

Colorado DOT & Electric Buses

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2018 State Public Transportation
Partnerships Conference

The DOT and Electric Buses

- State Priorities:
- Funding:
 - Project Examples
- Technical Assistance:
 - Conferences and Coaching
- Electric Bus Trials:



State Priorities:

- Executive Order D 2017-015
 - Reduce greenhouse gas emissions statewide by more than 26% by 2025, as compared to 2005 Levels
 - A 25 percent reduction in carbon dioxide emissions from the electricity sector by 2025, as compared to 2012 levels.
 - A 35 percent reduction in carbon dioxide emissions from the electricity sector by 2030, as compared to 2012 levels
 - Achieve electricity savings by 2% of total electricity sales per year by 2020 through cost-effective energy efficiency.

State Priorities:

- Executive Order D 2017-015
 - The Colorado Energy Office, the Regional Air Quality Council, and the Colorado Department of Public Health and the Environment are directed to develop, in coordination with other state agencies and in alignment with the Volkswagen Mitigation Trust, a statewide Electric Vehicle plan by January 1, 2018 to build out key charging corridors that will facilitate economic development and boost tourism across the state while reducing harmful air pollution.

Funding Options:

- Colorado's Beneficiary Mitigation Plan:
 - \$18 Million for Transit Buses
 - Engine model year 2009 or older
 - Greater than 14,001 lbs.
 - Scrap replaced vehicle
 - Cut vehicle's frame rails in half
 - 3-inch hole in the engine block
 - First awards in March 2019



Funding Options:



COLORADO
Department of Transportation
Division of Transit & Rail

Funding for transit buses through Consolidated Call for Capital Projects

The Colorado Department of Transportation's Division of Transit and Rail (DTR) currently funds capital projects for public transportation agencies throughout the state using a competitive grant process known as the Consolidated Call for Capital Projects (CCCP). This grant program consolidates capital funding from various state and federal sources into a single competitive application process that occurs each fall. The Division evaluates projects and, if selected for an award, determines the most appropriate funding source for each project. \$18 million of settlement funding will be added to the CCCP program to fund 110% of the incremental cost between Class 4-8 diesel buses and their replacement with similar alternatively fueled transit buses. The Transit Bus Replacement Program will operate statewide in Colorado during approximately FY 2019-2023. Any vehicles receiving funds from the settlement will require the existing diesel vehicle to be replaced and scrapped. The DTR will use a combination of existing funds and settlement funds to maximize the incentive to replace diesel vehicles with electric and CNG transit vehicles.

CDOT Consolidated Call for Capital Projects

Geographic Area	Statewide	Statewide
Scrappage	No	Yes
Eligible Equipment	New or replacement transit vehicles, equipment & facilities	CNG or electric transit vehicles and charging infrastructure
Funding Source	FTA Sections 5301, 5311, and 5339, State FASTER Transit funds	Settlement funding
Funding Available	\$16 million per year	\$18 million over 5 years
Funding Level	80% of capital purchase	110% of incremental cost

Funding Options:

- FTA Low and No Emissions Grant Program:
 - CDOT applies on behalf of subrecipients:
 - 2017:
 - 4 Projects Applied - \$18.5 Million Requested
 - 3 Projects Awarded - \$1.4 Million
 - Roaring Fork Transportation Authority (RFTA)
 - Town of Vail
 - Via Mobility



Funding Options:

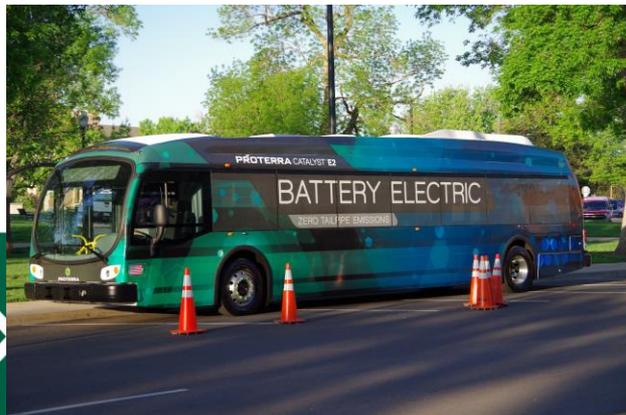
- 2017 \$1.4 Million 5339c Low/No Award:
 - How did it happen:
 - CDOT worked closely with State Transit Association to identify projects
 - Four Agencies were identified as “ready to go”
 - Others Agencies were asked to wait a year
 - Scheduled a one day workshop with presentations from EV Manufactures
 - Collaborative effort to prepare the application

Funding Options:

- 2017 \$1.4 Million 5339c Low/No Award:
 - Application:
 - Be Prepared:
 - Provide quantifiable air pollution benefits
 - Document planning process for project
 - Provide a thorough project implementation strategy.
 - Bring Match:
 - Project awarded in Colorado provided 50% or greater State and Local Match

Funding Options:

- 2017 \$1.4 Million 5339c Low/No Award:
 - CDOT's Approach: (\$8.5 Requested)
 - Divide the funds base on proposed percentage of local match.
 - RFTA - \$715,531 Award = 1 – 40 foot bus
 - Vail - \$525,287 Award = 1 – 40 foot bus
 - Via Mobility - \$209,182 = 1 – 35 foot bus



Funding Options:

- 2018 Low and No Emission Grant Request
 - Request: \$20.2 Million
 - 7 Projects
 - 6 Mountain Resort Locations
 - FTA Award - ?



Technical Assistance:

- 2018 Spring CASTA Conference: May 2018
 - Electric Bus Day:
 - Cost/Benefit Analysis
 - Operational Considerations
 - Specification, Purchasing and Maintenance
 - Development to Watch
 - Peer to Peer Stories
 - Electric Bus Showcase



Technical Assistance:

- Refuel Colorado
 - Colorado Energy Office: “Fleet Coaches”
 - Help identify monetary savings and other advantages
 - Calculate life-cycle cost saving
 - Provide technical guidance
 - Fueling/Charging, Maintenance, and Safety
 - Advise on funding options
 - Location, vehicle class, and fuel type



REFUEL
COLORADO
FLEET COACHING

Electric Bus Trials:

- Breckenridge, Colorado
 - April 2018 – 22 Days
 - Total Distance Traveled: 1,660 miles
 - Max Daily Mileage: 139 miles
 - Average Speed: 9 mph
 - Total Charge Energy: 3,500 kWh
 - Average Efficiency: 2.1 kWh/mi



Electric Bus Trials:

- Breckenridge, Colorado
 - Lessons Learned:
 - Riders waited for the EB
 - High volume of calls asking where the EB went
 - Quieter than Diesel Bus
 - High Efficiency Tires are not snow/ice friendly

