<table>
<thead>
<tr>
<th>Topic</th>
<th>Presenter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Welcome, Agenda Review (5 min)</td>
<td>Kay Kelly, CDOT</td>
</tr>
<tr>
<td>Election of Board Officers (10 min)</td>
<td>Kay Kelly, CDOT</td>
</tr>
<tr>
<td>Action Agenda (15 min)</td>
<td>Kay Kelly, CDOT</td>
</tr>
<tr>
<td>Action Agenda (15 min)</td>
<td></td>
</tr>
<tr>
<td>• Approval of Minutes - 1/31/22 CTE Board Meeting</td>
<td></td>
</tr>
<tr>
<td>• CTE Board Articles of Organization</td>
<td></td>
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<tr>
<td>• CTE Board Bylaws</td>
<td></td>
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<tr>
<td>• Approval of Transportation Commission Loan</td>
<td></td>
</tr>
<tr>
<td>Federal &amp; State Transit Funding Landscape (20 min)</td>
<td>Amber Blake, CDOT</td>
</tr>
<tr>
<td>Transit ZEV Roadmap and 10-year CTE Plan (30 min)</td>
<td>Mike King, CDOT</td>
</tr>
<tr>
<td>Action Item: Rulemaking (20 min)</td>
<td>Herman Stockinger, CDOT</td>
</tr>
<tr>
<td>Wrap Up and Next Steps (15 min)</td>
<td>Kay Kelly, CDOT</td>
</tr>
</tbody>
</table>
Members of the Clean Transit Enterprise Board

For terms expiring 9/28/2024

Matt Frommer (Denver): Member with an expertise in zero-emissions transportation, motor vehicle fleets or utilities

Bonnie Trowbridge (Berthoud): Member representing a public advocacy group that has transit or comprehensive transit expertise

Vacant: Member representing a transportation-focused organization that services an environmental justice community

For terms expiring 9/28/2025

Mark Garcia (Pagosa Springs): Member of the Transportation Commission and have statewide transportation expertise

Cris Jones (Boulder): Member representing an urban area, having transit expertise

David Averill (Telluride): Member representing a rural area having transit expertise

Agency Appointments

Shoshana Lew: CDOT Executive Director

Kelly Blynn: Colorado Energy Office designee

Richard Coffin: Colorado Department of Public Health & Environment designee
**Elected Positions**

**Chairperson:** The principal duties of the Chairperson shall be to preside at all meetings of the Enterprise Board, to serve as the principal spokesperson for the Enterprise, and to aid the Secretary in coordination of meetings and agendas, and to perform all duties incident to the office.

**Vice-Chairperson:** The principal duty of the Vice-Chairperson shall be, in the absence or disability of the Chairperson, to perform all the duties of the chairperson, and when acting shall have all the powers of the Chairperson. The Vice-Chairperson shall also have such powers and perform such duties as from time to time may be prescribed by the Membership.

The Board may appoint other officers as it deems necessary and appropriate.
Motions to Approve:

1. Minutes of the January 31, 2022 CTE Board Meeting
2. CTE Board Articles of Organization
3. CTE Board Bylaws
4. Start-Up Loan Agreement between the CDOT Transportation Commission and the CTE Board in the amount of $73,500
FY 2022-23 TRANSIT FUNDING - $78.7M*

- **Federal Transit Grants**
  - $53.5 million
  - Includes local match

- **FASTER Local Transit Grants**
  - $5.0 million
  - State funded transit grants

- **Clean Transit Enterprise**
  - $8.3 million
  - Retail Delivery Fees

- **FASTER State Transit**
  - $10.0 million
  - Used for Bustang, state transit, administration

- **Bustang farebox revenue**
  - $1.9 million

*This graph represents FY 2022-23 revenue only. Revenue from previous year will also be used for 10-year plan and MMOF transit projects.
There are two types of FTA grant programs administered by CDOT.

Each grant program has its own set of criteria, eligibilities, and rules.

**Discretionary**
- Grants made through a competitive process.
- Discretionary funds may be subject to annual appropriations.

**Formula Program**
- Formula funds are a set amount of funds that are distributed annually.
- Formula funds are guaranteed.
● **Program Purpose:** Statewide Planning and Nonmetropolitan Transportation Planning Program for transit planning, technical assistance, service and route planning, long range and short range planning.

● **Program Funding:** ~$0.5 M forecasted for FY23 (federal dollars).

● **Program Overview:**
  - Eligible projects include development of transportation plans and programs, plan, design and evaluate a public transportation project, and conduct technical studies related to public transportation. (increase from 30% under the FAST Act).
  - The federal share of eligible costs for planning projects may not exceed 80 percent.

This funding administered by DTR and awarded as pass through grants via an annual call for projects.
5310 - Enhanced Mobility for Seniors and Individual with Disabilities

- **Program Purpose:** To improve transportation mobility and meet the needs of seniors and individuals with disabilities.

