ROARING FORK TRANSPORTATION AUTHORITY

Climate Action Planning Update

November Monthly Board Meeting

Thursday, November 10th, 2022

Presentation Summary

Review of Project Background and Purpose

- Importance of climate action planning
- Climate quiz
- Current emissions landscape
- Review of stakeholder and partner strategies

Establishing a Vision for the Future

- Purpose, need, vision, and goals
- Strategy breakdown by emissions totals
- Stakeholder workshop summary

Action Items and Next Steps

- Project status to date

Conclusion and Discussion

Project Background and Purpose

Project Background and Purpose

Project Need

Transportation is now the highest source of greenhouse gas emissions in the United States, accounting for 29 percent of U.S. emissions. In RFTA's service region, the associated climate impacts already are being felt through the increased presence of wildfires, flooding, and reduced snowpack.

Project Purpose & Vision

RFTA's Climate Action Plan (CAP) will define aspired agency targets with tactical recommendations over a three- to seven-year timeframe that are both action- and customer-oriented and based on a common understanding of the strategic context and future scenarios.

Project Goal *(draft)*

Create achievable climate action steps by setting greenhouse gas (GHG) emissions reduction targets and strategies.

Project Background | Regional Context

Roaring Fork Transportation Authority Service Territory

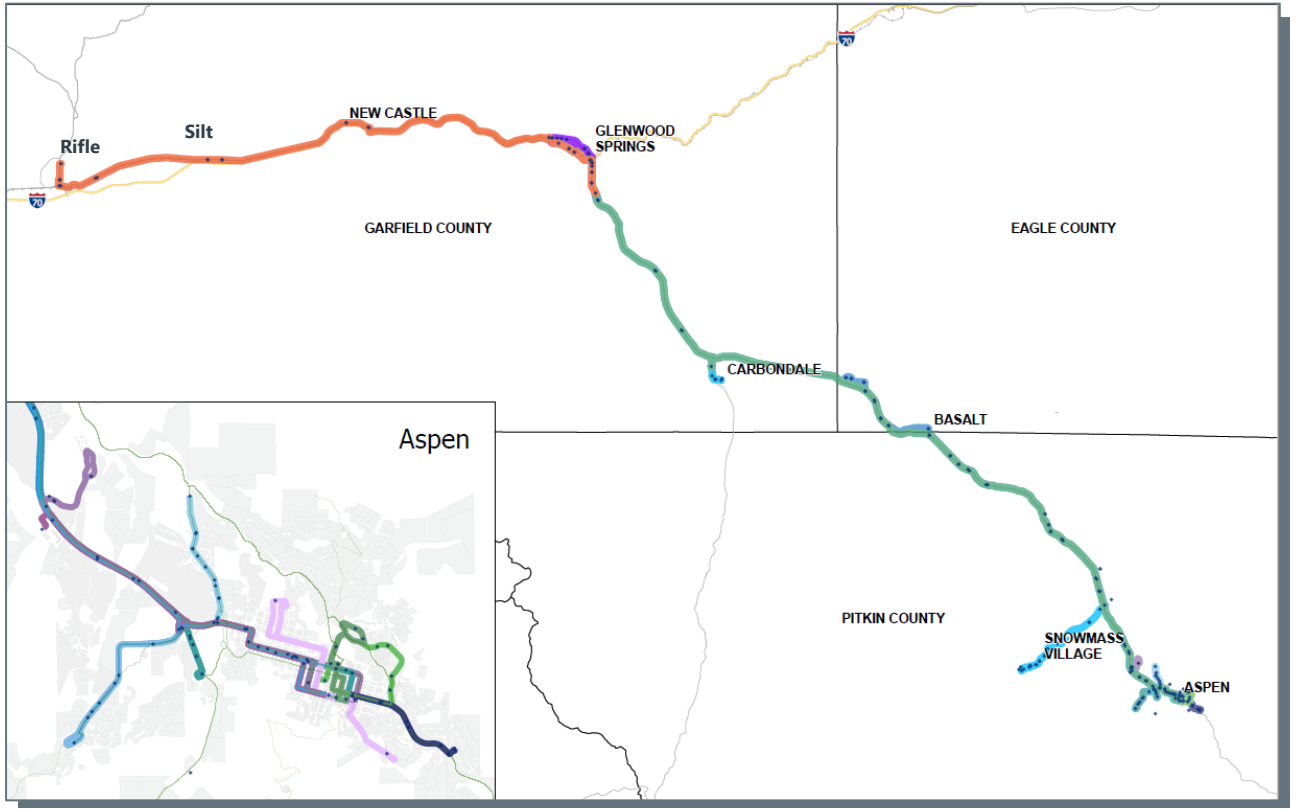
RFTA is the largest rural transit provider in the United States.

