



SERVING CENTRAL PENNSYLVANIA



Susquehanna Regional Transportation Authority

Climate Action Plan 2024



Contents

Executive Summary.....	3
1. Introduction	4
2. Agency Overview	5
3. Emissions Inventory	9
4. Past and Current Initiatives	11
5. Emissions Reduction Goals and Strategies	14
6. Strategies and Actions	15
7. Implementation and Monitoring.....	20



Executive Summary

The Susquehanna Regional Transportation Authority (SRTA) has engaged in sustainable practice through various initiatives and projects throughout the past several decades. Perhaps more important is the express intent that this Climate Action Plan builds upon previous tradition and defines additional actions that can further decrease Greenhouse Gas (GHG) emissions into the future.

Transportation is a major source of GHG emissions in the United States, accounting for 29 percent of 2019 GHG emissions. Public transit is critical to the sustainability landscape as it improves efficiency of transportation by allowing multiple people to travel together reducing the cumulative impact of low occupancy vehicles, resulting in reduced overall vehicle emissions and pollutants.

Reducing GHG emissions and adapting to changing climate conditions requires collective action and alignment with local, regional, state and federal partners.

SRTA's intent is to identify opportunities to reduce GHG emissions from SRTA vehicles, from SRTA facilities and further define opportunities as they relate to community impact.

SRTA will continue to leverage partnerships and integrate goals and strategies related to sustainability into the agency's strategic plan to strengthen the commitment to the communities it services and set the stage for continuing to serve as a steward of climate sustainability.



1. Introduction

This Climate Action Plan intends for the realization of sustainable transit practices involving the balancing of costs, risks, opportunities and performance benefits while tying investment priorities to SRTA's goals, objectives and overall mission. This plan includes strategies to optimize environmental sustainability and decrease GHG emissions in alignment with Federal, State and local goals.

The scope is limited to the operations and regional footprint of the Susquehanna Regional Transportation Authority and its involvement within the communities of Adams, Columbia, Cumberland, Dauphin, Franklin, Montour, Northumberland, Perry, Snyder, Union and York counties.

This plan was developed by SRTA staff using existing data from SRTA and with available data and tools from local, State and Federal partners. It provides a baseline for evaluating the impact SRTA provides on reducing GHG emissions in the region. The plan also provides strategies to collaborate with partners to work towards meeting sustainability targets.

SRTA will utilize the plan to guide operations toward reducing climate impact and promoting responsible actions within the communities it serves. The plan will serve as a tool to direct the Authority's sustainability actions and decisions with respect to vehicle purchases, fuel consumed and facility operations.



2. Agency Overview

The Susquehanna Regional Transportation Authority (SRTA) does business as “rabbittransit” and has been a public transportation provider since 1974 in accordance with the Pennsylvania Municipalities Act. Over the past 12 years, the Authority has consolidated multiple county transportation services/entities and now serves a regional footprint of more than 5,600 square miles for the counties of Adams, Columbia, Cumberland, Dauphin, Franklin, Montour, Northumberland, Perry, Snyder, Union and York, in addition to the City of Harrisburg.

SRTA provides fixed route service in the Harrisburg Capital Region, greater Gettysburg area, and in York County. It offers commuter express service in Adams, Cumberland, Dauphin and York Counties and Paratransit Shared Ride Service throughout its entire 11-county service area.

In August 2018, SRTA launched its Microtransit pilot project known as Stop Hopper. The demonstration pilot brought on-demand transit to the areas of East York and Red Lion in York County. rabbittransit grew its Microtransit service, and expanded it to Selinsgrove and Sunbury in Northumberland and Snyder Counties and Lewisburg, West Milton, Milton, Danville and Bloomsburg, which cover parts of Union, Northumberland, Montour and Columbia Counties. In Fiscal Year 2021-2022, SRTA developed Microtransit service for the Chambersburg community in Franklin County.

In FY 20-21, SRTA conducted a comprehensive assessment of its existing Capital Region transit service to establish a vision for what transit should be in 2020 and beyond. Input from the public including riders, stakeholders and key members of the community was significant to the creation of the Capital Region service redesign and route adjustment. The study and redesign was the first comprehensive assessment completed in the transit area’s 45-year history. The service redesign aimed to provide efficient and effective public transportation in Cumberland & Dauphin counties and the City of Harrisburg.

In February 2021, SRTA, in partnership with @Home in Adams County, launched a new pilot program focused on workforce development. The Gettysburg-Hanover Connector is a fixed route bus service that connects the two main communities of Gettysburg and Hanover through New Oxford. Part of Governor Wolf’s Workforce Development Program, the pilot aims to help eliminate the transportation issue that many employers face by focusing on providing access to employment opportunities in areas currently not accessible by public transit.