- **Program Funding:** ~$2.8 M forecasted for FY23 (federal dollars)

- **Program Overview:**
  - The program provides capital and operating assistance (increase from 45% under the FAST Act).
  - Eligible projects include capital, operating, and mobility management.
  - The federal share of eligible capital costs may not exceed 80 percent, and 50 percent for operating assistance.

This funding administered by DTR and awarded as pass through grants via an annual call for projects.
**Program Purpose:** The Formula Grants for Rural Areas program provides capital, planning, and operating assistance to states to support public transportation in rural areas with populations of less than 50,000, where many residents often rely on public transit to reach their destinations. The program also provides funding for training and technical assistance through the Rural Transportation Assistance Program.

**Program Funding:** ~$17.6 M forecasted for FY23 (federal dollars)

**Program Overview:**

- Three programs saw an increase of 30% compared to funding levels under the FAST Act.
  - 5311 - Operating and Admin, Capital (fleet, facilities, equipment).
  - 5311(b)(3) - Rural Transit Assistance Program (RTAP).
  - 5311(f) - Intercity Bus (Bustang, Outrider) (15% of total allocation)
- The federal share is 80 percent for capital projects, 50 percent for operating assistance, and 80 percent for Americans with Disabilities Act (ADA) non-fixed route paratransit service.

This funding administered by DTR and awarded as pass through grants via an annual call for projects.
• **Program Purpose:** To maintain a State of Good Repair.

• **Program Funding:** ~$6.5 M forecasted for FY23 formula program (federal dollars)

• **Program Overview:**
  ○ To provide funding to replace, rehabilitate and purchase buses and related equipment and to construct bus-related facilities including technological changes or innovations to modify low or no emission vehicles or facilities (increase from 30% under the FAST Act).
    • 5339(a) - formula pass through for Rural and Small Urban.
    • 5339(b) - Discretionary Program (competitive).
    • 5339(c) - Low or No Emissions Vehicles (competitive).

5339(a) funding administered by DTR and awarded as pass through grants via an annual call for projects. 5339(b) and (c) are competitive programs awarded directly through the FTA, projects are administered by DTR.
### Notable Funding Programs: Federal

<table>
<thead>
<tr>
<th>Funding Program</th>
<th>Strategic Funding Source for 10-Year Plan?*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface Transportation Block Grant (STBG)</td>
<td>✓</td>
</tr>
<tr>
<td>Transportation Alternatives Program (TA)</td>
<td></td>
</tr>
<tr>
<td>Congestion Mitigation and Air Quality (CMAQ)</td>
<td></td>
</tr>
<tr>
<td>NEW! Risk/Resiliency Formula Program</td>
<td>✓</td>
</tr>
<tr>
<td>FTA 5304 - Statewide Planning</td>
<td></td>
</tr>
<tr>
<td>FTA 5310 - Enhanced Mobility for Seniors and Individual with Disabilities</td>
<td></td>
</tr>
<tr>
<td>FTA 5311 - Rural Area Formula Program</td>
<td></td>
</tr>
<tr>
<td>FTA 5339 - Bus and Bus Facilities Formula Program</td>
<td></td>
</tr>
</tbody>
</table>

*Check marks indicate a “strategic” source of funding for the 10-Year Plan. However, all types of funding programs may be leveraged to fully deliver projects in the 10-Year Plan.
Transportation Alternatives (TA)

- **Program Purpose:** Implement non-motorized transportation projects and environmental mitigation.

- **Program Funding:** ~$18.5 M forecasted for FY23 (federal dollars)*

- **Program Overview:**
  - 59% of funding allocated based on population (increase from 50% under the FAST Act)
    - This funding is split between the CDOT Regions by population, and the Transportation Management Areas (i.e. the large MPOs) by urbanized area population.
  - Remaining funding can be spent anywhere in the state and is allocated to the CDOT Regions based on 45% VMT, 40% lane miles, and 15% truck VMT.

**Transit Eligibility:** First and last mile connections (local agency projects)

*Draft FY23 Final Budget.*
● **Program Purpose:** Support activities with air quality benefits.

● **Program Funding:** ~$46M forecasted for FY23 (federal dollars)*

● **Program Overview:**
  ○ Required to go to air quality nonattainment or maintenance areas, with a few exceptions.
  ○ Most of this funding goes to the ozone nonattainment areas (DRCOG, NFRMPO, and UFR TPR) on the basis of 75% population and 25% VMT.

**Transit Eligibility:** Transit Improvements, Operating assistance (1st 5 years only), Alternative fuels and vehicles

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*Draft FY23 Final Budget.*
● **Program Purpose:** Provide formula and grant funding for resilience improvements

● **Program Funding:** $19M forecasted for FY23 (federal dollars)* (formula funding)
  ○ $1.4 Billion available nationally via competitive, discretionary grant funding available (non formula funding)

● **Program Overview:**
  ○ The full name of the program is Promoting, Resilient Operations for Transformative, Efficient, and Cost-saving Transportation (PROTECT) program.
  ○ Formula funding is available for highway, transit, and certain port projects, higher Federal share if the State develops a resilience improvement plan and incorporates it into its long-range transportation plan, of the amounts apportioned to a State for a fiscal year, the State may use: not more than 40% for construction of new capacity, or not more than 10% for development phase activities.
  ○ Competitive, discretionary grant funding covers highway, transit, intercity passenger rail, and port facilities, resilience planning activities, including resilience improvement plans, evacuation planning and preparation, and capacity-building, construction activities (oriented toward resilience), construction of (or improvement to) evacuation routes.

