	10.7%	28.8%	46.3%
MHD and Freight Trucks	10-11%	28-29%	46-47%

Table II. Projected fleet share of battery electric and PHEV on-road vehicles in Colorado, EPS NTA Scenario

	2025	2030	2035
Cars and SUVs	4.8%	23.5%	46.5%
Buses	2.6%	11.6%	22.5%
MHD and Freight Trucks	1-2%	7-10%	17-25%

Colorado Transportation Vision 2035 Methodologies

Transit And Multimodal Options Calculation Methodology

Table III. GHG Emissions Change in Year (MMT CO2e)

Scenario	2030	2040	2050
Proposed Rule Implementation: Travel Choices + Transit + Land Use	(1.70)	(1.20)	(0.70)
Alternative 1: Travel Choices	(1.43)	(0.88)	(0.44)
Alternative 2: Travel Choices + Transit	(1.62)	(1.09)	(0.59)

Many of the sub-goals are derived from analysis performed in the 2021 Cost Benefit Analysis (CBA) of CDOT's Greenhouse Gas Transportation Planning Standard. In the table above, see the scenario titled "Proposed Rule Implementation: Travel Choices + Transit + Land Use". The CBA for the GHG Rule estimated a reduction of 1.7 MMT by 2030 from a baseline year of 2019 through deployment of strategies including increased transit service combined with more efficient land use patterns, active transportation investments and other strategies. The CBA estimates were made over an 11 year period, which mirrors the timeframe of this Transportation Vision (11 years between 2024 and 2035).

The CBA scenario included the following metrics:

- **Transit**: an assumption that *"transit revenue-miles will increase by 6.0 percent per year between 2022 and 2030 (**69 percent total growth between 2019 and 2030**)*. Thus, the CBA projected that over an 11 year period (from 2019 to 2030) a 69% increase in transit revenue-miles was necessary to achieve 1.7 MMT of emission reductions (in association with other multimodal strategies).
- **Bicycles and sidewalks:** the Transportation Vision analysis calculated over the figures estimated in the CBA. For context, Colorado has 185,000 total statewide road lane miles, including 104,000 municipal road lane miles, 23,000 state highway road lane miles, and 58,000 county road lane miles:

- **Bicycle facilities.** The CBA included an estimate of building 2,500 miles of new bicycle lanes, and 2,500 miles of new separated bicycle facilities (including separated paths) This would represent:
    - a 116% increase over the estimated current level of bicycle facilities statewide (from 4,313 miles to 9,313 miles).
- An estimate of the existing statewide bicycle facility mileage was identified with the following methods:
    - Existing bicycle facilities in Denver metro region (DRCOG 2024 estimate) = 524 miles on-street, 1,646 miles off-street = 2,170 miles total
    - Share of Denver region population of state total population = 50.6%
    - Based on total Denver region miles, the total statewide miles is estimated at 4,313 miles.
- **Sidewalks.** The CBA stated that the Denver metro region has 18,800 miles of sidewalk, which leads to an estimate of 37,377 miles of sidewalk statewide. The CBA estimated 1,900 new or improved miles of sidewalk are added over 11 years, a 4.8% increase.

Notes on Calculating Sub-Goals for strategies that boost non-SUV modes of travel (transit, biking, and walking)

- **Transit sub-goal:** An 83% increase in transit revenue miles by 2035.This equals a 6% annual growth rate in transit service, a rate that reflects what has historically been achieved by transit agencies in some years. The goal matches CDOT's Policy Directive 14 goal.
- **Bicycle facilities goal:** A 81% increase in bicycle facilities statewide. These figures represent a proportional decrease from the figures identified in the CBA, given that the CBA identified 1.7 MMT of emission reductions, and the Vision 2035 Goal is 1.2 MMT.
- **Sidewalks goal:** A 3.4% statewide increase in sidewalks.These figures represent a proportional decrease from the figures identified in the CBA, given that the CBA identified 1.7 MMT of emission reductions, and the Vision 2035 Goal is 1.2 MMT.