In March 2022, on behalf of the Pennsylvania Department of Transportation (PennDOT), SRTA began providing oversight and coordination of the statewide Intercity Bus Program (ICB). ICB provides daily long-distance, fixed-route coach transportation options for rural areas. The program operates 10 routes that service 65 stops across Pennsylvania connecting rural communities to urban hubs, as well as supporting connections with Amtrak, airports, local transit authorities, and beyond. The long-term goal of ICB is to provide greater access to rural and urban residents by coordinating transfers and ticketing with fixed-route and shared-ride public transportation. SRTA’s oversight of ICB will provide an innovative and efficient way to satisfy rural residents’ needs for travel throughout the Commonwealth and the national transportation system.

SRTA offers service in both urbanized areas as well as rural counties and provides more than 4 million trips a year.

SRTA operates two centralized maintenance and operations facilities in York and Harrisburg, PA and several administrative offices and operations facilities in its rural counties. In addition, SRTA operates three transit transfer hubs and houses two CNG fueling stations.

In 2012, the Gettysburg Transit Center was constructed at a former Petro fueling station adjacent to the Historic Gettysburg Railroad Station. The transportation hub serves as a transfer connection area for fixed route buses and a boarding location for the rabbitEXPRESS commuter service between Gettysburg and Harrisburg. Site enhancements included streetscape improvements with landscaping and pedestrian scale lighting, storm water management rain gardens to improve runoff water quality, plus four bus bays. The southerly property boundary was improved to incorporate a connection with a bike path and other site amenities including, lighting, landscaping and a bike rack. Ground mounted wayfinding signage was also provided and a heritage sign presenting the history of the former Sheads Buehler Building that used to occupy the property.



In February 2015, renovations were completed for SRTA’s Gettysburg administrative offices. Significant interior damage required demolition. The location serves as the depot for bus departure as well as a customer service location for members of the public to purchase tickets, ask questions or submit Shared Ride applications.

In June 2015, shovels broke ground as a former Pfaltzgraff distribution center became the focus of major renovations. The property became the York central operations and maintenance facility of SRTA, allowing for much needed expansion to house vehicles and administrative staff supporting a multi-county regional transit operation.

In 2016, renovations were completed for the operations facility in Elysburg in Northumberland County.

In FY 21-22, many initiatives advanced to address infrastructure needs and maintaining a state of good repair. An evaluation of safety and security was conducted at the current Harrisburg facility as the original trolley barn site is more than 100-years old. Emergency floor repairs and various updates were made as SRTA began to make plans for its future Harrisburg site, which included working on a conceptual charrette for a new facility with PennDOT, Susquehanna Township, Dauphin County and Stantec. Additionally, shared ride infrastructure in rural counties remained a priority, as the goal is to have buses under roof for safety and security as well as to extend the vehicles' lifespan. Facility evaluations were conducted in Franklin, Perry, Northumberland and Union counties to better understand needs and opportunities for sheltering vehicles.

In May 2021, SRTA's Capital area welcomed the completion of new safety improvements to the Market Square Transfer Center in the Harrisburg region in coordination with the Pennsylvania Department of Transportation (PennDOT) and Mayor Eric Papenfuse. The Market Square Transfer Center project included the addition of improved signals and signage, ADA ramps and a new crosswalk at 2nd Street driveway entrance, updated bus loading zones, leaning rails, and new bus shelters. Illuminated Pedestrian warning signals were also added to indicate that a bus may be approaching. The project aimed to make both pedestrians and riders safer at the Transfer Center improving accessibility and protection while enhancing the overall travel experience.

January 2022 marked the grand opening of the new Middletown train station. SRTA's Capital region provides service to the Middletown Train Station via route 7, offering a direct connection to and from the train station, to the Harrisburg International Airport and to downtown Harrisburg. The transit authority oversees the parking management and maintenance responsibility for the Middletown Train Station on behalf of PennDOT. The new train station is owned by PennDOT and is served by Amtrak, public transit, taxi, bicycle, and rideshare services.

In May 2022, SRTA celebrated the completion of construction on its King Street Station, formerly known as the Downtown Transfer Center. The station in downtown York was upgraded to feature better lighting, more ADA-friendly enhancements, new design features related to safety and security, and a greater roof clearance to accommodate CNG bus height, among other renovations.



FY 22-23 Infrastructure Update:

- Carlisle Facility: Design phase advanced and contracts issued for construction for facility to support Cumberland County operations. The project will include an administration building, a bus barn to house vehicles and onsite bus wash.
- Capital Region Facility: Purchased adjacent property to the existing Capital Region office owned by Goodwill and began design for a new Administration and Operations facility.
- Harrisburg Train Station Bus Shelters Renovation: Renovations began in March 2023 and included new glass walls and ceiling, lighting improvements, new metal benches, real-time schedule monitor display and installation of a bike pad.