*Draft FY23 Final Budget.*
**Program Purpose:** To support the reduction of transportation emissions.

**Program Funding:** $16.8M forecasted for FY23 (federal dollars)*

**Program Overview:**
- New federal funding program from the IIJA.
- Requires 65% of the funding to be obligated on the basis of population.
- Population driven.

**Transit Eligibility:** Transit system improvements

*Draft FY23 Final Budget.*
<table>
<thead>
<tr>
<th>Funding Program</th>
<th>Strategic Funding Source for 10-Year Plan?*</th>
</tr>
</thead>
<tbody>
<tr>
<td>SB 267</td>
<td>✔</td>
</tr>
<tr>
<td>SB 260 State MMOF</td>
<td>✔</td>
</tr>
<tr>
<td>SB 260 Local MMOF</td>
<td></td>
</tr>
<tr>
<td>FASTER</td>
<td></td>
</tr>
</tbody>
</table>

*Check marks indicate a “strategic” source of funding for the 10-Year Plan. However, all types of funding programs may be leveraged to deliver projects in the 10-Year Plan.
● **Program Purpose:** Strategic funding from the state legislature.

● **Program Funding:** $500M / yr on average for over four years (FY19-22)

● **Program Overview:**
  ○ 25% of the funding must be spent in rural areas
  ○ 10% minimum to transit projects
    ■ Capital projects
• **Program Purpose:** The Multimodal Transportation & Mitigation Options Fund (MMOF), created by Senate Bill 18-001, and seeks to promote a complete and integrated multimodal system.

• **Program Funding:** $17.4M forecasted for FY23*
  - $2.6M allocated to CDOT, and $14.9M to local entities

• **Program Overview:**
  - MMOF funds are split 15% to CDOT and 85% to local entities
  - All MMOF funding awards and projects will be administered and overseen by CDOT
  - Transit projects including operating are eligible

*Draft FY23 Final Budget.*
FASTER

- **Program Purpose:** FASTER allows the state of Colorado to improve roadway safety, repair deteriorating bridges, and support and expand transit.

- **Program Funding:** $85M forecasted for FY23, for state transportation projects*
  - $23M forecasted for FY23, for cities*
  - $28M forecasted for FY23, for counties*

- **Program Overview:**
  - Senate Bill 09-108, also known as the Funding Advancements for Surface Transportation and Economic Recovery Act of 2009 (FASTER), was signed into law on March 2, 2009.
  - FASTER legislation created the Colorado Bridge Enterprise (CBE) and the High Performance Transportation Enterprise (HPTE)
  - FASTER revenue is generated through several vehicle registration fees and fines

*Draft FY23 Final Budget.
### Program Overview Transit Specific:

<table>
<thead>
<tr>
<th>Eligible Expense</th>
<th>Annual Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small agency capital (all except MMT, Transfort, RTD)</td>
<td>$2.1 Million</td>
</tr>
<tr>
<td>Small agency admin &amp; operating (all except MMT, Transfort, RTD)</td>
<td>$2.0 Million</td>
</tr>
<tr>
<td>Large urban capital (MMT @ $0.7 M/yr &amp; TransFort@ $0.2 M/yr)</td>
<td>$0.9 Million</td>
</tr>
<tr>
<td></td>
<td><strong>Local Pool</strong></td>
</tr>
<tr>
<td></td>
<td>$5.0 Million</td>
</tr>
<tr>
<td>DTR Administration, Planning, Technical Assistance</td>
<td>$1.0 Million</td>
</tr>
<tr>
<td>CDOT Bustang Interregional Bus Services</td>
<td>$3.5 Million</td>
</tr>
<tr>
<td>Operating Assistance for Other Regional / Interregional Bus Services</td>
<td>$2.5 Million</td>
</tr>
<tr>
<td>Large urban capital (RTD)</td>
<td>$3.0 Million</td>
</tr>
<tr>
<td></td>
<td><strong>Statewide Pool</strong></td>
</tr>
<tr>
<td></td>
<td>$10.0 Million</td>
</tr>
</tbody>
</table>

*Draft FY23 Final Budget.*
Program Purpose: The Volkswagen Settlement program is designed to mitigate NOx pollution by replacing older diesel transit vehicles with new, zero emission options.

Program Funding: ~$5 M forecasted for FY23.