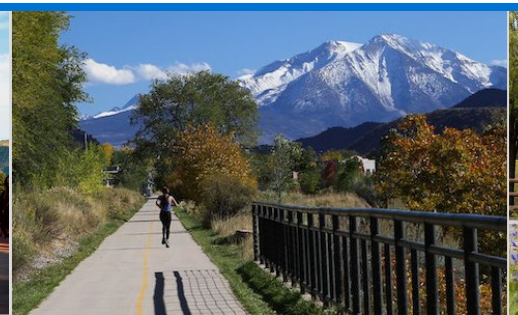
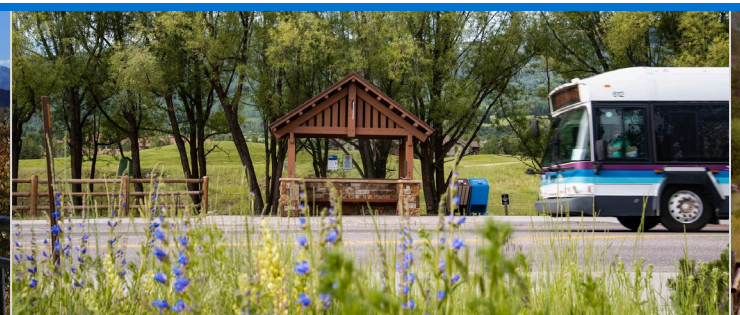
RFTA's service region spans 70 miles from Aspen to Rifle.

RFTA buses travel approximately 5.3 million miles per year, significantly supporting regional mobility.

RFTA hosts nearly 5.5 million rider trips annually. (5,408,532 in 2019)

RFTA owns and co-manages 34 miles of the Rio Grande Corridor/Rio Grande Trail which receives 75,000 non-motorized users annually.



Project Background | Approach

8-Month Project Timeframe

Phase 2

Technical discovery of RFTA's emissions profile will provide baseline insights for developing an effective climate action plan with targeted emission reductions.

Phase 4

Preparing for the future, an implementation and monitoring program will be created that encompasses RFTA's climate strategy, emergency mitigation priorities, progress tracking, and associated funding opportunities.

Phase 1

Establishing a vision for the future will be a critical first step in setting a strong foundation for RFTA and its stakeholders for developing an effective climate vision and goals through professionally facilitated working sessions and consistent biweekly and monthly reporting on progress and outcomes.

Phase 3

Climate action plan (CAP) development will build upon the previous visioning sessions and technical discovery to produce strategies that are uniquely tailored toward enabling RFTA to track and accomplish its climate goals through an achievable, action-oriented programmatic approach.

