

# Colorado EV Plan 2023: Interim Update - *DRAFT*

December 8, 2022 - Presentation to the Community Access Enterprise



**COLORADO**  
Department of Public  
Health & Environment



**COLORADO**  
Department of Transportation



**COLORADO**  
Energy Office



# Agenda

- 1. Introduction & Background**
- 2. 2023 EV Plan Overview**
  - Overview and timeline
  - Draft vision and goals
  - Draft actions
- 3. Questions and Comments**



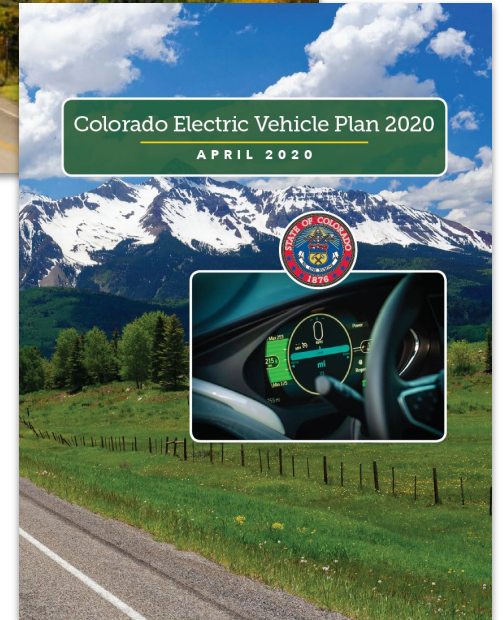
# Introduction and Background





# Colorado EV Plan Background

- In 2018, Colorado released its first electric vehicle (EV) plan setting forth goals, actions and strategies to develop EV fast-charging corridors across the state and establishing a target of 940,000 EVs on the road by 2030.
- In 2020, Colorado updated and released the Colorado Electric Vehicle Plan 2020, which added new goals and actions.
- State agencies are now in the process of developing the next EV Plan, to be released in 2023.
- The updated plan will also synthesize related plans, such as the Clean Truck Strategy, Transit Zero Emission Vehicle Roadmap, Enterprise 10 Year Plans, and National Electric Vehicle Infrastructure (NEVI) Plan (see Appendix slides)



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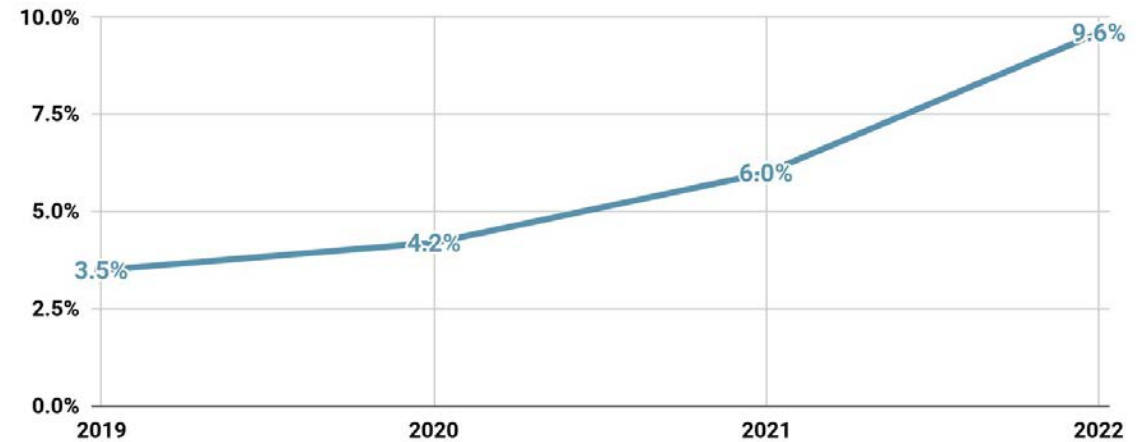




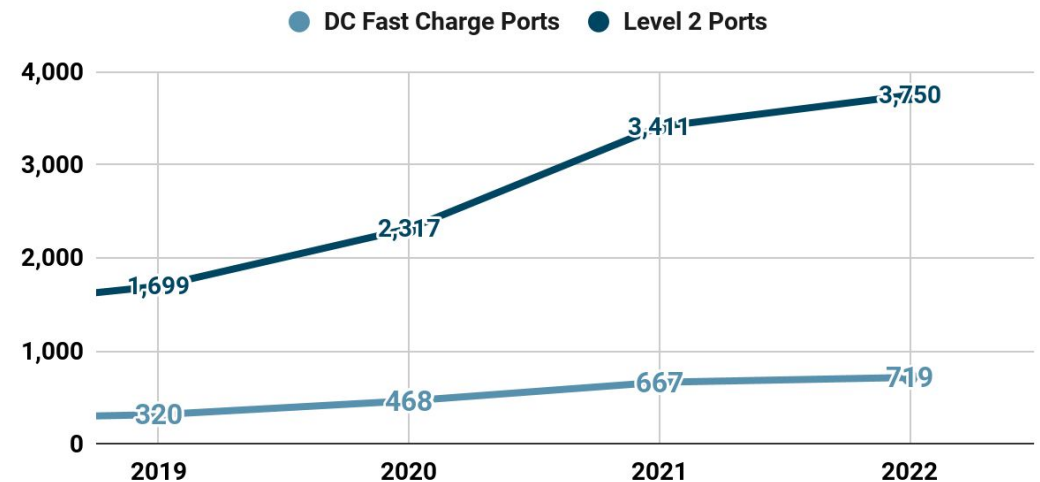
# Market Snapshot

- EV market share of new vehicles has nearly tripled since 2019 (data from CO Auto Dealers Association)
- EV percent of new vehicle sales is already above the Zero Emission Vehicle (ZEV) standard required for 2025.
- Installed public charging ports have more than doubled since 2019 (data from EValueCO dashboard)

EV Market Share (CADA)



Cumulative EV Charging Ports



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# Market Snapshot - EV Plan 2020 Targets

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Goal: 10,500 by June 30, 2020

Actual\*: 9,032 Annual Original EV Registrations as of July 1, 2020

Goal: 23,500 by June 30, 2022

Actual\*: 26,734 Annual Original EV Registrations as of July 1, 2022

[\\*Data from EValueCO](#)



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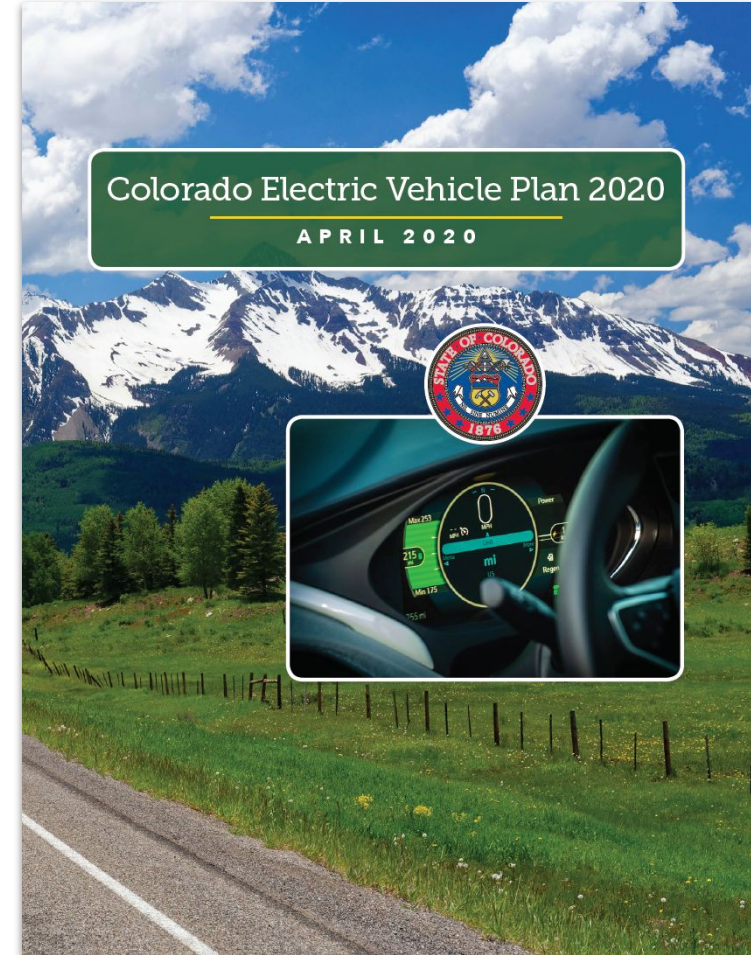
# Tracking Progress on the 2020 EV Plan

Actions and goals from EV Plan (All numbers are approximate):

- Not completed: ~ 9%
- Partially completed: ~31%
- Completed: ~60%

*Note: EV Plan 2020 released in April of 2020 at start of COVID*

*Plan Appendix will include details on all 2020 actions, their status, and outputs.*