The annual budget for SRTA is approximately \$62 million. As a municipal Authority, SRTA collects approximately 13% of operating costs through rider fares. The remainder is funded by a combination of operating revenues and Federal, state and local operating, planning and capital grants.

3. Emissions Inventory

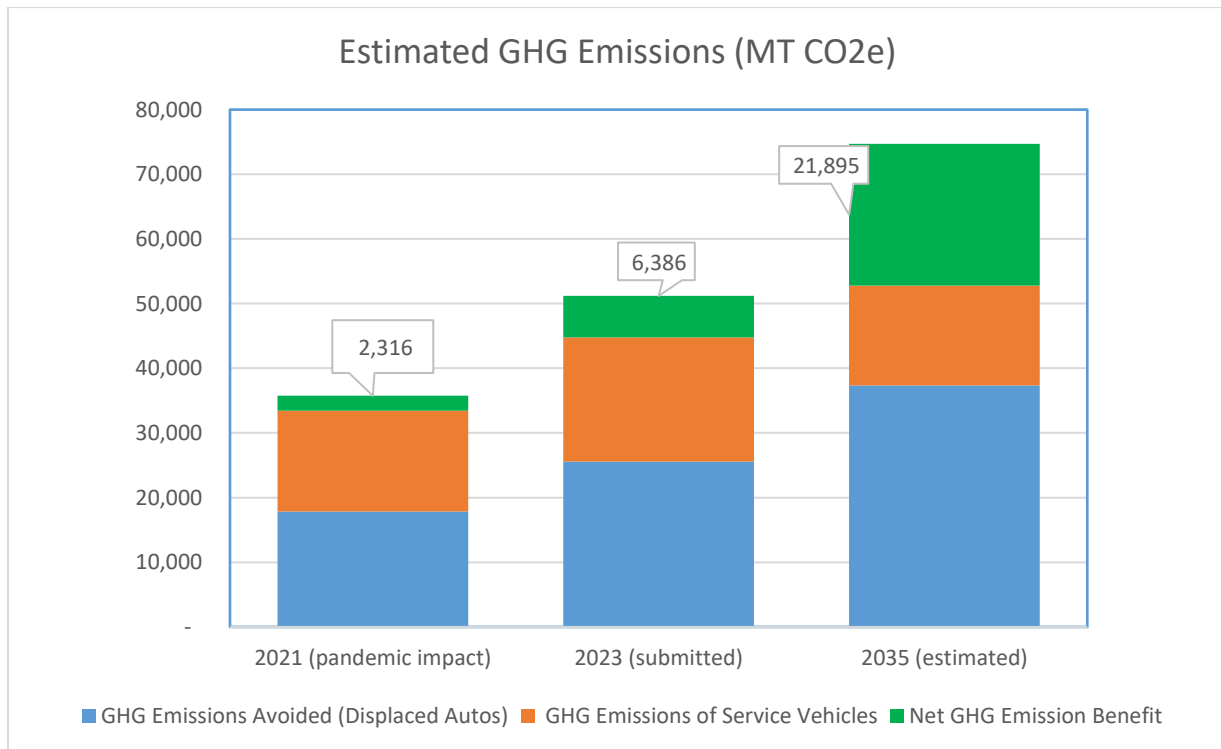
SRTA made its initial move to the alternative fuel compressed natural gas (CNG) with the first fleet replacement CNG vehicles in 2017. These eight vehicles went into service in fiscal year 2018. The fleet replacement policy - moving toward alternative fuels by replacing fixed route heavy-duty diesel vehicles and some demand-response gas vehicles with CNG vehicles - has continued steadily since that time. The full fleet conversion should be completed by 2035. (See Ch. 6 for more details on fleet conversion through vehicle replacements.)

SRTA’s Greenhouse Gas (GHG) Inventory is comprised of two parts:

- GHG Emissions Avoided or GHG Emissions of Displaced Autos – based on NTD reported and estimated Passenger Miles Traveled (PMT)
- GHG Emissions of Service Vehicles – based on NTD reported and estimated fuel usage by fuel type

The net of these two parts (GHG Emissions Avoided – GHG Emissions of Service Vehicles) is the GHG benefit (positive or negative) of transit services provided by SRTA.

Data from the 2021 NTD, 2023 NTD submitted data, and estimated 2035 were used to calculate the estimated GHG Emissions values for the GHG Emissions Avoided and the GHG Emissions of Service Vehicles shown in the chart and table below. For all years, the net of these values resulted in a positive benefit.