Project Background | Approach

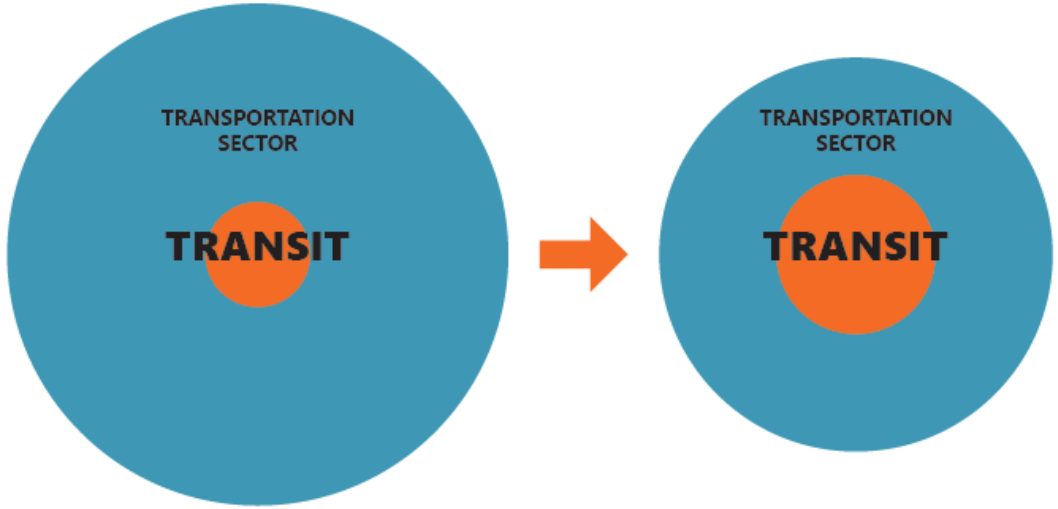
THE EFFECT OF TRANSIT ON EMISSIONS

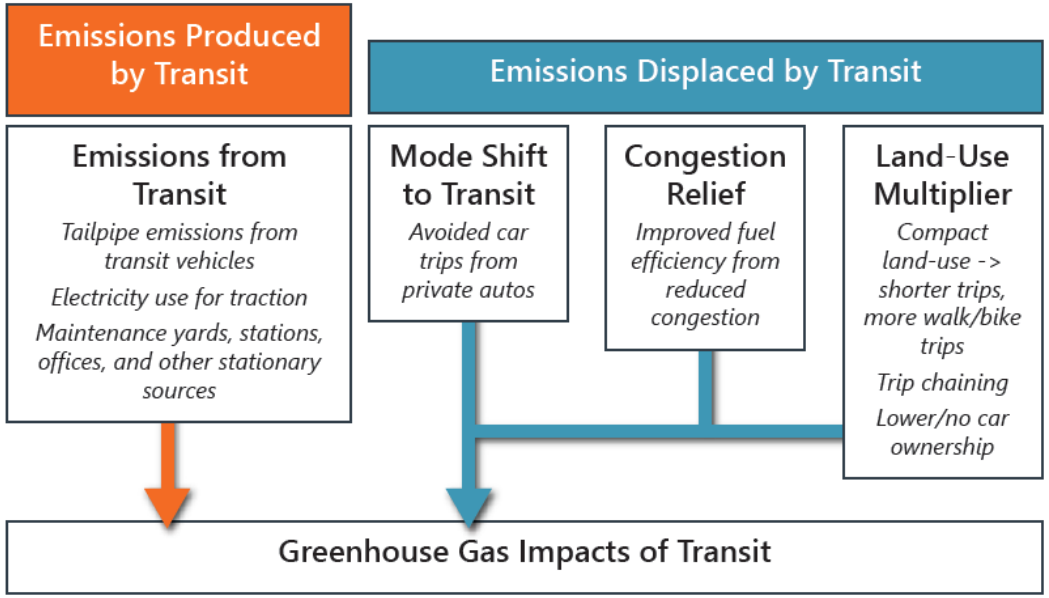
Broader impacts associated with RFTA's operations include helping to displace regional transportation sector emissions including:

- Shifting users from less carbon-efficient modes to transit.
- Reducing congestion and its associated emissions.
- Coordinating to enable more compact development patterns which allow for shorter and fewer vehicular trips to be made.

Primary actions and strategies for reducing RFTA's carbon intensity include:

- Direct agency operations
- Broader transportation impacts associated with RFTA's operations





Climate Technical Discovery

Technical Discovery | National, State, & Local Context

NATIONAL

$550 billion
Infrastructure Investment and Jobs Act

→

$180 billion
Clean Energy, Power, Water, and Energy Efficiency

→

$108 billion
Authorized for Public Transportation

STATE & LOCAL

90% by 2050
Greenhouse Gas Pollution Reduction Roadmap

→

80% by 2050
RFTA Membership Communities

→

Today
RFTA Climate Action Plan & Stakeholder Workshop

"We are taking an important step forward in tackling transportation's share of the climate challenge, and we don't have a moment to waste. **Our approach gives states the flexibility they need to set their own emission reduction targets, while providing them with resources from President Biden's Bipartisan Infrastructure Law to meet those targets and protect their communities.**"