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# Major Accomplishments

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Some major accomplishments from the 2020 EV Plan:

- Developed a Clean Truck Strategy
- Established the state take-home EV Policy
- Advanced Building Code Adoption Toolkit with EV infrastructure requirements
- Charge Ahead Colorado funded more than 2,000 charging stations statewide since the start of the program
- Launched EValueCO dashboard
- Launched EV CO education and awareness campaign
- Completed EV Equity Study and Tools, Low-Carbon Hydrogen Roadmap, Battery Storage Study



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# Additional progress

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Additional key electric vehicle milestones not originally included in 2020 plan:

- SB 21-260 and establishment of the three transportation electrification enterprises
- Passage of the Bipartisan Infrastructure Law (BIL) - National Electric Vehicle Infrastructure (NEVI) program, Clean School Bus program, etc.
- Passage of the Inflation Reduction Act (IRA) - new and extended tax credits
- SB 22-193 Air quality package - \$65M electric school bus and \$12M e-bike programs
- HB 22-1362 which includes requirements for EV readiness in new building energy codes
- SB 21-230 includes \$5 million in funding to install charging stations at state facilities



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# Additional progress

Progress on other transportation emissions reduction strategies (not electrification-focused):

- CDOT Greenhouse Gas Transportation Planning Standard which is helping shift transportation funding towards bus rapid transit and other multimodal projects.
- Programs to incentivize sustainable land use patterns such as HB 21-1271 and HB 22-1304 Strong Communities.
- SB 22-180 ozone season free transit grant program and expansion of Bustang service.
- Investments in safe walking and bicycling infrastructure (e.g. Revitalizing Main Streets).



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# 2023 EV Plan: Overview and Timeline



# EV Plan 2023: Context and Overview

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- EV Plan was last updated in early 2020; many actions from that plan have been completed, many others are still being implemented.
- Many new actions are underway based on developments since 2020, such as the passage of SB21-260, SB 22-193, the BIL, and the IRA.
- Because there are so many new actions underway, the EV Plan 2023 can serve as a resource on transportation electrification efforts at the state.
- In addition, time is needed to understand where there still may be gaps with the addition of all these new actions.
- With this plan, we are reaffirming and refocusing commitment to the core actions agencies are pursuing to accelerate EV adoption across sectors, plus limited addition of new goals and actions to continue progress.



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# EV Plan 2023: Draft Timeline and Input Opportunities

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- **Timeline**
  - December '22-early January '23: Stakeholder engagement and written comments
  - January: Agencies finalize draft of 2023 EV Plan
  - Winter 2023: Publish final 2023 EV Plan
- **Opportunities for input**
  - Dec. 8, 10am-12pm: Community Access Enterprise board meeting presentation
  - Dec. 12, 6pm-7:30pm: Transportation Equity Workshop
  - Dec. 15, 10am-12pm: Colorado Electric Vehicle Coalition meeting
  - Submit comments [via Google Form](#) or to [ceo\\_transportation@state.co.us](mailto:ceo_transportation@state.co.us) by December 31, 2022



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# 2023 EV Plan: Draft Vision and Goals





# Draft Vision Statement

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- **2023 Draft Vision Statement:** Large-scale transition of Colorado's transportation system to zero emission vehicles, which includes a goal of nearly 100% of light-duty vehicles being electric by 2050, 100% of medium- and heavy-duty vehicles being zero emissions, and increasing use of shared and small scale electrified modes like eBikes. This vision includes expanding access and benefits of this transition to all residents and businesses, particularly those in disproportionately impacted and rural communities.



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# Draft Goals - Light-duty vehicles and infrastructure

Goal	Objectives / Interim Targets	Category
#1: Increase adoption of EVs in the light duty sector to approximately 940,000 vehicles by 2030		(2020 EV Plan)
	Increase adoption of EVs in the light-duty vehicle sector to 65,000 new vehicle sales in 2025, which is over 25% of new vehicle sales and what is typically considered a tipping point in the diffusion of new technologies.	
	Increase adoption of EVs in the light-duty vehicle sector to over 65% of new vehicle sales by 2030; aligns with 940,000 by 2030 goal.	
	Reach nearly 100% zero emission light-duty vehicles on the road by 2050.	
#2: Increase EV infrastructure build out to support the state's 2030 light-duty vehicle goals		
	Collaborate with state agencies, local governments, utilities, and private companies to reach 1,700 DCFC and 5,800 public Level 2 installed or awarded charging stations by 2025, including 1,000 state-supported stations each year through 2025.	
	Coordinate with other state agencies, the Colorado Scenic & Historic Byways Commission, local governments, and individual site hosts to increase the number of Colorado Scenic & Historic Byways classified as electrified byways from 3 in FY 2020 to 26 by the end of FY 2025.	



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= Continuing from  
2020 or other plan



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## Draft Goals - Light-duty vehicles and infrastructure

Goal	Objectives / Interim Targets	Category
#3: State government agencies will meet their directives from EO D 2019 016 Amending and Replacing EO D 2018 026 Concerning the Green of State Government related to EVs		(2020 EV Plan)
	Reduce greenhouse gas emissions from State vehicles by at least 15% by the end of FY 2024-25 over the FY 2014-15 baseline.	(2022 Greening Gov EO)
	Reduce greenhouse gas emissions from State vehicles categorized as special use by at least 7.5% by the end of FY 2024-25 over the FY 2014-15 baseline.	(2022 Greening Gov EO)



## Draft Goals - Electric Mobility

Goal	Objectives / Interim Targets	Category
#4: Shift trips to shared and small scale electrified modes like eBikes where feasible		
	Support deployment of over 10,000 eBikes to low and moderate income Coloradans by 2025	
	Support 10 community-driven electric mobility projects by 2025	



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2020 or other plan



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# Draft Goals - Medium / heavy duty vehicles and infrastructure

Goal	Objectives / Interim Targets	Category
#5:	Increase adoption of M/HD ZEVs to at least 30% of new sales by 2030, and 100% of sales by 2050.	(Clean Truck Strategy)
	<b>ZEVs on the road:</b> Increase adoption of zero-emission M/HD vehicles to 35,000 vehicles on the road by 2030.	(Clean Truck Strategy)
	<b>Accelerate fleet turnover:</b> For M/HD vehicles that do not have viable near-term ZEV product offerings, state agencies will work with partners to facilitate disposal of the oldest vehicles and purchase of replacement vehicles with newer emissions technology. This includes aiming for new trucks sold to produce 90% less NOx emissions than current standards starting in 2027.	(Clean Truck Strategy)
	<b>Transit fleet:</b> Convert the public transit fleets across the state to 100% zero-emission vehicles no later than 2050, with an interim target of at least 1,000 ZEV transit vehicles by 2030.	(Clean Truck Strategy)
	<b>School buses:</b> Support the adoption of 2,000 electric school buses by 2027 and a longer term goal to achieve 100% zero-emission buses on the road by 2035, with a focus on adoption in school districts in DI communities	(Clean Truck Strategy)
	<b>State fleet:</b> Establish a goal and transition plan for state-owned fleets to achieve 100% zero-emission M/HD fleet vehicle purchases where technically feasible by no later than 2040.	(Clean Truck Strategy)
	State agencies will plan for and support public, utility, public-private partnership and private sector funding for sufficient M/HD charging and hydrogen fueling infrastructure to serve identified clean truck and bus adoption goals.	(Clean Truck Strategy)



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2020 or other plan



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# Draft Goals - Cross-cutting

Goal	Objectives / Interim Targets	Category
<b>#6: State agencies will develop equity-centered programming by engaging with disproportionately-impacted communities and community members in program design and implementation, and increase investment in these communities.</b>		
	Ensure all transportation electrification grant programs include enhanced incentives, scoring, and/or other equity components for disproportionately impacted communities and low income individuals.	
	The state will work with its partners and will leverage CDPHE, CEO, CDOT and CDLE equity resources to prioritize clean truck and bus deployment in ways that provide direct benefits to disproportionately impacted communities and support a just transition for workers in the medium- and heavy-duty vehicle sector.	<i>(Clean Truck Strategy)</i>
<b>#7: State agencies will proactively work to support a broad and resilient ZEV workforce that ensures transportation system safety and reliability while offering job opportunities to all Coloradans.</b>		
	State agencies will establish targets based on the upcoming ZEV workforce needs analysis, such as a number of community colleges/technical schools offering ZEV training or a number of workers trained.	