Estimated GHG Emissions (MT CO2e)

	2021	2023 (submitted)	2035 (estimated)
<i>GHG Emissions Avoided (Displaced Autos)</i>	17,873	25,589	37,350
<i>GHG Emissions of Service Vehicles</i>	15,557	19,204	15,455
Net GHG Emission Benefit	2,316	6,386	21,895

The 2021 and 2023 years show the impact of the COVID-19 pandemic, along with the impacts of the continuing fleet conversion from gas/diesel to CNG fuel. The 2035 numbers show the estimated impact of full fleet conversion. SRTA will continue to evaluate GHG emissions at regular intervals to track the GHG impact of the fleet conversion to diesel-alternative fuels with submitted NTD data.



4. Past and Current Initiatives

SRTA has engaged in sustainable practice through various initiatives and projects. The following include past and current initiatives of SRTA, which improve sustainability of the agency and impact on the community.

In 2005, SRTA (dba rabbittransit) announced its partnership with the City of York to use biodiesel in some City and transit vehicles. The pilot program, which began with eight SRTA buses utilizing B20 (20 percent biodiesel), rapidly expanded and in July 2006, SRTA introduced B5 fuel into all of its vehicles. A total of 61 buses operated on biodiesel and were collectively responsible for more than 1.7 million rides a year.

In addition to the environmental benefits of cleaner burning fuel, biodiesel contributes to the economy through its soy-based production. Biodiesel is produced domestically, thereby reducing reliance on foreign oil. SRTA was the first public fleet in Pennsylvania to use biodiesel on a regular basis and was awarded a Pennsylvania Department of Environmental Protection grant to cover the extra cost of biodiesel fuel. It received the Power Award from PennFUTURE and the Renewable Ag Energy Council Leadership Award.

In June 2016, SRTA launched a public Compressed Natural Gas (CNG) fueling station. The station was created through a public-private partnership (P3) with PennDOT and Love's Trillium CNG. While the location in York was primarily built to meet the needs of SRTA's growing fleet of CNG buses, it is also open to the public 24/7. The station provides service to vehicles of all sizes, including light-, medium- and heavy-duty trucks.



In 2016, SRTA, in partnership with the York Area Metropolitan Planning Organization, completed a park and ride study that identified I-83 and Exit 4 to be an ideal location for a park and ride in Southern York County. SRTA secured property in Shrewsbury Borough and advanced the park and ride location to increase commuter ridership.

In August 2017, SRTA acquired eight Compressed Natural Gas (CNG) vehicles to introduce into its fleet since the opening of its public CNG station. SRTA converted another 10 diesel buses to CNG over the next four years.



In Fiscal Year 2018-2019, a Compressed Natural Gas (CNG) fueling station was added at the Gettysburg facility located in Adams County. SRTA again partnered with Trillium for the coordination and installation of the project. The CNG fueling system is a “timed fill” and allows multiple vehicles to be fueled at the same time. Two new CNG vehicles were added in January as part of the Gettysburg fleet. These were the first of their kind to be put into service in Adams County since the opening of the CNG station in October.

SRTA is an active participant of a PennDOT 3P collaboration for the utilization of CNG and are obligated to participate in this particular alternative fuel source program until 2033.

SRTA is an active participant of a PennDOT Public Private Partnership collaboration for the utilization of CNG and are obligated to participate in this particular alternative fuel source program until 2033. PennDOT is a major funder in the provisions of public transit in the Commonwealth of Pennsylvania. In 2034, there are 5 transit coaches that are scheduled to be replaced. As we approach this milestone, we will evaluate electrification or other alternative fuels as potential viable options.

Public transit improves efficiency of transportation by allowing multiple people to travel together

with the effect of reducing the cumulative impact of low occupancy vehicles, resulting in reduced overall vehicle emissions and pollutants. Transit also reduces the scale of roadway capacity needs and parking infrastructure by facilitating compact development and decreasing the demand for vehicle trips.

In February 2018, SRTA launched a new partnership with ES3, a large local employer, to expand service along its fixed route corridor between the City of York and the industrial park area. Given that transportation is a huge barrier for those seeking employment, the partnership makes it possible to provide additional service as E3S helps contribute to the cost of operating assistance.

In August 2018, SRTA advanced another new partnership with FedEx Ground to expand service along its fixed route corridor between the City of York and the FedEx Ground site in Lewisberry. This was the second employer partner along the northern I-83 Corridor and continued successfully in part due to its best practices. It hosted the first-ever job fair at the downtown Transfer Center to connect directly with riders as potential job candidates.