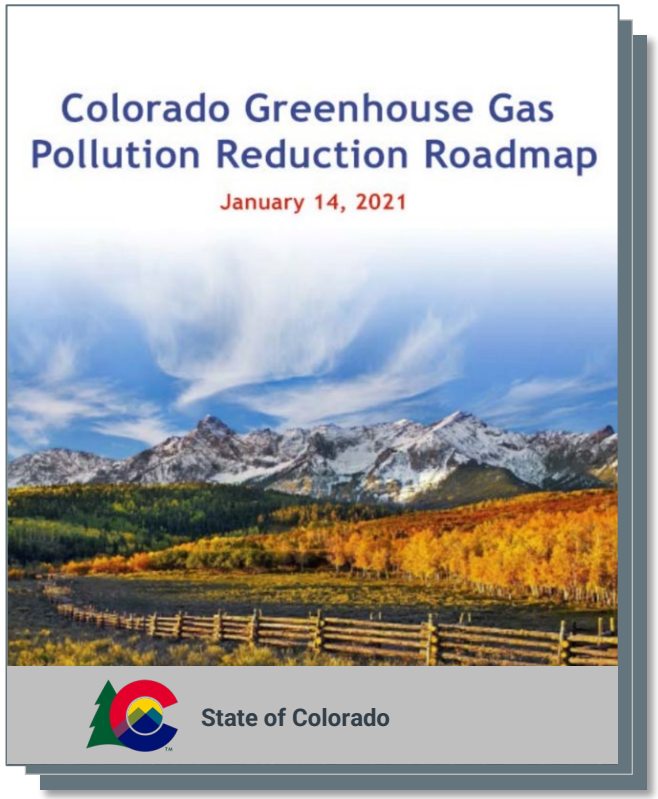
– Pete Buttigieg,
US Transportation Secretary

Technical Discovery | National, State, & Local Context

50
Leading climate action plans surveyed

11
Including state and local plans

+1,000
Strategies assessed



Common Themes

- **Focus on transportation** as a critical sector for greenhouse gas reductions.
- **Land use** as an important area for partnership and growth between mobility and planning groups.
- **Social equity** as a key driver for climate action strategies.
- **Combined energy efficiency and decarbonization** strategies.
- **New technology** as an accelerator for meeting climate goals.

Key Takeaways

- What are the biggest threats from climate change at the local level?
- How can public organizations strategically coordinate around common themes for reducing emissions?
- How can climate goals and actionable items best support regional collaboration?
- How can land use and multi-modalism be used to promote both social equity and environmental sustainability?