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# 2023 EV Plan: Draft Actions





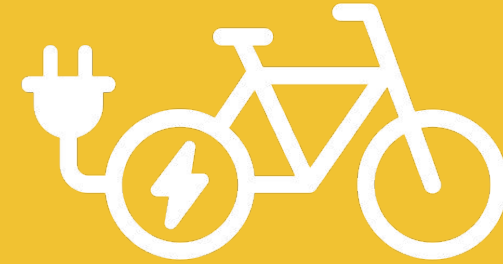
# Draft Actions

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## Light Duty Vehicles and Infrastructure



## Electric Mobility *(eBikes and other shared modes)*



## Medium / Heavy Duty Vehicles and Infrastructure



## Cross-cutting

- Programming and Funding
- Equity and Engagement
- Policy, Planning, and Data
- Workforce Development

*Icons courtesy of the Noun Project*



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# Light-Duty Vehicles / Infrastructure - vehicle standards

- For post model-year 2025 light-duty vehicle standards, propose to the AQCC to extend and expand Colorado's clean car standard through 2032
  - The extended clean car policy will increase the options and model choices that Coloradans have in the market.
  - This approach would be in line with what many manufacturers, including Ford and GM, have committed to, as well as with Colorado's 940,000 EVs by 2030 goal.
  - Colorado's robust growth in EV market share and complementary programs and policies makes it possible to consider this approach, and continue progress from the ZEV standard.
  - This approach maximizes choices for consumers by ensuring manufacturers will make their EV models available in CO, while avoiding adopting a ban on ICE vehicles; this is the 'Colorado Way'
  - Pursuing all flexibilities, including early action credits, can help make the standard workable for Colorado. This also includes new environmental justice credits which can leverage state funds for equity-focused programs.
  - While there are staff capacity constraints, we will explore feasibility of 2023 adoption to avoid interim years where manufacturers may not bring vehicles to CO



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# Light-Duty Vehicles / Infrastructure - continued

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- Policy
  - Pursue EV readiness requirements for new multi-family and commercial construction.
  - Consider extension of the light-duty ZEV tax credit through at least 2027, and consider implementation of a used EV tax credit.
- Launch new programs:
  - Vehicle Exchange Colorado program to help income-qualified Coloradans retire and replace an older, high-emitting vehicle.
  - Residential Charging Infrastructure program to help Coloradans install EV charging at home.
  - Clean Fleet TNC incentive program.
- Continue existing programs, such as the current EV tax credit, and expand charging infrastructure funding programs (see Appendix for summary of all programs):
  - Charge Ahead Colorado.
  - DCFC Plazas.





# Medium / Heavy Duty (M/HD) Vehicles/Infrastructure

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- Key near-term strategies:
  - Propose adoption of the Advanced Clean Truck and Low NOx Omnibus rules to the AQCC.
  - Explore options to modify the specific ownership tax and sales and use tax to make tax payments for ZEV MHD equal to those for ICE M/HD vehicles.
  - Implement new programs, including M/HD vehicle incentive program, charging incentive program, and a new school bus grant program, and encourage uptake of federal commercial vehicle tax credit created by IRA.
- All strategies and actions in the Clean Truck Strategy, Transit ZEV Roadmap, and Clean Fleet Enterprise can be found in the Appendix slides



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# Electric mobility (eBikes and other shared modes)

- Launch the Community-Accelerated Mobility Program (CAMP) to support community-driven electric mobility projects.
- Launch income-qualified statewide eBike rebate program funded with \$12M from SB 22-193.
- Continue Can Do Colorado eBike grant program funded by SB 22-193.
- Launch e-cargo bike pilot.
- Consider adoption of a statewide eBike tax credit.



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# Cross-cutting - Programming and Funding

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- Leverage new federal programs from the Bipartisan Infrastructure Law (BIL) and Inflation Reduction Act (IRA) to expand the impact of state investments and accelerate electric mobility adoption.
- **Continue to support local and state government leading by example:**
  - Ensure buildout of charging infrastructure in state facilities funded through SB 230.
  - Update Greening Government Executive Order.
  - Providing EV readiness planning grants to local jurisdictions.



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# Cross-cutting - Equity and Engagement

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- Integrate equity components (e.g. enhanced incentives for disproportionately impacted communities, income qualified individuals, or disadvantaged business enterprises) into all relevant programs.
- Deepen equity-centered engagement through stakeholder engagement vendor and a new EV Equity Recharge coach.
- **Continue:**
  - EV CO awareness campaign.
  - Continue Recharge coaches program to support access to grant programs.
  - Colorado Electric Vehicle Coalition and subcommittees.
  - Expanding translated content and access to interpretation at meetings.
  - EV education and awareness grants.
  - Hosting EV Equity Dashboard and Prioritization Tool.



# Cross-cutting - Policy, Planning, and Data

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- **Policy:**
  - Support expanded investments in M/HD vehicles and charging, light-duty EV charging, and other key programs in next utility transportation electrification plans.
  - Pursue federal funding for regional hydrogen hub.
- **Planning and Data:**
  - Launch all Enterprise dashboards to track and report on program spending and other metrics.
  - Continue hosting EValueCO Dashboard.
  - Host trainings for stakeholders to learn how to use the EV equity tools and update dashboard.



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# Cross-cutting - Workforce Development

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- Conduct workforce needs analysis study to understand the scale and type of jobs needed to meet the state's ZEV goals, and gaps in the workforce training system.
- Support community colleges to launch first EV automotive programs, and pursue making EV automotive training available at every community college.
- Provide grants to support ZEV workforce development.
- Increase engagement with dealerships to support program implementation and partnerships, such as federal tax credits and the Vehicle Exchange Colorado program.



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# Questions or Comments?

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# Thank You!

ceo\_transportation@state.co.us

Written comments: [Google Form](#) - by 12/31/2022



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# APPENDIX

Additional detail from related plans

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# Clean Truck Strategy



## 2022 Colorado Clean Truck Strategy



# Clean Truck Strategy - Procurement Policies and Programs

Actions	Timing
Analyze the M/HD state fleet to identify the best opportunities for conversion to ZEVs.	Near term
Develop plans for outreach, education, and technical assistance to support public and private fleet transitions to ZEVs.	Near term
Implementation of outreach, education and technical assistance strategies to support public and private fleet transitions to ZEVs.	Medium term
Propose updates to the next Greening of State Government Executive Order that incorporate state fleet goals informed by the analysis of the state M/HD fleet.	Medium term
Evaluate options to streamline procurement and lower costs for public and private fleets.	Medium term
Develop a one-stop shop clean truck website for Colorado fleets.	Medium term

[Colorado Clean Truck Strategy](#)



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# Clean Truck Strategy - Vehicle incentives and financing

Actions	Timing
Implement an electric school bus grant program and support districts in leveraging federal funds.	Near term
Develop a comprehensive set of program designs for rebates, vouchers and/or grants for zero-emission trucks.	Near term
Explore additional strategies to support the retirement of the oldest, most polluting diesel vehicles on the road, including future legislative action and grant programs.	Near term
Explore options to update and extend tax credits for zero-emission trucks and to consider modifications to the specific ownership tax and sales and use tax.	Medium term
Evaluate options to reduce diesel idling, including incentives for vehicles with high-idling profiles, and for idle-free zones along with other measures.	Medium term
Investigate and recommend financing options for zero-emission M/HD vehicles and fueling infrastructure.	Medium term
Evaluate the level of funding estimated to be needed to support the transition to ZEVs and assess the need for and feasibility of additional funding sources.	Medium term

[Colorado Clean Truck Strategy](#)



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# Clean Truck Strategy - Infrastructure Planning and Investments

Actions	Timing
Conduct a planning study for M/HD charging that identifies the quantity, type and locations of charging infrastructure needed to support ZEV truck adoption goals.	Near term
Develop a comprehensive set of incentive offerings for depot and public truck charging, leveraging funding from the federal government and state enterprises.	Near term
Pursue actions in the "Opportunities for Low-Carbon Hydrogen in Colorado: A Roadmap" related to the medium- and heavy-duty transportation sector.	Near term
Work to evaluate and develop case studies for early M/HD charging installations to understand and address barriers to permitting for charging infrastructure.	Near term
Coordinate with neighboring states to share best practices and encourage investments that support an interstate M/HD charging and hydrogen fueling network.	Medium term
Research options to support truck stop electrification, with a focus on electrifying facilities in disproportionately impacted communities.	Medium term
Research options to support loading dock electrification, with a focus on electrifying facilities in disproportionately impacted communities.	Medium term

[Colorado Clean Truck Strategy](#)



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# Clean Truck Strategy - Utility + Workforce