In 2021, the Commonwealth of Pennsylvania adopted a Climate Action Plan with a goal of reducing GHG emissions 26% by 2025 and 80% by 2050. The 2017 baseline data showed net GHG emissions in Pennsylvania to be 233.7 MMTCO₂e, with 24% of that coming from transportation. That percentage includes all forms of transportation: public, private and commercial. Of the strategies developed in that plan, those affecting public transportation include:

- Increase fuel efficiency of light duty vehicles and reduce vehicle miles traveled for single occupancy vehicles
- Increase adoption of light-duty electric vehicles
- Institute a low-carbon fuel standard to reduce the carbon intensity of transportation fuels
- Implement a multi-state memorandum of understanding to make all medium- and heavy duty vehicle sales zero emission vehicles by 2050

To aid in the reduction of single occupancy vehicles, SRTA staff serves as a board member and Executive Committee member of the non-profit Susquehanna Regional Transportation Partnership (SRTP). SRTP operates Commuter Services of PA, a professionally staffed organization funded by federal Congestion Mitigation & Air Quality funds. Through their free services they work to reduce traffic congestion by helping commuters find alternatives, other than driving alone, and by reaching out to employers so they can help their workforce find those options. SRTA has been a partner of SRTP since the organization's inception in 2005.

SRTA staff has a long history of being voting members and active participants with all MPOs/Planning partners in our service region including:

- York Area MPO Technical Committee
- York Area MPO Coordinating Committee
- ACTPO (Adams County Transportation Planning Organization)
- Franklin County Technical Advisory Committee (TAC)
- Franklin County MPO Policy Board
- Harrisburg Area MPO Technical Committee
- Harrisburg Area MPO Coordinating Committee
- SEDA-COG MPO Board

5. Emissions Reduction Goals and Targets

The following goals provide a framework for identifying and prioritizing opportunities for reducing SRTA and the region's GHG emissions:

- 1. Identify opportunities to reduce greenhouse gas emissions from SRTA vehicles**
- 2. Identify opportunities to reduce greenhouse gas emissions from SRTA facilities**
- 3. Identify opportunities to reduce greenhouse gas emissions as it relates to community impact**

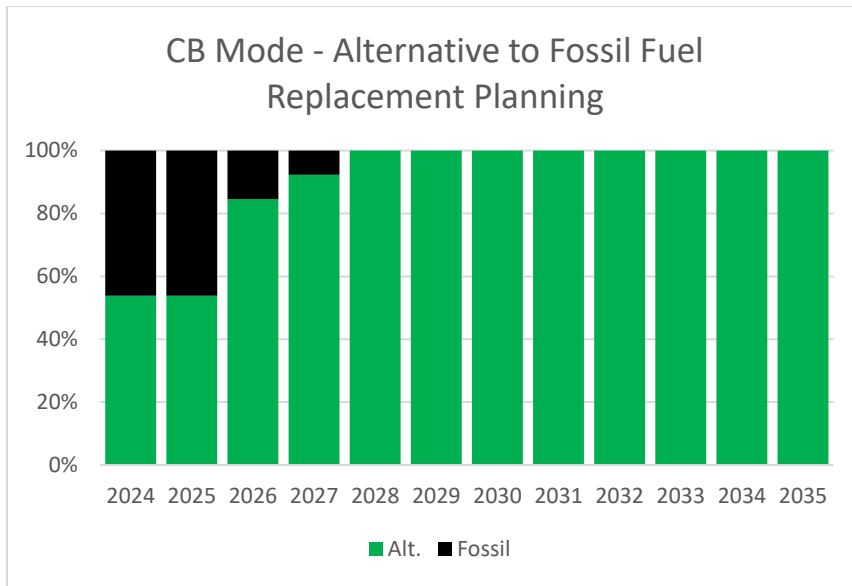


6. Strategies and Actions

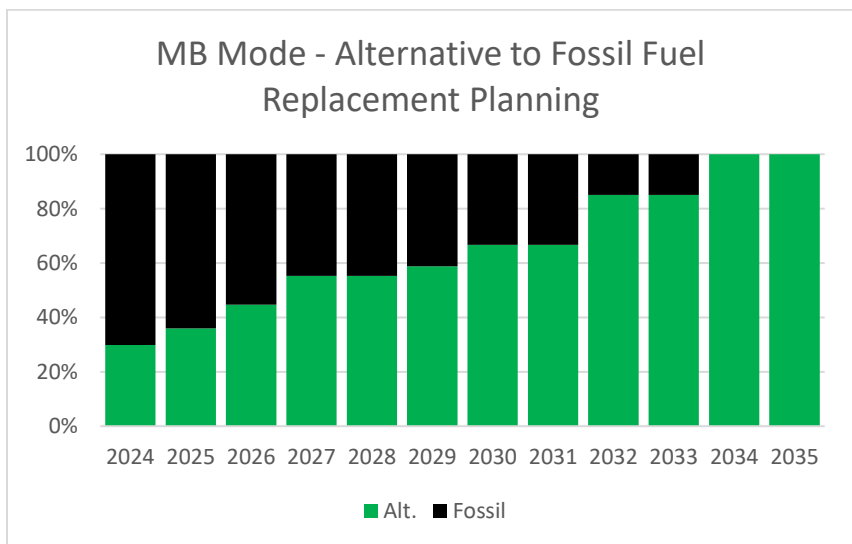
Goal #1: Identify opportunities to reduce greenhouse gas emissions from SRTA vehicles

- Continue transition of fleet to alternative fuel conversion as per the SRTA Transit Asset Management plan.
 - As vehicles need to be replaced, slotted on the capital planning tool to transition to alternative fuel.