Program Overview:

- Settlement funds directly replace Model Year 2009 or earlier Class 4-8 passenger revenue vehicles that are diesel-fueled with zero emission vehicles:
  - Battery Electric Vehicles, Hydrogen Fuel Cell Vehicles, or Compressed Natural Gas Vehicles that are fueled by renewable natural gas (RNG)
  - Grantees are required to scrap an existing transit vehicle

- Grant funding is also available for charging and fueling infrastructure to support zero-emission vehicles.

This funding is administered by DTR and allocated through a call for projects annually.
**CDOT Enterprise Funding**

<table>
<thead>
<tr>
<th>Funding Program</th>
<th>Strategic Funding Source for 10-Year Plan?*</th>
</tr>
</thead>
<tbody>
<tr>
<td>SB 260 Clean Transit Enterprise</td>
<td></td>
</tr>
<tr>
<td>SB 260 Non-Attainment Enterprise</td>
<td></td>
</tr>
</tbody>
</table>

*Check marks indicate a “strategic” source of funding for the 10-Year Plan. However, all types of funding programs may be leveraged to deliver projects in the 10-Year Plan.*
● **Program Purpose:** Created within CDOT to mitigate transportation-related emissions in ozone nonattainment areas.

● **Program Funding:**
  ○ Total fee revenue is $7.1M forecasted for FY23*
  ○ Revenue ramps up over time with lower revenues in earlier years.
  ○ Enterprise can impose an air pollution mitigation fee on retail deliveries and rides provided by TNCs to fund its operations.

● **Program Overview:**
  ○ Enterprise funding is for eligible projects that reduce traffic, including demand management projects that encourage alternatives to driving alone or that directly reduce air pollution, such as retrofitting of construction equipment, construction of roadside vegetation barriers, etc.
  ○ Full name is the Nonattainment Area Air Pollution Mitigation Enterprise.

*Draft FY23 Final Budget.*
Program Purpose: The Clean Transit Enterprise supports public transit electrification planning efforts, facility upgrades, fleet motor vehicle replacement, as well as construction and development of electric motor vehicle charging and fueling infrastructure.

Program Funding: $8.3M forecasted for FY23*

Program Overview:

- The bill allows the enterprise to impose a Clean Transit Retail Delivery Fee to fund its operations, issue grants, loans or rebates to support electrification of public transit.
- The Clean Transit Enterprise Board includes six members appointed by the governor, and executive directors or their designees from CDOT, Colorado Department of Public Health and Environment (CDPHE) and the Colorado Energy Office (CEO).
- Appointed board members will serve terms of three or four year.

*Draft FY23 Final Budget.
$733 million of new fee revenue supports 3 new electrification and charging infrastructure Enterprises:

**Charging Infrastructure & Electric Vehicle Equity**

- Build charging infrastructure in communities across the State, and support electric vehicle and eBike adoption in low and moderate income communities.
- **$310 million investment**
- Paired with existing CO EV Infrastructure Fund - $115 million and potential federal funding

**Fleet Electrification Incentives**

- **New ‘Clean Fleet’ Enterprise** in CO Department of Public Health and Environment (CDPHE)
- Support fleet replacement (delivery trucks, TNCs, school buses, and other light/medium/heavy duty vehicles) with incentives to meet climate and air quality goals
- Support CDPHE’s Mobile Source Program to complement vehicle investment.
- **$289 million investment**

**Public Transit Electrification**

- **New “Clean Transit” Enterprise** in Colorado Department of Transportation (CDOT).
- Support electrification of public transit through electrification planning efforts, facility upgrades, fleet vehicle replacements and associated charging infrastructure.
- **$134 million investment**
House Bill 19-1261

Sets statewide greenhouse gas (GHG) reduction targets of:

- 26% by 2025
- 50% by 2030
- 90% by 2050

*From a 2005 baseline
Significant Progress Underway, But More Action Necessary

As a result of the state’s actions to date, we are on a trajectory to achieving approximately half the level of emission reductions to meet the 2025 and 2030 goals. Additional strategies can advance co-benefits such as reducing local air pollution, generating economic growth, advancing environmental justice and equity.
Colorado’s 2020 Electric Vehicle Plan established a state target of 940,000 registered ZEVs by 2030.

CDOT and its partner agencies are currently developing a Clean Trucking Strategy to reduce emissions from medium- and heavy-duty vehicles across the state.

Colorado also has a goal of converting all transit vehicles in-state to ZEVs, with an interim target of 1,000 transit ZEVs by 2030.

The plan also includes strategies to explore related issues like the hydrogen fuel market, supporting EV equity, and working with dealers and technical schools to develop a supportive ZEV workforce over the longer-term.

Key Elements of the Transit ZEV Roadmap

- **Collecting data and conducting research and analysis** to inform the current state of Colorado’s transit fleet, understand the current state of the national transit ZEV market, identify transit ZEV conversion barriers and opportunities, and determine and document complementary utility actions and policies needed to advance the transition of Colorado’s transit fleet to ZEVs.

- **Conducting outreach and engagement with transit agencies and utilities** to understand current ZEV plans, issues, opportunities and potential strategies the State could implement to support the transit ZEV transition.