Actions	Timing
<b>UTILITY STRATEGIES</b>	
Engage in development of the next transportation electrification plans (TEPs) to support inclusion of a significant focus on M/HD fleet investments.	<b>Near term</b>
Convene utilities for statewide collaboration on charging planning and implementation for M/HD ZEVs, including in conjunction with roadway projects.	<b>Medium term</b>
Convene a commercial EV rates workshop with utilities and fleets to strive to enable consistent and affordable rates to charge statewide.	<b>Medium term</b>
<b>WORKFORCE DEVELOPMENT PROGRAMS</b>	
Conduct a workforce needs analysis to identify gaps, plan programs and strive to ensure supply of workers matches demand as the ZEV market grows.	<b>Near term</b>
Develop and implement funding partnerships to support ZEV mechanic training programs.	<b>Medium term</b>
Support apprenticeships, internships, scholarships and other strategies to educate and recruit students for future careers in the M/HD ZEV sector.	<b>Medium term</b>
Develop programming alongside existing light-duty dealership efforts to engage and educate M/HD vehicle dealers in the state.	<b>Medium term</b>

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# Clean Truck Strategy - Regulatory Actions

Actions	Timing
Propose adoption of the Advanced Clean Truck and Low NOx Omnibus rules to the Colorado Air Quality Control Commission (AQCC).	Near term
Establish a working group to collaborate with statewide transit stakeholders regarding potential future adoption of a clean transit rule.	Near term
Investigate options to ensure clean truck adoption by public fleets and large private fleets, in alignment with the Advanced Clean Truck rule where technically feasible.	Near term

[Colorado Clean Truck Strategy](#)



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# Clean Truck Strategy - Additional Opportunities

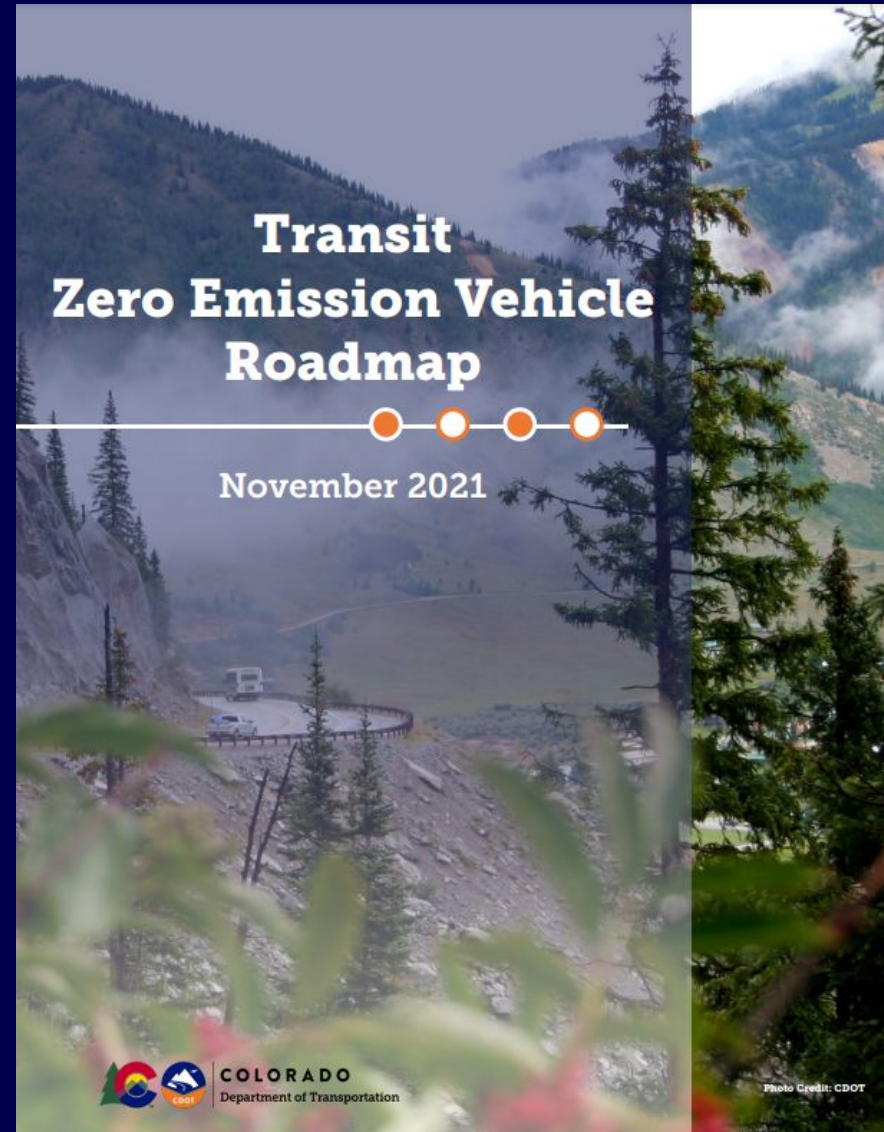
Actions	Timing
Conduct exploratory work on potential indirect source standards to reduce air pollution from facilities that generate significant M/HD vehicle traffic (any potential regulatory actions would be a medium-term strategy).	Near term
Update the state freight plan including investigation of truck travel strategies that enhance operations, reduce congestion and reduce subsequent greenhouse gas emissions.	Near term
Investigate the potential benefits and feasibility of innovative local programs that reduce emissions from deliveries.	Medium term
Track and report the carbon intensity of transportation fuels used in Colorado.	Medium term
Analyze the relative costs and benefits of different approaches to battery reuse, remanufacturing, recycling and disposal.	Medium term

[Colorado Clean Truck Strategy](#)



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# Transit ZEV Roadmap





# Transit ZEV Roadmap - Policy

[Transit Zero Emission Vehicle Roadmap](#)

Actions	Timing
Integrate Transit ZEV Roadmap strategies into the next revision of the Colorado EV Plan	Near-Term (2021-2024)
Develop a ZEV Transition Plan for CDOT operated transit services (e.g. Bustang, Outrider, Snowstang) to demonstrate CDOT's commitment to ZEV goals and to lead by example	Near-Term (2021-2024)
Integrate recommendations from CEO's EV Equity Study into transit electrification grants, programs, and initiatives	Near-Term (2021-2024)
Explore opportunities to better define the process for tracking RNG and to substantiate the use of RNG as a transit ZEV option	Near-Term (2021-2024)
Evaluate opportunities and methodologies for integrating environmental impact analyses to capture the environmental and societal costs of tailpipe emissions in procurement processes	Near-Term (2021-2024)
Serve as a facilitator or convenor to bring together transit agencies and utilities to actively address known ZEV transition challenges and overcome barriers to transit ZEV fleet transitions	Near-Term (2021-2024)
Continue coordinating with partner state agencies to develop a forum for transit agencies and utilities to discuss ZEV transit programs and initiatives to avoid programmatic conflicts and/or competing goals and objectives. Coordination could include formal workshops and/or meetings to discuss topics such as electric rates, resource planning, fleet/facilities planning, etc.	Mid-Term (2025-2027)
Monitor progress of the Transit ZEV Roadmap goals and update as needed to achieve 2050 goals.	Long-Term (2028-2030)
Update the Transit ZEV Roadmap transition financial model using Colorado-specific experience and recalculate funding requirements to reach the 2050 goal.	Long-Term (2028-2030)

# Transit ZEV Roadmap - Planning & Technical Support

Actions	Timing
Define a standard approach for measuring GHG emissions and reductions for transit agencies that is consistent with the Transit Emission Dashboard methodology	Near-Term (2021-2024)
Hire staff and/or contract with consultants to provide on-call technical assistance to transit agencies to support ZEV fleet transition planning	Near-Term (2021-2024)
Identify opportunities to streamline data collection for the entire Colorado transit fleet to efficiently track progress toward the statewide ZEV transit and related GHG emission reduction goals, building on the CEVC Transit Subgroup Zero-Emission Bus Tracking Sheet and COTRAMS database	Near-Term (2021-2024)
Integrate the findings and data from the Transit ZEV Roadmap into the Group Transit Asset Management Plan update	Near-Term (2021-2024)
Coordinate with transit agencies to better understand options and strategies for transitioning contractor-owned facilities to support ZEVs	Near-Term (2021-2024)
Track storage location of transit vehicles in COTRAMS to aid in ZEV replacement feasibility analysis and transition planning	Near-Term (2021-2024)

[Transit Zero Emission Vehicle Roadmap](#)



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# Transit ZEV Roadmap - Information Sharing & Research

Actions	Timing
Create an informal transit-focused virtual peer exchange network to ask questions, share information and/or lessons learned, and facilitate ongoing conversations among transit agencies	Near-Term (2021-2024)
Engage existing Colorado research groups and programs to support and develop opportunities for transit agencies to test/evaluate ZEVs and research transit ZEV-related technologies such as battery recycling and second use cases, transit and utility business models, smart charging solutions, etc.	Near-Term (2021-2024)
Convene a rural transit working group, including electric co-ops, to define barriers and potential solutions for rural transit agencies	Near-Term (2021-2024)
Convene interested transit agency and hydrogen fuel providers to identify potential pilot project opportunities and discuss potential barriers to widespread fleet adoption in Colorado	Near-Term (2021-2024)
Collaborate with the CEO and CDPHE to assess potential benefits, costs, and timing for adoption of the California Innovative Clean Transit Rule (ICTR) in Colorado	Near-Term (2021-2024)
Integrate Transit ZEV Roadmap data and recommendations into Clean Transit Enterprise 10 Year Plan	Near-Term (2021-2024)
Track real-world transit vehicle purchase and infrastructure upgrade costs to refine assumptions and inputs to the Transit ZEV Roadmap transition financial model and conduct future scenario analyses	Near-Term (2021-2024)
Monitor and document real-world ZEV operational costs in Colorado to inform future planning efforts	Near-Term (2021-2024)
Monitor the development of the US Department of Energy Livewire Data Platform and encourage transit agencies to upload data to the platform to further national ZEV information sharing	Mid-Term (2025-2027)