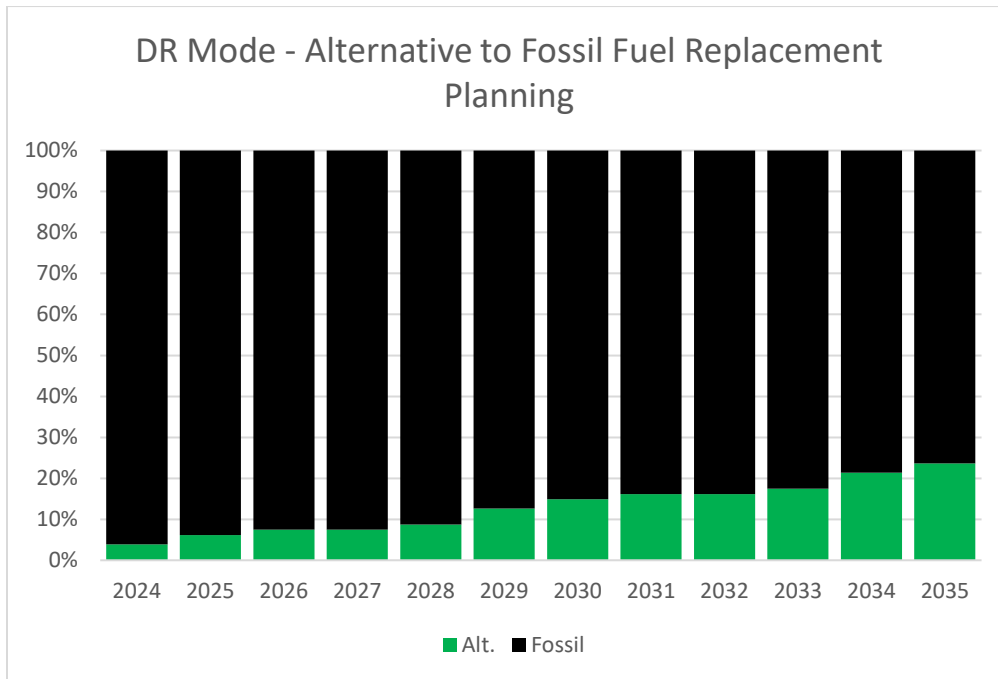
Commuter Bus Replacement Plan



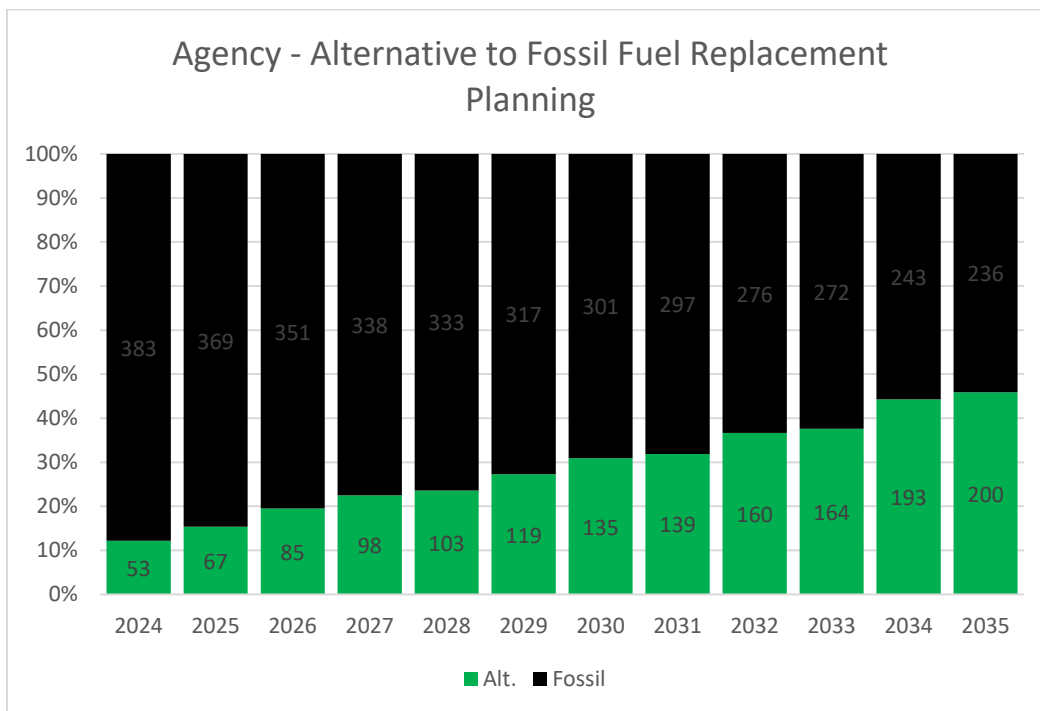
Motor Bus (Fixed Route) Replacement Plan