- **Engaging with transit agencies and utilities** to support the transition of 1,000 transit vehicles to ZEV by 2030 and a 100 percent fleet transition by 2050.

- **Crafting a comprehensive Transit ZEV Roadmap** that integrates findings and strategies from complementary planning efforts and provides statewide transit and utility decision-makers with the direction and tools to facilitate and manage the ZEV transition while continuing to deliver quality transit service to the traveling public.
National ZEV Transit Trends
Barriers to ZEV Fleet Adoption

Knowledge Barriers
Lack of understanding of the technical, planning, financial, and governance factors critical to successful ZEV implementation.

Technological Barriers
Currently, available ZEV transit models cannot meet the needs of all transit services due to battery limitations that impact range and vehicles’ ability to operate at varying grades and temperatures.

Financial Barriers
Some Colorado transit agencies report that the cost of transit ZEVs can be as much as double that of internal combustion engine vehicles. Significant financial barriers arise when combined with costly infrastructure upgrades and transit agency training required to develop electric rates collaboratively with utility companies.

Institutional Barriers
Transit agency and utility service territories cover diverse and dynamic geographic areas. Colorado utilities and transit agencies have varying levels of experience and inconsistent processes for coordinating across jurisdictional boundaries to meet service planning and transmission/distribution planning needs.
• Approximately 3,301 total transit vehicles in Colorado*

- **100** ZEV Transit Buses Deployed, On Order or Soon to be on Order in Colorado
- **71** Electric Gondola Transit Vehicles
- **170** Light Rail Train Cars
- **66** Commuter Rail Cars
- **27** Renewable Natural Gas (RNG) transit buses

*2021 data*
2021 Transit ZEVs
By the Numbers

- **9** Colorado transit agencies operating ZEVs
- **3** Colorado transit agencies with ZEVs on order (not yet operational)
- **10** Colorado transit agencies that have completed, are in the process of, or will be completing a ZEV Transition Plan in the near future

*Grand Valley Transit uses Renewable Natural Gas (RNG) for 50% of its operations; the remaining 50% uses Xcel Energy natural gas.*
The Role of Utilities

- Local electric utilities will play an essential role in any successful ZEV planning and implementation process.

- Increased load associated with charging transit fleets could put significant strain on the existing electric infrastructure. Utilities and transit agencies will both have to invest in distribution upgrades and new infrastructure to meet the increased electrical demand to support electric fleets.

- The utility and transit agency relationship will look very different depending on the size of fleet, type of vehicles, type of chargers, and geographic location. Mutual understanding of both utility and transit agency operating needs will go a long way to ensuring reliable energy to meet evolving transit service schedules and operational needs. There are also opportunities to develop resiliency plans for planned and unplanned outages.

- State and local governments can encourage utility investment in ZEVs by supporting infrastructure development. For example, the state and CDOT could oversee and manage coordinated infrastructure planning processes for both utilities and transit agencies.
Questions for the Financial Model based on the 2020 EV Plan’s identified transit goals:

What does it take to get to 1,000 Vehicles by 2030?

What does it take to get to 100 percent ZEV by 2050?

Is there a reasonable path forward?
Financial Modeling Assumptions

- Updating the 2018 Inventory
- Determining Vehicle Replacement Schedule
- Identifying ZEV Replacement
- Calculating Average Vehicle & Charger Costs
# The Thought Exercise…

What will replacing vehicles like-for-like cost?

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Do we meet the 2030 goal? (# of ZEVs in 2030 Fleet, ULB/MUL)</th>
<th>Do we hit the 2050 goal? (Year Fleet is 100% ZEV, ULB/MUL)</th>
<th>Cost of Vehicle Replacements (ULB/MUL)</th>
<th>Incremental Cost (ULB/MUL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No ZEVs (Baseline)</td>
<td>✗ (100)</td>
<td>✗ (N/A)</td>
<td>$595M / $785M</td>
<td>-</td>
</tr>
</tbody>
</table>

How does this compare to…

- Replacing all vehicles with ZEVs starting in 2022?
- Somewhere in between...2025? 2027?
- Replacing all vehicles with ZEVs starting in 2030?
## Financial Modeling

Transitioning the CO fleet to ZEVs is projected to cost $230M to $285M (30-45%) more than maintaining the existing fleet.