# Transit ZEV Roadmap - Funding

[Transit Zero Emission Vehicle Roadmap](#)

Actions	Timing
Evaluate strategies for vehicle leasing options, third-party financing, battery leases, utility on-bill financing, and other funding mechanisms and opportunities to use Clean Transit Enterprise funds	Near-Term (2021-2024)
Establish a permanent Statewide Local Match Fund to buy down the transit agency local match for the purchase of transit ZEVs to be equal to that of the comparable internal combustion engine vehicle option. Evaluate the potential use of CTE funds the Local Match Fund, as well as potential match funding strategies	Near-Term (2021-2024)
Establish and maintain a state-approved master purchasing agreement for zero emission vans, cutaways, and buses to streamline transit agency procurement of transit ZEVs	Near-Term (2021-2024)
Develop flexible funding programs to support ongoing maintenance and operations costs and long-term operations of transit ZEVs.	Near-Term (2021-2024)
Incentivize and promote private sector support for ZEV transit transition, including demonstration projects, vehicle testing, and/or short-term proof of concept lease options	Near-Term (2021-2024)
Assess opportunities to support the replacement of vehicles with ZEVs prior to the end of their useful life to expedite ZEV transition	Near-Term (2021-2024)
Consider establishing a more flexible vehicle replacement policy for zero-emission buses for so long as available vehicle technologies do not align with the typical 1-to-1 vehicle replacement ratio	Near-Term (2021-2024)



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# Transit ZEV Roadmap - Funding (continued)

Actions	Timing
Develop a strategy for updating DTR's master purchasing agreement in a timely manner as additional transit ZEV options emerge.	<b>Mid-Term (2025-2027)</b>
Reassess available state funding sources to ensure that funding resources efficiently support and effectively incentivize the transit ZEV transition.	<b>Mid-Term (2025-2027)</b>
Ensure long-term and consistent funding options for ZEV capital investments in support of facilities and maintenance equipment (e.g., larger lifts to accommodate heavier ZEVs).	<b>Mid-Term (2025-2027)</b>
Develop a strategy and funding plan to support ZEV fleet replacement.	<b>Mid-Term (2025-2027)</b>

[Transit Zero Emission Vehicle Roadmap](#)



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# Transit ZEV Roadmap - Education & Training

Actions	Timing
Develop Colorado-specific informational materials about transit ZEV challenges, opportunities, and benefits in coordination with existing transit and ZEV organizations to educate transit agency staff and decision-makers	Near-Term (2021-2024)
Partner with CASTA to provide OEM-neutral training and/or educational sessions for transit operators and maintenance staff early in the ZEV transition process	Near-Term (2021-2024)
Collaborate with CASTA to offer training on use of the Transit ZEV Roadmap financial modeling tool to transit agencies so that they can run their own fleet-specific analyses and effectively communicate the results to decision-makers and the public.	Near-Term (2021-2024)

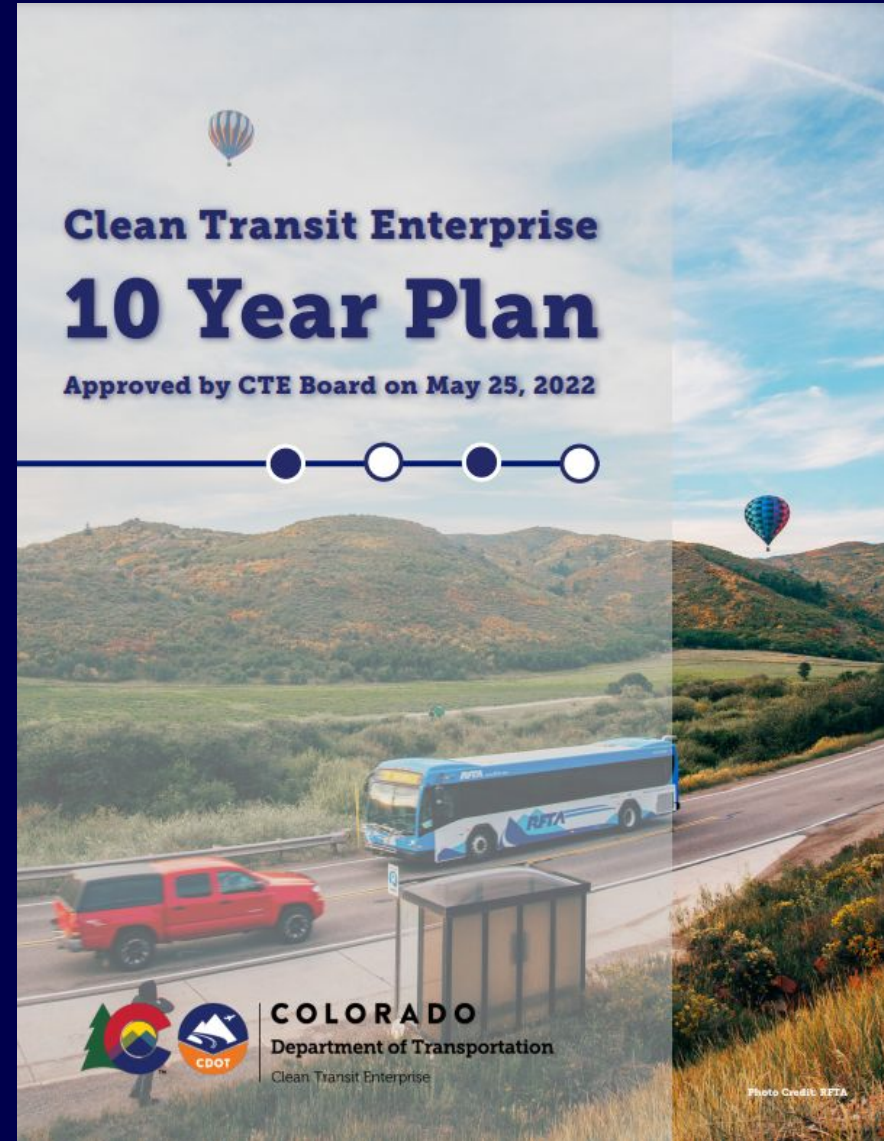
[Transit Zero Emission Vehicle Roadmap](#)



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# Clean Transit Enterprise 10 Year Plan



# Clean Transit Enterprise - Business Purpose

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The Clean Transit Enterprise is created to serve the primary business purpose of reducing and mitigating the adverse environmental and health impacts of air pollution and greenhouse gas emissions produced by retail deliveries by:

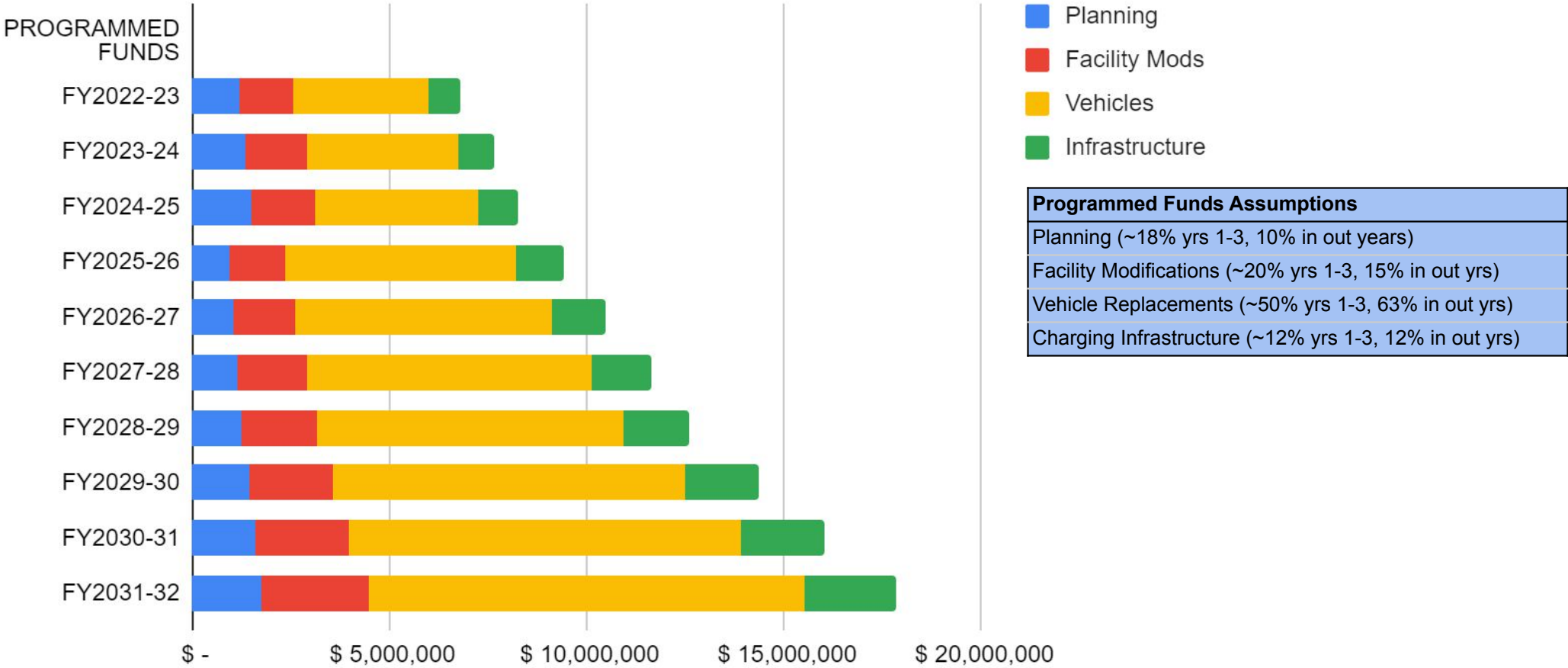
- Supporting the replacement of existing gasoline and diesel public transit vehicles with electric motor vehicles,
- Providing the associated recharging infrastructure for electric transit fleet motor vehicles,
- Supporting facility modifications that allow for the safe operation and maintenance of electric transit motor vehicles,
- Funding planning studies that enable transit agencies to plan for transit vehicle electrification



DRAFT

# Clean Transit Enterprise - 10 Year Plan Funding

CTE Programmed Funds Estimate by Project Category



DRAFT





# Clean Transit Enterprise - Funding Programs

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## Vehicle Acquisition Programs

- Grants to transit agencies to support acquisition programs based on offsetting the incremental cost difference between a ZEV and its equivalent ZEV option
  - Eligible ZEVs include: BEVs, PHEVs, and FCEVs
  - CNG vehicles eligible in circumstances where no EV option is practically available and the vehicle will be fueled with at least 90% recovered methane (RNG)
- *Future Options: Potential loan and/or rebate programs*

## Charging/Fueling Infrastructure Programs

- Grants to support the purchase and installation of charging and/or fueling infrastructure to support current and future ZEV deployments
- *Future Options: Potential loan and/or rebate programs; more detailed Hydrogen refueling programs based upon market development in Colorado*



# Clean Transit Enterprise - Funding Programs (cont.)

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## Planning Programs

- Grants to transit agencies to support ZEV planning activities
- On-call planning support
- *Future Options: to be developed based on emerging best practices and stakeholder feedback*

## Facility Modification Programs

- Grants to transit agencies to support facility modifications and upgrades necessary to support safe, efficient and scalable ZEV transition
- *Future Options: Potential loan offerings*



DRAFT

# Community Access Enterprise 10 Year Plan





# Ten-Year Plan Recommendations

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## Existing Programs

- Charge Ahead Colorado
- Can Do Colorado (ebikes)
- DCFC (fast charging) corridors and plazas
- Research + technical support + stakeholder engagement

## New Programs

- Community Accelerated Mobility Projects (CAMP) - Technical Readiness and Implementation
- Vehicle Investment for Sustainable Transportation Access (VISTA) - high-emitting vehicle replacement
- Fleet Infrastructure Resources (FIR) - medium-/heavy-duty charging infrastructure
- *Sustainable Hydrogen Investments for a New Economy (SHINE)*
- *Service Panel Upgrade + Residential Resources (SPURR)*



# New Programs in FY23

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- Community Accelerated Mobility Projects (CAMP) - Technical Readiness
  - Targeted Outcomes: Develop mobility solutions that meet needs specific to the local communities including flexible funding that includes electric carshare, electric vanpool, community eBike share, community charging infrastructure, and others.
- Vehicle Exchange Colorado - high-emitting vehicle replacement
  - Targeted Outcomes: Remove high-emitting vehicles from the road to be replaced by one of several low-emitting mobility options, including battery electric vehicles, transit, electric alternative mobility, and others.



# New Programs in FY23

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- Fleet Infrastructure Resources (FIR) - medium-/heavy-duty charging infrastructure
  - Targeted Outcomes: Provide support to fleet owners seeking to install EV charging infrastructure to support medium- and heavy- duty fleet operations
- Can Do Colorado (ebike)
  - Targeted Outcomes: Develop commercial cargo bike pilot program



# Community Access Enterprise Creation

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- Created by Colorado Legislature through Senate Bill (SB) 21-260 and housed within the Colorado Energy Office (CEO)
- Business purpose: support the widespread adoption of electric vehicles, including vehicles that originally were powered exclusively by internal combustion engines but have been converted into electric vehicles, in an equitable manner by:
  - Funding the construction of charging infrastructure throughout the state
  - Incentivizing the acquisition and use of electric motor vehicles and electric alternatives to motor vehicles in communities, including but not limited to disproportionately impacted communities, and by owners of older, less fuel efficient, and higher polluting vehicles





# Ten-Year Plan Development



## TEN-YEAR PLAN

COMMUNITY ACCESS ENTERPRISE

MAY 2022



**COLORADO**  
Energy Office

- Five stakeholder meetings held in March 2022 plus written and oral comments, survey
- Outlines how the enterprise will execute its business purpose FY2022-2023 through FY2031-2032 and estimate the amount of funding needed to implement
- Plan is flexible in order to be responsive to rapidly changing EV market, community needs, complimentary funding sources and more
- CAE Board voted unanimously to approve the plan on May 12, 2022
- Plan is posted to CAE website, executive summary in Spanish

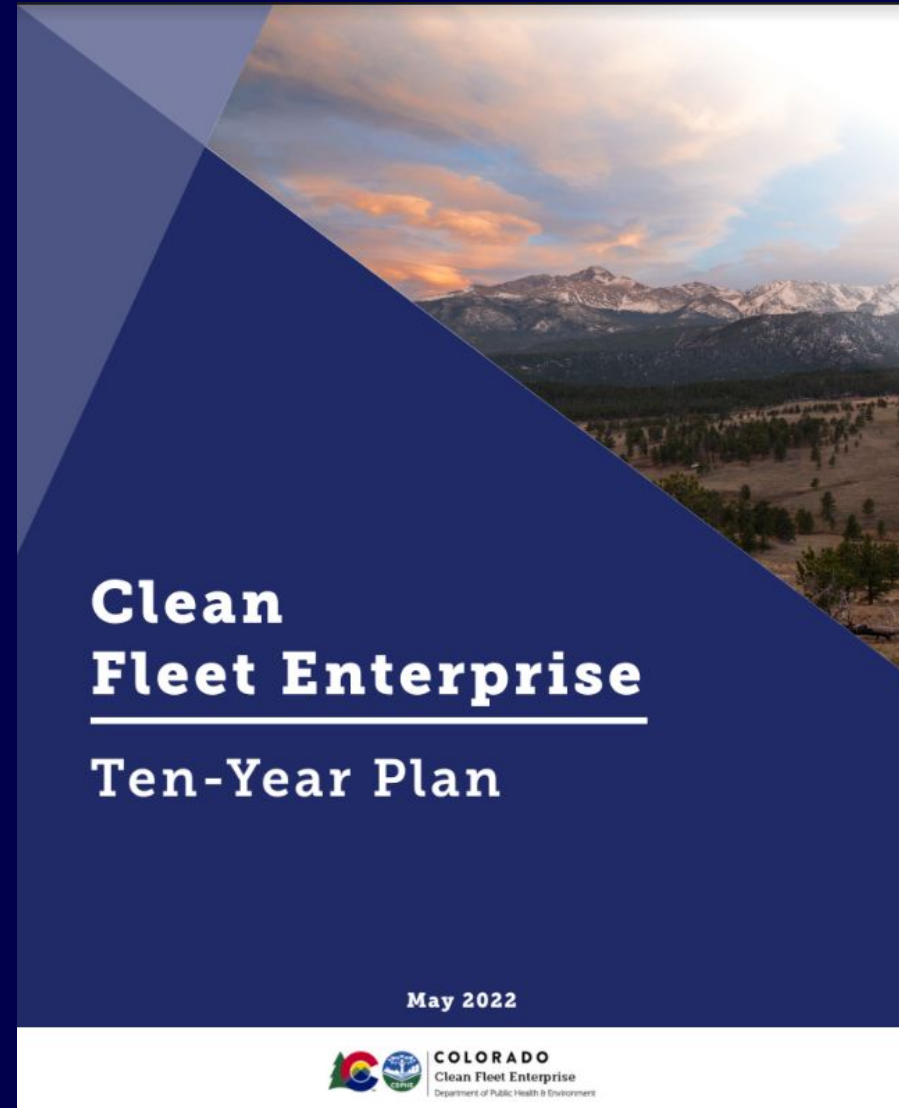


# FY23 CAE Program Funding

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eBike Programming	\$240,000
DCFC Plazas/Corridors	\$2,610,000
Charge Ahead Colorado	\$6,150,000
Research + Technical Support + Stakeholder Engagement	\$240,000
FIR - M/HD charging infrastructure	\$1,700,000
CAMP - Technical Readiness	\$240,000
VISTA - High-Emitting Vehicle Replacement	\$596,000
<b>TOTAL</b>	<b>\$11,776,000</b>