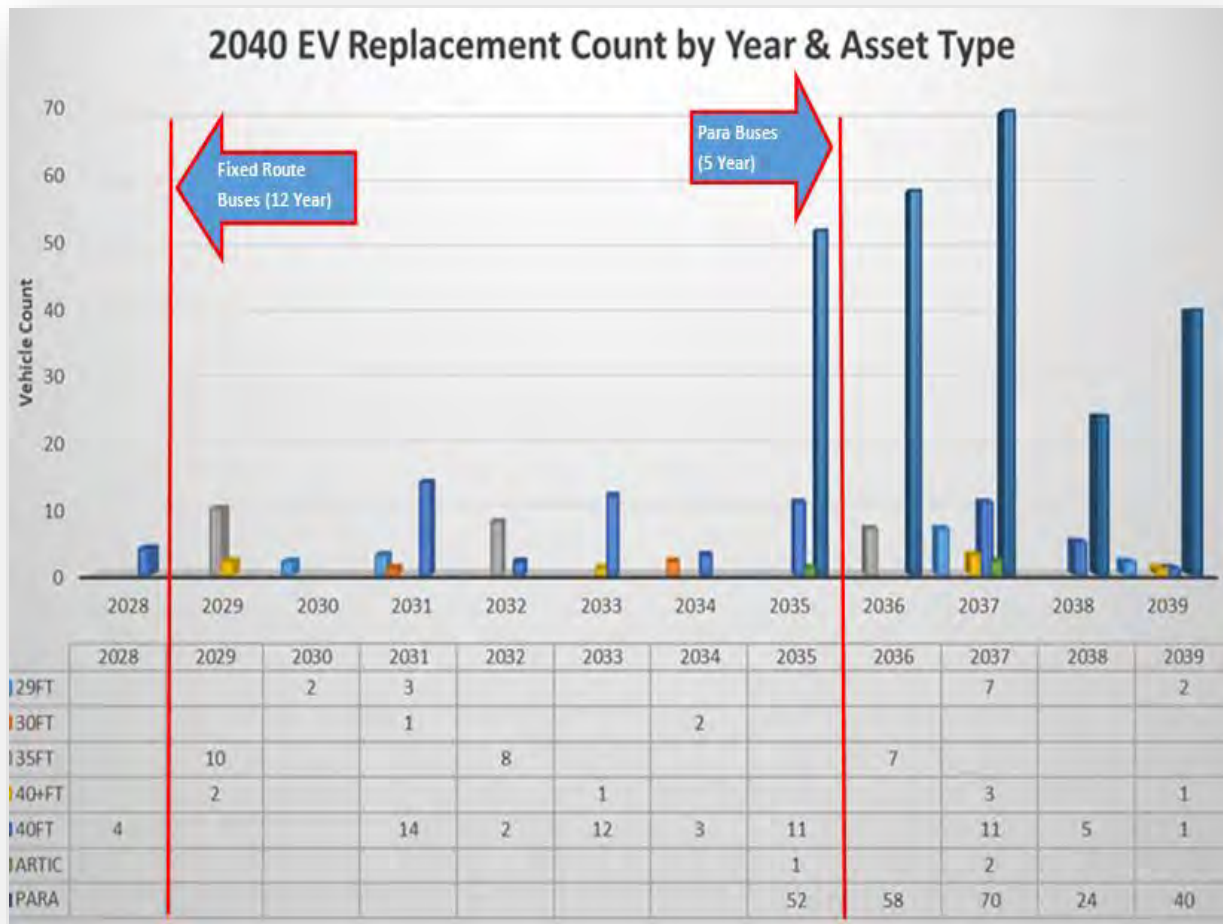


Demand Response Replacement Plan



Full Fleet Replacement Plan





The arrows in the graph above depict the timeline for achieving alternative fuels: 2028 for the fixed route fleet and 2035 for the paratransit fleet.

- Stay committed and consistent in keeping our fleet up to date and in a state of good repair.
- Explore opportunities to invest in renewable energy.
 - Evaluate renewable CNG (RNG) and coordinate with PennDOT to release an RFP to purchase environmental aspects/benefits for renewable CNG (RNG) for 2025 implementation.
 - Currently, we are part of a PennDOT Public Private Partnership collaboration for the utilization of CNG and are obligated to participate in this particular alternative fuel source program until 2033. In 2034, there are 5 transit coaches that are scheduled to be replaced. As we approach this milestone, we will evaluate electrification or other alternative fuels as potential viable options.