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Do we meet the 2030 goal? (# of ZEVs in 2030 Fleet, ULB/MUL)</th>
<th>Do we hit the 2050 goal? (Year Fleet is 100% ZEV, ULB/MUL)</th>
<th>Cost of Vehicle Replacements (ULB/MUL)</th>
<th>Incremental Cost (ULB/MUL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No ZEVs (Baseline)</td>
<td>✗ (100)</td>
<td>✗ (N/A)</td>
<td>$595M / $785M</td>
<td>-</td>
</tr>
<tr>
<td>2022</td>
<td>✓ (2,050 / 2,325)</td>
<td>✓ (2035 / 2033)</td>
<td>$870M / $1,070M</td>
<td>$275M / $285M</td>
</tr>
<tr>
<td>2025</td>
<td>✓ (1,580 / 2,250)</td>
<td>✓ (2038 / 2036)</td>
<td>$840M / $1,045M</td>
<td>$245M / $260M</td>
</tr>
<tr>
<td>2027</td>
<td>✓ (1,150 / 1,225)</td>
<td>✓ (2040 / 2038)</td>
<td>$830M / $1,020M</td>
<td>$235M / $235M</td>
</tr>
<tr>
<td>2030</td>
<td>✓ (245/ 205)</td>
<td>✓ (2043 / 2041)</td>
<td>$825M / $1,015M</td>
<td>$230M / $230M</td>
</tr>
</tbody>
</table>
Transitioning the Colorado fleet to ZEVs is projected to cost $230 to $285 million more than the baseline scenario, equating to a 30 to 45 percent premium over maintaining the existing fleet.

Initial capital investment in EV chargers represent most of the incremental ZEV costs ($225 million to $230 million).

Incremental cost difference (excluding associated charger costs) is $45 to $60 million, reflecting a 5 to 10 percent premium over the vehicle costs of replacing the existing non-ZEV fleet.

The near-term push to 1,000 will cost an additional $5 to $10 million in transit ZEV replacement costs to meet the 2030 goal.
### Model Assumptions

#### Vehicle Replacement Schedule:

<table>
<thead>
<tr>
<th>Revenue Vehicle Type</th>
<th># of Vehicles in Fleet</th>
<th>ZEV Cost</th>
<th>Non-ZEV Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Articulated Bus</td>
<td>124</td>
<td>$1,200,000</td>
<td>$677,000</td>
</tr>
<tr>
<td>Standard Bus (35 to 40 ft.)</td>
<td>1044</td>
<td>$950,000</td>
<td>$500,000</td>
</tr>
<tr>
<td>Small Bus (less than 35 ft.)</td>
<td>196</td>
<td>$580,000</td>
<td>$350,000</td>
</tr>
<tr>
<td>Large Cutaway (17 to 30 passengers)</td>
<td>50</td>
<td>$360,000</td>
<td>$200,000</td>
</tr>
<tr>
<td>Standard Cutaway (10 to 25 passengers)</td>
<td>779</td>
<td>$170,000</td>
<td>$88,000</td>
</tr>
<tr>
<td>Passenger Van</td>
<td>250</td>
<td>$100,000</td>
<td>$55,000</td>
</tr>
<tr>
<td>Automobile</td>
<td>104</td>
<td>$60,000</td>
<td>$35,000</td>
</tr>
<tr>
<td>Minivan</td>
<td>103</td>
<td>$60,000</td>
<td>$35,000</td>
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<tr>
<td>Sports Utility Vehicle</td>
<td>4</td>
<td>$60,000</td>
<td>$35,000</td>
</tr>
<tr>
<td>Over-the-road Bus/Motorcoach</td>
<td>228</td>
<td>$1,100,000</td>
<td>$600,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total Colorado Transit Fleet</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
<th>2026</th>
</tr>
</thead>
<tbody>
<tr>
<td># of Vehicles in Fleet</td>
<td></td>
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</tr>
<tr>
<td>Total ZEVs being replaced</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total ZEVs in CO Fleet</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Incremental Cost Difference</td>
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#### Fleet Costs:

- **ZEV Replacement Year**
- **Cost of P Incremental**

<table>
<thead>
<tr>
<th>Year</th>
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<tbody>
<tr>
<td>2022</td>
<td>2023</td>
<td>2024</td>
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<tr>
<td>2025</td>
<td>2026</td>
<td>2027</td>
</tr>
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### Financial Modeling

- **Year the Colorado Transit Fleet**
- **Year the Colorado Transit Fleet**
Achieving Colorado’s Transit ZEV Goals

**Implementation Timeframes**
- **Near-Term:** 2021-2024
- **Mid-Term:** 2025-2027
- **Long-Term:** 2028-2030

**Policy**
Identify policies to reduce barriers to ZEV transition and implementation.

**Planning & Technical Support**
Provide training to promote workforce readiness and educational programs for riders and policy-makers.

**Information Sharing & Research**
Increase access to technical resources and expertise to support the planning, design, and implementation activities.

**Funding**
Define data collection, research, and analysis methods to facilitate statewide information sharing and support a successful transition to transit ZEVs in Colorado.

**Education & Training**
Prioritize funding and identify state funding types and methods to effectively support ZEV planning and implementation.
Near-Term (2021 - 2024)

Policy

Integrate Transit ZEV Roadmap strategies into the next revision of the Colorado EV Plan.

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.

Integrate recommendations from CEO’s EV Equity Study into transit electrification grants, programs, and initiatives.

Explore opportunities to better define the process for tracking RNG and to substantiate the use of RNG as a transit ZEV option.

Evaluate opportunities and methodologies for integrating environmental impact analyses to capture the environmental and societal costs of tailpipe emissions in procurement processes.