# Clean Fleet Enterprise 10 Year Plan



# Clean Fleet Enterprise Business Purpose

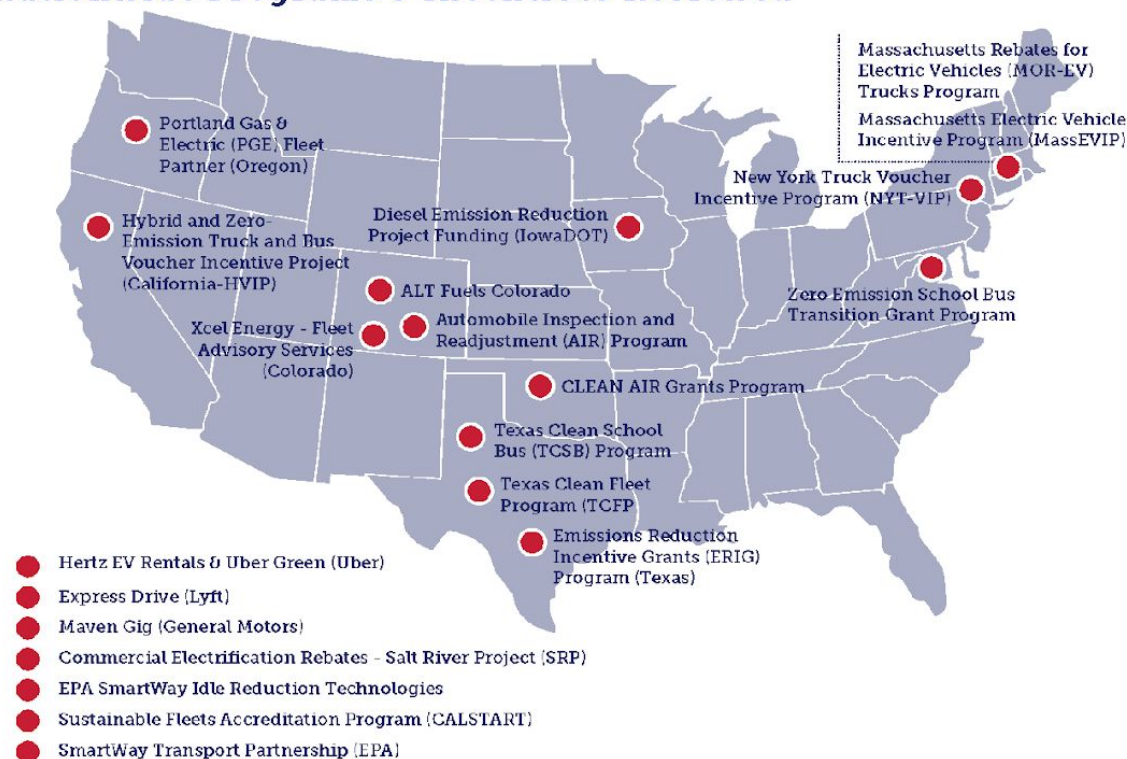
## Statutory Goals of the Clean Fleet Enterprise

- Reduce health disparities in disproportionately impacted communities (DICs)
- Mitigate environmental and health impacts of air pollution and greenhouse gas emissions from motor vehicles being used to provide transportation network company (TNC) rides and retail deliveries
- Help fleets finance electric, hydrogen, compressed natural gas from recovered methane, and other cleaner technology vehicle acquisitions
- Set fees to finance efforts

# Background & Literature Review Highlights

- 1 Clean Fleet Vehicle Purchase Programs
- 2 School Bus Programs & Incentives
- 3 Freight Idling Reduction Programs
- 4 TNC Fleet Programs & Incentives
- 5 Innovative Diesel and Gasoline Inspection & Maintenance Programs
- 6 Clean Transportation Workforce Programs
- 7 Clean Fleet Planning Programs

## Nationwide Programs & Incentives Reviewed





# Recommended Clean Fleet Enterprise Portfolios



## Clean Fleet Vehicle & Technology Project Portfolio

### Objective

To incentivize, support, and accelerate the adoption of clean fleet vehicles and technology.

### Description

The Clean Fleet Vehicle & Technology Project Portfolio will initially operate as a grant program. Potential project types include clean vehicle purchases/leases, clean vehicle pilot projects for fleets to experiment with zero emission vehicle technologies, and projects to install idle reduction technologies on fleet vehicles that do not have a viable clean technology vehicle option.



## Clean Fleet TNC Portfolio

### Objective

To complement existing TNC fleet sustainability goals and programs to incentivize, support, and accelerate the adoption of clean TNC fleet vehicles and increase the percentage of prearranged rides completed in ZEVs.

### Description

An initial TNC Ride Incentive Program providing a per-ride incentive for TNC rides provided in ZEVs to help offset the higher incremental costs of renting or owning a ZEV. Staff will investigate options to provide purchase and/or lease rebates to reduce the incremental cost of owning or leasing ZEVs.



## Remote Sensing Prioritization Portfolio

### Objective

To reduce vehicle emissions by:

- (1) Utilizing On-Road Remote Sensing technology to identify the oldest, highest emitting vehicles for replacement with an eligible vehicle in the Clean Fleet Vehicle & Technology Portfolio
- (2) Focusing on DICs and other communities with known vehicle-related air quality issues

### Description

The Remote Sensing Prioritization Portfolio will identify high-emitting fleet vehicles and refer them to the Clean Fleet Vehicle & Technology Project Portfolio. The Portfolio will also be used to inform an overall understanding of the types of vehicles that are the highest emitters and as a tool to initiate conversations with fleets to understand barriers to fleet replacement.



## Clean Fleet Vehicle Workforce Development Portfolio

### Objective

To provide training and development of a clean transportation workforce to support the adoption of clean fleet vehicles for use in motor vehicle fleets.

### Description

The Workforce Development Portfolio could include a range of programs including, but not limited to, driver/operator training and technician training to ensure that the necessary supply of clean fleet workers can meet demand as the market grows. There is a need to strike a balance between workforce development and having enough ZEVs on the road in Colorado to allow broader workforce development activities to be most impactful.



## Clean Fleet Planning, Research & Evaluation Portfolio

### Objective

To support and engage fleets to develop strategies and plans for electrifying motor vehicle fleets, research new technology and periodically evaluate existing CFE Portfolios to identify opportunities to improve and optimize efficiency and effectiveness.