Technical Discovery | Stakeholder and Partner Strategies

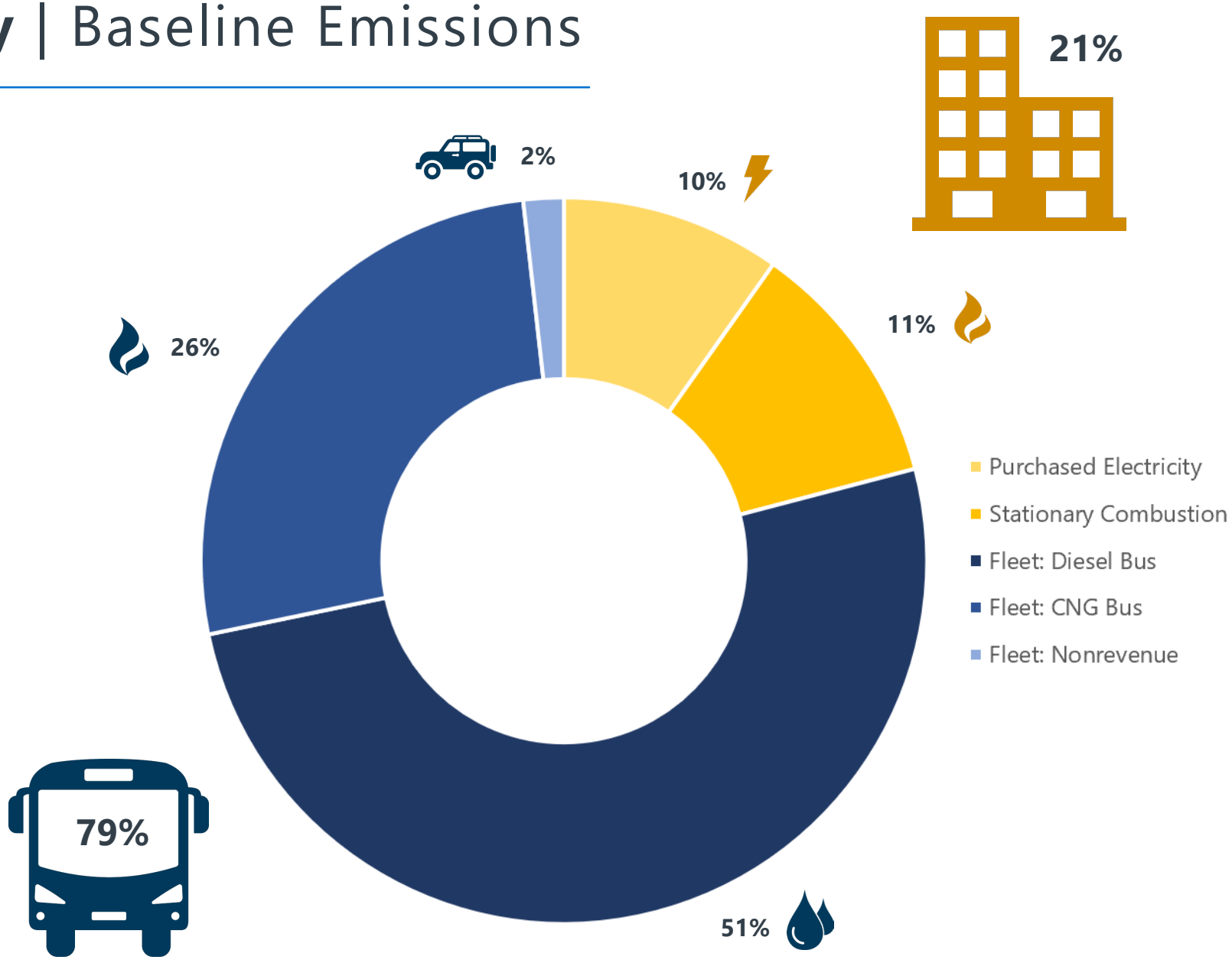
Strategy Categories	Aspen City Council	Carbondale City Council	Eagle County	Garfield County
Plan & Year	Climate Action Plan, 2017	Climate and Energy Action Plan, 2017	Climate Action Plan, 2016	Energy Action Plan (2017)
Transit and Multimodalism		Increase percent mode share of travel by walking, biking, and public transit	Fund rail transit opportunities, Incentivize multi-modal transportation (commuter rail, BRT, etc.)	
Land Use and Connectivity	Enhance first and last connectivity, Redesign urban form and population density		Compact, mixed-use communities and land use patterns + affordable housing	
Fuels (alternative fuels and fuel efficiency)	Promote alternate fuel vehicles	All vehicles use low-carbon fuels	Expand network of electric vehicle (EV) charging stations, purchase EVs	Development and maintenance of EV charging stations and CNG stations
Vehicle Miles Traveled (VMT) Reduction	Reduce vehicle miles traveled (VMT)			
Technology	Promote new mobility technologies			
Policy (fees and incentives)	Increase cost of driving			
Estimated Emission Reduction	**80% (2050)**	**No stated GHG reduction goal**	**10% (2025)**	**20% (2015), 35-50% (2030)**

Strategy Categories	Glenwood Springs City Council	Pitkin County	Town of Basalt	Town of New Castle	Town of Snowmass Village
Plan & Year	Energy and Climate Action Plan, 2009	Climate Action Plan, 2017	Eagle County CAP *(addendum)* , 2017	Climate Action Plan (2009)	Sustainability Plan (2022)
Transit and Multimodalism	Improve public transportation for more frequent service, longer hours, and more served	Increase ridership of public transit	Fund rail transit opportunities, Incentivize multi-modal transportation (commuter rail, BRT, etc.)	Promote alternative transportation methods including biking, public transit, and carpooling	Increase bike presence for commuters and travelers with e-bikes and WE-cycle partnership
Land Use and Connectivity			Compact, mixed-use communities and land use patterns + affordable housing		
Fuels (alternative fuels and fuel efficiency)	Raise fuel efficiency standards, Purchase low-emission, fuel-efficient, clean-burning vehicles	Require shuttles and rentals to meet mile per gallon (MPG) standards	Expand network of electric vehicle (EV) charging stations, purchase EVs		Expand EV Charging Station Network and Solar Power Network
Vehicle Miles Traveled (VMT) Reduction	Reduce vehicle miles traveled (VMT)	Increase vehicle occupancy/ride share			
Technology					Promote use of The Good Traveler online program to provide travelers with sustainable options
Policy (fees and incentives)	Policies and initiatives to increase telecommuting or non-vehicular commuting for city employees			Policies, initiatives, and publicity campaigns to promote sustainability efforts	Continue providing free shuttle system to residents and guests of the town
Estimated Emission Reduction	**25% (2012)**	**20% (2020), 80% (2050)**	**25% (2025), 80% (2050)**	**30% (2020), 80% (2050)**	**62.5% (2030), 100% (2050)**

Technical Discovery | Baseline Emissions

RFTA's 2050 Climate Baseline and Forecast

- **Nearly 80% of RFTA's total emissions** come from bus and vehicle fuels.
- **More than 50% of emissions** come from the combustion of diesel fuel.
- **Approximately 20% of emissions** come from building electricity and natural gas usage.
- **During 2019, the plan's baseline emissions year**, RFTA's emissions totaled 12,795 metric tons of greenhouse gases.