Goal #2: Identify opportunities to reduce greenhouse gas emissions from SRTA facilities

- Evaluate new green building tactics and infrastructure certifications where appropriate.

- As we design and construct the SRTA facility for the Capital Region, SRTA will take a measured approach to sustainability, utilizing cost-effective practices by incorporating an integrative and sustainable approach to the design utilizing best practices to achieve a facility, which acknowledges the benefits of sustainability, while minimizing the costs related to actual certification. These practices may include:
 - Focus on Indoor Water Use Reduction, Outdoor Water Use Reduction and Water Metering including low flow fixtures, automatic shut off valves, and metered faucets.
 - Aim to Optimize Energy Performance including a series of studies, to understand how to harvest daylight, and reduce the use of electricity to light the interior of structure. LED light fixtures selected and placed in most optimal locations.
 - Optimize electrical and mechanical systems to operate with greater efficiency to reduce usage, in accordance with DOE standards.
 - Aim to source local materials and use as many products as possible that involve recycled products.
- Review SRTA building energy production system technologies and identify cost effective updates.
 - Reduce Harrisburg facility utility cost by 50%
- All new shelters erected from 2024 will have lighting sourced from renewable energy.
- Ensure operations and maintenance facilities use efficient and environmentally friendly lighting such as LED.
- Incorporate motion activated lighting at appropriate facilities without degrading safety and security.
- Design all new maintenance facilities to accommodate zero-emission technologies.
- Identify non-traditional transportation funds to support green initiatives.
- Enhance Facilities Asset Management Program
 - Configuration of Esri based data collection and assessment field tool.
 - Configuration of TERM Lite to assess: 1) State of Good Repair (SGR) backlog; 2) level of annual investment to attain SGR or other investment objectives; 3) impact of various funding profiles on future asset conditions and reinvestment needs; and 4) investment priorities by facility asset type through a weighted multi-criterion approach.
 - A filter for this process will include an environmentally based criterion
 - All assets will be assessed on condition, criticality and risk with methodologies established for each, which will help determine areas of need to support development of a business plan for future pilot phases of asset management program enhancements.

Goal #3: Identify opportunities to reduce greenhouse gas emissions as it relates to community impact

- Continued SRTP participation and involvement as it relates to advocating for non-single occupancy vehicle (SOV) alternatives.
- Work with local and regional partners to conduct public education and awareness around local options for reducing the single occupancy vehicle.
- Create or expand partnerships with area employers to expand service along fixed route corridor for workforce development, recruitment and retention while reducing congestion and SOVs.

- Develop vanpool program for 2nd and 3rd shift workers to fill an unmet transportation need while increasing non-SOV alternatives.
- Champion climate friendly tactics within the workplace and increase employee awareness.
 - Identify preferred parking for motorcycles and electric vehicles.
 - Advocate carpooling for employee events.
 - Champion virtual meetings vs in-person attendance to reduce employee vehicle miles traveled.

7. Implementation and Monitoring

Chapter 7 highlights the strategies to advance SRTA's progress toward achieving its Climate Action Plan goals. Implementation of the plan and monitoring will focus on the following strategies:

Annual Management Work Plan: SRTA staff from relevant departments to develop an annual work plan to show how activities will be defined and accomplished to ensure progress toward actions. The work plans will align with the goals and actions set in the Climate Action Plan. These work plans will document steps to advance an action, which may include submitting a project request for funding through SRTA's annual budget process, defining a scope of work, advancing a pilot program or project, or developing a strategy to seek grant funding under current or new regional, state, or federal programs. The Annual Management Work Plan is reviewed and adopted by the SRTA Board of Directors.

Authority Strategic Priorities: To strengthen the commitment and internal alignment, SRTA will incorporate discussions at its annual Board of Directors' Strategic Planning Retreat on how to better integrate goals and strategies related to sustainability into the agency's next strategic plan, which will be developed over the next two to three years. This can influence funding commitments and investment priorities in the near and long-term.

Reporting: SRTA will produce for a Climate Action Plan update to report on the progress toward the actions identified for each goal. Key stakeholders will be informed through this reporting and the SRTA Board of Directors will be updated to discuss progress and future goals and strategies.

Partnerships: Reducing GHG emissions and adapting to changing climate conditions will require collective action at the local, regional, state, and federal level. It will require strategic alignment internally at SRTA and among agencies to support new or updated policies or programs, remove barriers to implementation, identify funding, and coordinate financial investments. SRTA will continue to collaborate with service area cities and regional partners on initiatives and actions to achieve the goals and actions in this plan. Recent examples of partnerships include our participation related to the Public Private Partnership (P3) between PennDOT and CNG infrastructure provider, Trillium, in addition to collaboration with Commuter Services of Pennsylvania and area employers in our efforts to reduce single occupancy vehicle usage in the region.