### Description

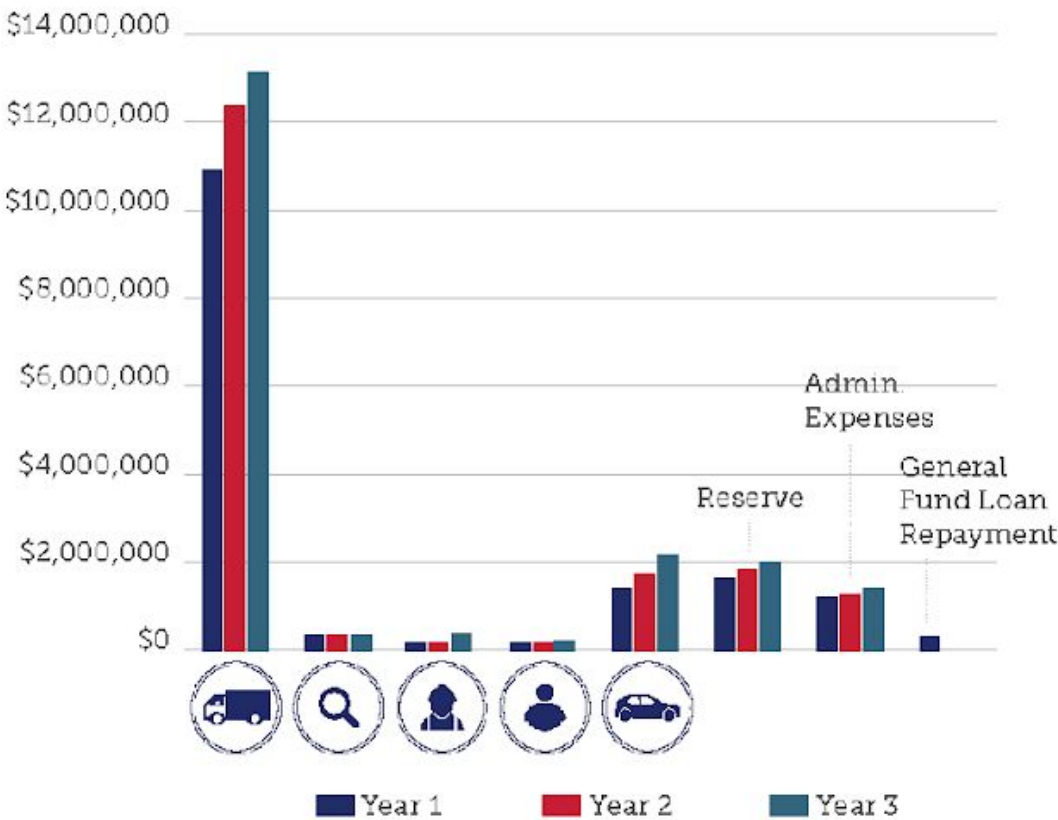
The intent of this Portfolio is to support planning activities by providing access to technical assistance via a third-party consultant to support the development of clean fleet transition plans and to evaluate CFE offerings.

# Revenue & Budget Overview

## Near-Term Revenue Projections

Fiscal Year	Clean Fleet Per Ride Fee	Clean Fleet Retail Delivery Fee	Total Fee Revenue
FY 2022-23	\$1,731,050	\$14,628,581	\$16,359,631
FY 2023-24	\$2,116,783	\$16,134,741	\$18,251,523
FY 2024-25	\$2,599,884	\$17,374,012	\$19,973,896
Near-Term Subtotal	\$6,447,716	\$48,137,334	\$54,585,050

## Near-Term Portfolio Budgets



 Clean Fleet Vehicle & Technology Project Portfolio

 Clean Fleet Vehicle Workforce Development Portfolio

 Clean Fleet TNC Portfolio

 Clean Fleet Planning, Research, & Evaluation Portfolio

 Remote Sensing Prioritization Portfolio



# Implementation Plan

 Clean Fleet Vehicle & Technology Project Portfolio

 Clean Fleet Vehicle Workforce Development Portfolio

 Clean Fleet TNC Portfolio

 Clean Fleet Planning, Research, & Evaluation Portfolio

 Remote Sensing Prioritization Portfolio

## Near-Term Actions/ Program Offerings

(FY 2022-23 to FY 2024-25)

## Mid-Term Actions/ Program Offerings

(FY 2025-26 to FY 2027-28)

Clean Fleet Enterprise - Ten-Year Plan



- Develop a comprehensive set of program designs for grants to fund ZEVs while considering the components and principles developed in the Clean Truck Strategy
- Research and investigate scrappage requirements
- Develop Portfolio program guidance and requirements designed to fund eligible fuels and vehicles per the framework outlined in this Ten-Year Plan
- Develop Portfolio education, marketing and outreach materials
- Staff will work with partners to research loading dock electrification, with a focus on electrifying facilities in DICs and report findings to the CFE Board (Colorado Clean Truck Strategy)



- Develop TNC Portfolio program guidance, requirements, and outreach materials
- Investigate TNC vehicle purchase/lease rebates



- Research and develop an On-Road Remote Sensing program to identify high emitting fleet vehicles operating in Colorado with a focus on DICs in areas with high ozone precursor emissions. This development process will include high emitting vehicle identification protocols and outreach/education materials



- Staff will coordinate with state partner agencies and other stakeholders to understand workforce development efforts underway in Colorado and the goals of the ZEV Workforce Development Group and report back to the CFE Board
- Research workforce development program design and develop partnerships



- Staff will develop the CFE's Planning, Research & Evaluation Portfolio through CFE Board and stakeholder engagement
- Procure technical support services to provide on-call technical assistance
- Investigate and recommend alternative financing options for zero emission medium- and heavy-duty vehicles
- Research and evaluate planning and research program design

Clean Fleet Enterprise - Ten-Year Plan



- Evaluate the development of alternative funding mechanisms included in SB 21-260
- Staff will coordinate with the CEO and CDOT to evaluate and report back to the CFE Board on options to streamline procurement and lower costs for public and private fleets (Colorado Clean Truck Strategy)



- Continue to collaborate with TNCs to consider additional TNC programs to incentivize, support, and accelerate the adoption of clean TNC fleet vehicles and/or modifications to the TNC Ride Incentive Program. Potential additional TNC programs for evaluation include providing vehicle purchase incentives to TNC drivers and/or rental companies that lease ZEVs to TNC drivers, provide lease rebates to reduce the incremental costs of leasing ZEVs, and evaluate revisions to ownership, and rental taxes to reduce the incremental costs to TNC leasing companies leasing ZEVs



- Evaluate other potential mobile source strategies that will reduce fleet emissions



- Staff will investigate supporting state partner agencies and other stakeholder efforts to develop ZEV mechanic training programs and other strategies to educate and recruit students for future careers in the medium- and heavy-duty ZEV sectors. These efforts should focus on supporting participants from disproportionately impacted and Just Transition communities, diesel mechanics, and others whose work may shift along with the transition to ZEVs (Colorado Clean Truck Strategy)



- Complete an evaluation of the Clean Vehicle & Technology Project Portfolio to identify Portfolio modifications/revisions



# Public Engagement, Communication & Reporting

SB 21-260 acknowledges the importance of transparent reporting and routine information sharing to ensure accountability and effectiveness of the CFE. The following sections highlight some of the required communication and reporting mechanisms for the CFE.

## CFE Website & Dashboard

The CFE shall “create, maintain, and regularly update on its website a public accountability dashboard that provides, at a minimum, accessible and transparent summary information regarding the implementation of its Ten-Year Plan, the funding status and progress toward completion of each project that it wholly or partly funds, and its per project and total funding and expenditures.” The accountability dashboard will provide information about the implementation of, and key performance indicators for, the Ten-Year Plan.

The website will also serve as an ongoing mechanism for communicating with the public and seeking input from members of the public, interest groups, etc. Required reporting elements shall include “the funding status and project progress for projects wholly or partially funded with CFE funds, both project and total funding and expenditures.”

Additional key performance indicators that could be included in the dashboard include:

- Number of vehicles wholly or partially funded
- Mapping the location of projects
- Number of fleets participating in CFE portfolio offerings
- Number of TNC shared rides provided in ZEVs
- Number of drivers participating in the Clean TNC Portfolio offerings
- Estimated criteria and GHG emissions reductions (where available)

## CFE Ten-Year Plan

The CFE is required to publish this initial Ten-Year Plan detailing how the enterprise will execute its Business Purpose from FY 2022-23 through FY 2031-32, including funding and budget estimates. The CFE Bylaws specify that a second Ten-Year Plan for FY 2032-33 through FY 2041-42 shall be published by January 1, 2032.

It is recommended that work to develop the second Ten-Year Plan begin no later than FY 2030-2031 to ensure adequate time for stakeholder outreach and engagement. While the CFE Bylaws specify a second Ten-Year Plan for FY 2032-33 through FY 2041-42, it is important that this, and all, CFE Ten-Year Plans are treated as a framework for implementing the Business Purpose of the CFE. As such, the portfolios are expected to evolve throughout the course of the FY 2022-23 to FY 2031-32 timeframe of this CFE Ten-Year Plan.

The CFE could consider updating the CFE Ten-Year Plan on a more frequent basis to capture lessons learned and integrate portfolio revisions. It is expected that all program revisions and modifications would also be captured in the CFE Annual Report (summarized on the right).

## Annual Report

The CFE shall prepare an Annual Report regarding its activities and funding and present the report to the Transportation Commission (CDOT), the House of Representatives Transportation & Local Government Committee, and the Senate Transportation & Energy Committee, or any successor committees. The CFE is also required to publish the Annual Report on the CFE website.

While SB 21-260 and the CFE Bylaws do not currently include specific requirements for the Annual Report, the following items could be included:

- Comparison of budgeted vs. actual spent amounts, by portfolio
- Recommendations for the subsequent fiscal year budget
- Overview of any revisions to program portfolio guidance and requirements
- Summary of public engagement and stakeholder meetings
- Summary of key performance metrics for the fiscal year, as reported on the CFE dashboard
- Summary of any portfolio or program evaluations conducted in the report year
- Summary of research efforts and applicable recommendations
- Estimated criteria and GHG emissions benefits (where available)