Technical Discovery | Baseline Emissions

EMISSION APPROACH AND METHODOLOGY

Public Transportation is a Climate Solution

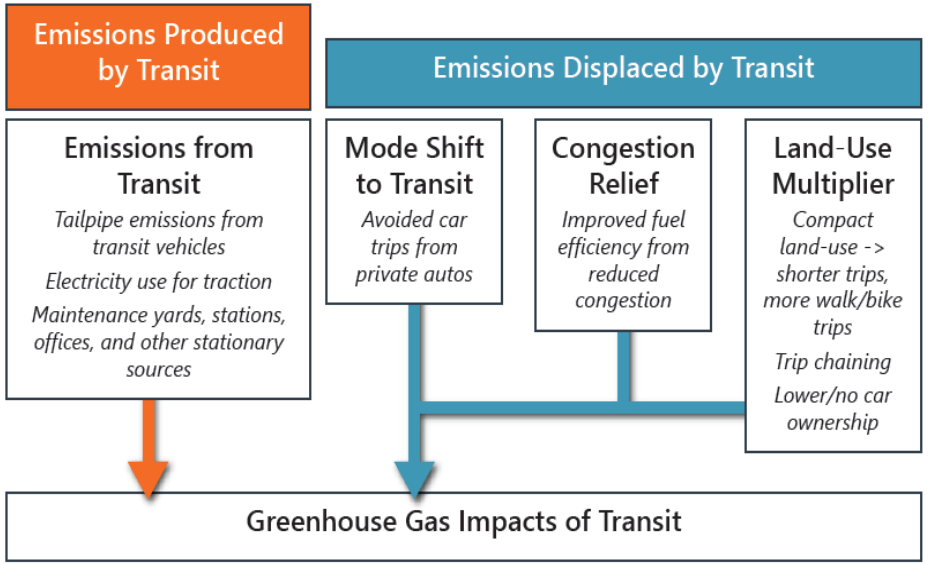
A trip on public transit emits
55% fewer greenhouse gas emissions
than driving or ridehailing alone.

Center for Neighborhood Technology

SCOPE 1
- Stationary combustion
- Mobile combustion
- Fugitive emissions

SCOPE 2
- Electricity use

Special Planning Feature | Emissions Reductions from Transit



RFTA ridership is a primary element of scope 1 and 2 offsets as well as influencing regional transportation factors that are external to core RFTA operations.

RFTA ridership is a highly consequential climate action strategy that reduces regional emissions by offering services for more passengers to ride buses and reduce private vehicle trips with higher cumulative emissions.

Preliminary studies indicate that RFTA's ridership levels may serve to offset the agency's collective scope 1 and 2 operational emissions.

Establishing a Vision for the Future

Results pending, to be shared at November board meeting.

Establishing a Vision for the Future | Stakeholder Input

Transit Services
Increased ridership and passenger boardings
Electric and alterantive fuel buses
Renewable energy development for battery electric bus (BEB) charging
Increased transit routes
Bus rapid transit (BRT)
Commuter rail (ex. Rio Grande railroad corridor / Rio Grande trail)
Priority lanes or roads for transit buses
Free or low-cost fares for public transit
Increased route connections with pedestrian and bicycle routes
Access to EV charging at park-and-rides, administrative buildings, and other transit facilities