Serve as a facilitator or convenor to bring together transit agencies and utilities to actively address known ZEV transit challenges and overcome barriers to transit ZEV fleet transition. Workshop and/or working group topics should include:

- Transit agency and utility programmatic coordination
- Generation, transmission, and distribution planning
- Best practices for transit agency/utility coordination
- Facility planning (including strategies for overcoming building and lease limitations)
- Transit ZEV electric rate design
- ZEV model availability and applications
Planning & Technical Support Strategies

Near-Term (2021 - 2024)

Planning & Technical Support

- Define a standard approach for measuring GHG emissions and reductions for transit agencies that is consistent with the Transit Emission Dashboard methodology.
- Hire staff and/or contract with consultants to provide on-call technical assistance to transit agencies to support ZEV fleet transition planning. Support activities could include utility coordination, grant application support, route modeling, maintenance/operations planning, facility planning, GHG emissions tracking, etc.
- 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 reductions goals. Build on the CEVC Transit Subgroup Zero-Emission Bus Tracking Sheet and the COTRAMS database.
- Integrate the findings and data from the Transit ZEV Roadmap into the Group Transit Asset Management Plan update.
- Coordinate with transit agencies to better understand options and strategies for transitioning contractor owned facilities to support ZEVs.
- Track storage location of transit vehicles in COTRAMS to aid in ZEV replacement feasibility analysis and transition planning.

Strategies that span multiple goal areas are indicated with multicolored bullets.
### Near-Term (2021 - 2024)

#### Information Sharing & Research

- Create an informal transit-focused virtual peer exchange network (e.g., Slack channel, Listserv, etc.) to ask questions, share information and/or lessons learned, and facilitate ongoing conversations among transit agencies.
- Engage existing Colorado research groups and programs (e.g., NREL, ASPIRE³, CU, CSU, etc.) to support and develop opportunities for transit agencies to test/evaluate ZEVs and research transit ZEV-related technologies such as battery recycling second use cases, transit and utility business models, smart vehicle charging solutions, etc.
- Convene a rural transit working group, including electric co-ops, to define barriers and potential solutions for rural transit agencies.
- Convene interested transit agency and hydrogen fuel providers to identify pilot project opportunities and discuss potential barriers to widespread fleet adoption in Colorado.
- 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.
- Integrate Transit ZEV Roadmap data and recommendations into the Clean Transit Enterprise's 10-Year Plan.
- 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.
- Monitor and document real-world ZEV operational costs in Colorado to inform future planning efforts.

Strategies that span multiple goal areas are indicated with multicolored bullets.
Funding Strategies

Near-Term (2021 - 2024)

Funding

- Evaluate strategies for vehicle leasing options, third-party financing, battery leases, utility on-bill financing, and other funding mechanisms and opportunities to use SB 21-260 Clean Transit Enterprise funds.

- 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 to use the Clean Transit Enterprise to fund the Local Match Fund, as well as potential match funding strategies (e.g., incentivizing transit agencies to pursue federal funding sources by providing a higher percentage of matching funds for federal grants than state/local grants).

- Establish and maintain a state-approved master purchasing agreement for zero emission vans, cutaways, and buses to streamline transit agency procurement of transit ZEVs.

- Develop flexible funding programs to support ongoing maintenance and operations costs and long-term operations of transit ZEVs.

- Incentivize and promote private sector support for ZEV transit transition, including demonstration projects, vehicle testing and/or short-term proof of concept lease options, etc. to ensure vehicle types and technologies meet Colorado transit agency needs and to support the advancement of the larger transit ZEV market.

- Assess opportunities to support the replacement of vehicles with ZEVs prior to the end of their useful life to expedite ZEV transition.

- Consider establishing a more flexible vehicle replacement policy for zero-emission buses for so long as available vehicle technologies (i.e., battery range and low-temperature performance) do not align with the typical 1-to-1 replacement ratio.

Strategies that span multiple goal areas are indicated with multicolored bullets.
Near-Term (2021 - 2024)

Education & Training

- Develop Colorado-specific informational materials about transit ZEV challenges, opportunities, and benefits in coordination with existing transit and ZEV organizations (e.g., Colorado Association of Transit Agencies [CASTA]) to educate transit agency staff and key decision-makers.
- Partner with CASTA to provide OEM neutral training and/or educational sessions for transit operators and maintenance staff early in the ZEV transition process.
- 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.
Clean Transit Enterprise 10-Year Plan

Requirements

(10)(a) TO ENSURE TRANSPARENCY AND ACCOUNTABILITY, THE ENTERPRISE SHALL:

(I) NO LATER THAN JUNE 1, 2022, PUBLISH AND POST ON ITS WEBSITE A TEN-YEAR PLAN THAT DETAILS HOW THE ENTERPRISE WILL EXECUTE ITS BUSINESS PURPOSE DURING STATE FISCAL YEARS 2022-23 THROUGH 2031-32 AND ESTIMATES THE AMOUNT OF FUNDING NEEDED TO IMPLEMENT THE PLAN. NO LATER THAN JANUARY 1, 2032, THE ENTERPRISE SHALL PUBLISH AND POST ON ITS WEBSITE A NEW TEN-YEAR PLAN FOR STATE FISCAL YEARS 2032-33 THROUGH 2041-42;

(II) 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;

(III) ENGAGE REGULARLY REGARDING ITS PROJECTS AND ACTIVITIES WITH THE PUBLIC, SPECIFICALLY REACHING OUT TO AND SEEKING INPUT FROM COMMUNITIES, INCLUDING BUT NOT LIMITED TO DISPROPORTIONATELY IMPACTED COMMUNITIES, AND INTEREST GROUPS THAT ARE LIKELY TO BE INTERESTED IN THE PROJECTS AND ACTIVITIES; AND

Draft Outline

1. Introduction
   a. SB21-260 Language
   b. State of Colorado ZEV Goals
2. Anticipated Fee Revenues for FY23-FY32
   a. Fee Levels
   b. Anticipated Revenues by Year
   c. Potential Matching Funds
3. Transit Electrification Barriers & Opportunities
   a. Current State Transit Fleet Inventory
   b. Technology Availability
   c. Barriers to Implementation
   d. Anticipated Costs & Timelines
   e. Supporting Policies & Actions
4. Clean Transit Enterprise Funding Strategy
   a. Funding Mechanisms
   b. Funding Category Prioritization
   c. Project Prioritization
   d. Match Levels
   e. Scrapping Requirements
   f. Replacement Ratios
   g. Other Policy Decisions
5. Implementation & Tracking
6. Conclusions
Rules Carry the Force of Law and Must be Authorized in Statute

43-4-1203 (6)(g) “… To promulgate rules to set the amount of the clean transit retail delivery fee at or below the maximum amount authorized in this section and to govern the process by which the enterprise accepts applications for, awards, and oversees grants, loans and rebates…”

43-4-1203 (7)(b) “For retail deliveries of tangible personal property purchased during the state fiscal year 2022-2023, the enterprise shall impose the clean transit retail delivery fee in a maximum amount of three cents.”
1.0 Statement of Basis and Purpose and Statutory Authority

- States the reason for the rule and where the authority lies in statute for the Enterprise to promulgate rules.

2.0 Definitions

- Duplicates many statutory definitions, and defines terms that are used in the Rule.

3.0 Fees

- Sets the initial fees effective July 1, 2022.
- Assumes the adjustment for inflation and working with DOR to determine the new rate.
- Reiterates statute that the Enterprise must notify DOR of changes in the fee by each March 15.
4.0 Process for Awarding and Overseeing Grants, Loans, and Rebates

- Selection of grants will be done on a competitive basis.
- Process will be part of the broader annual call for transit projects (currently referred to as the CDOT DTR Consolidated Call for Capital Projects).
- Criteria for awards will be established by the Enterprise and published no fewer than 60 days before any grant deadlines.
- Applications will be assessed and scored based on their support for the business purpose of the Enterprise.
  - Replacement of gasoline and diesel vehicles
  - Provide charging infrastructure
  - Support facility modifications
  - Fund planning studies
- The Enterprise will approve the grants.
- CDOT DTR staff will oversee the grant process and day-to-day management of grants.

5.0 Declaratory Orders

- Every rule, by statute, must provide for the entertaining of, and prompt disposition of petitions for declaratory orders to terminate controversies or remove uncertainties surrounding the Rule.
Rulemaking for Enterprise Fee Setting

Process and Timeline

● Open Rule: Enterprise Opens Rule February 22, authorizes CDOT Hearing Officer to conduct Public Hearing.
● File Rule: CDOT staff “files the rule” with the Secretary of State.
● Public Hearing: On April 4, CDOT staff will conduct the public hearing per the Administrative Procedures Act.
● Adopt Rule: Enterprise Board adopts Rule on April 12
● Effective Date: As early as May 31.
Board Member Participation in the Rulemaking

- All board members will be invited to attend the rulemaking hearing, but are not required to attend.
- It would be appropriate but optional to “assign” a board member to offer introductory comments at the rulemaking hearing and “represent” the Board at the hearing.

Elements of an Appropriate Motion to Open the Rules

- Move to authorize CDOT staff to open the Clean Transit Enterprise Rules;
- Authorize the appointment of a member of CDOT staff to serve as the Hearing Officer to preside over the Rulemaking Hearing and process.
Upcoming Dates:

- Tuesday, March 15th - CTE Board Confirmation Hearings
- Tuesday, March 29th - CTE Board Meeting
- Monday, April 4th - CTE Rulemaking Hearing
- Tuesday, April 12th - CTE Board Meeting
- Wednesday, May 25th - CTE Board Meeting
- Wednesday, June 1st - Deadline to Publish/Post 10-year Plan

Upcoming Meeting Topics:

- 10-year Plan Process and Engagement
Clean Transit Enterprise Information

https://www.codot.gov/programs/innovativemobility/cte