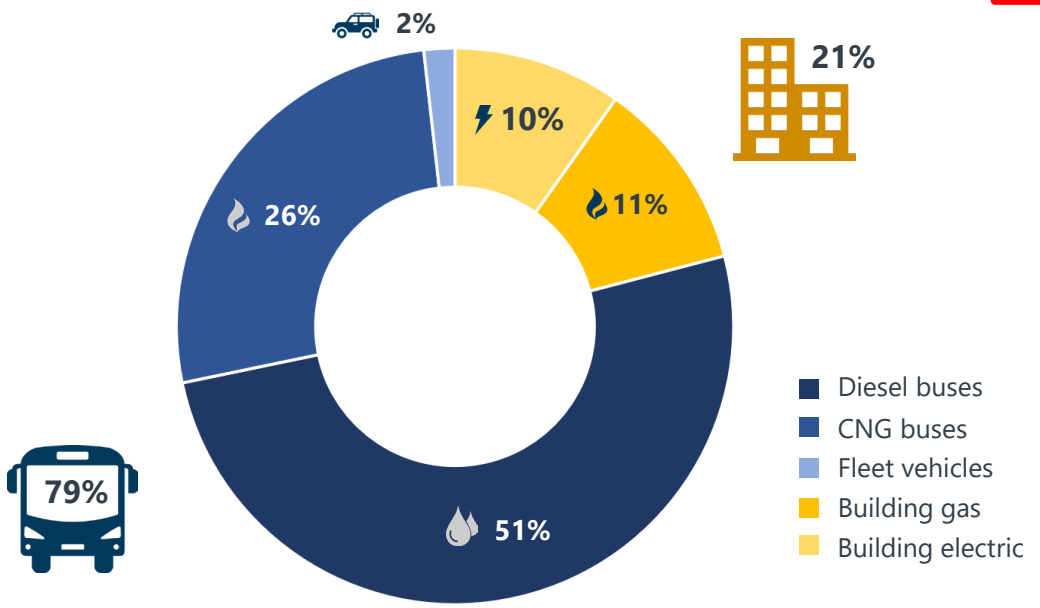
Land Use Connection
Transit oriented development (TOD)
Jobs: Connected housing, jobs, and transit
Connectivity: Enhanced first and last mile connectivity to transit
Parking: Policies to disincentivize single ocupancy vehicle use (ex. reduced spaces, increased prices)
Emissions: Emission-free / Low-emission transportation districts
Mobility Hubs and Parking: Incentivized park-and-ride locations
Equity: Enhanced transit services to underserved communities
Increased urban density
Resilience: Transit services for climate-related events (ex. wildfires, flooding)
Conservation: Promotion of smart land use and conservation through transportation developments

Agency Operations
Green buildng codes for new transit facilities (construction and operations)
Renewable energy generation on-site at agency facilities
Purchased renewable energy
Electric and alternative fuel vehicle procurement for agency fleet
Building energy efficiency measures
Telework options for agency employees
Electric vehicle (EV) incentives for employees through offering workplace charging
Public EV charging through leverage agency infrastrcuture
Reduced waste to landfills
Water conservation measures

Strategies developed through review of national and international best practices.

KEY - Greenhouse Gas Reduction Impact

- > 75% of agency emissions
- 10% to 25% of agency emissions
- < 10% of agency emissions



Action Items & Next Steps

Action Items & Next Steps | Project Status

8-Month Project Timeframe

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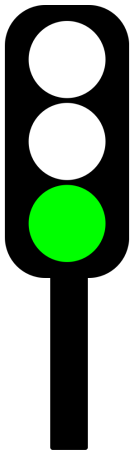
Current Project Status Is GREEN

Project scope, schedule, and budget are on track for completion within the anticipated 8-month planning timeframe.



Action Items & Next Steps | Next Steps

KEY DECISION ITEM
- Set overall emissions target to guide strategy selection and development
- Allow strategy selection and development process to cumulatively determine overall emissions target

Establishing a Vision for the Future (complete)
- Kickoff meeting & board presentation
- Facilitated workshop pertaining to the CAP's purpose, need, vision and goals
- National review of leading climate action plans

Technical Discovery (complete)
- Baseline emissions inventory considering RFTA's internal operations and facilities relative to regional transportation and land use trends.

Climate Action Plan Development (pending)
- Modifiable master spreadsheet for measuring CAP criteria, supported by user-friendly, open-source tools
- Evaluation criteria and measurement process for climate action strategies
- Master list of potential strategies
- Documented process for strategy screening and advancement of promising strategies for further development
- Refined set of cost-benefit-based strategies tailored to RFTA's unique operational environment
- Implementation program guidance

Preparing for the Future (pending)
- Implementation and monitoring program
- Identification of unique funding sources and opportunities
- Framework for annual plan evaluations and updates

Thank you!

RFTA Climate Action Planning Update

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