



HSEQ - Health, Safety
& Environmental Quality

SUSTAINABILITY REPORT 2025



Niagara Frontier Transportation Authority

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GHG Emissions Inventory

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The Niagara Frontier Transportation Authority (NFTA) is a public benefit corporation of the State of New York created under Chapter 717 of the laws of 1967. New York Public Authorities Law §1299-b provides “[t]here is hereby created and established a transportation district to be known as the Niagara Frontier transportation district which shall embrace the counties of Erie and Niagara.”

About Us

Letter from the Executive Director

Dear Reader,

Thank you for your interest in learning more about the important role the Niagara Frontier Transportation Authority (NFTA) plays in the region’s sustainability. The NFTA strategically considers the long-term economic, social and environmental impacts of all transportation activities. We want to maximize long-term benefits and ensure that our success strengthens our community. The NFTA is committed to making our community better for the next generation.

While this is our first formal Sustainability Plan, sustainability has been a core part of the culture of the NFTA for many decades. In fact, the light rail transit system has been powered by clean hydropower energy for over 40 years! Other initiatives such as treating spent deicing fluid from airport operations, development of sustainable master plans for airport growth, investing in large solar arrays, green roofs and supporting clean energy with operation of low emission and no emission buses are just a few examples of some of our successes.

This Sustainability Plan has been developed and is centered on a framework that aligns with our significant priorities. Throughout the planning process, we engaged key participants to provide critical feedback. This plan is the result of months of coordination and is reflective of the numerous comments received from these major stakeholders. We listened and now we are committed to the actions identified in this plan.

Guided by our plan, we will utilize leading-edge technologies and long-term investments, but we will also employ simple steps which are important to our overall success. Behavioral choices will be emphasized so that each of us can make a difference. It’s up to all of us at the NFTA to push for continuous progress towards our sustainability goals and deliver to our community.

Sincerely,



Kimberley Minkel
Executive Director

Policy Statements

It is the policy of Niagara Frontier Transportation Authority to initiate programs and policies that protect the environment, promote a sustainable culture, and safeguard the health and safety of employees and customers in the communities in which it serves.

Daily decisions and actions at the NFTA are guided by the following principles:

- ▶ Comply with applicable environmental laws and regulations.
- ▶ Minimize and reduce waste, prevent pollution, and incorporate recycling in all practices and operations.
- ▶ Strive to eliminate releases that impact the environment.
- ▶ Employ sound environmental practices to address and redevelop environmentally impacted property.
- ▶ Train employees to be aware of and responsive to environmental and sustainable responsibilities.
- ▶ Continually improve practices, products, and methods to increase environmental quality based on newer and best industry standards.

Here at the NFTA, **SUSTAINABILITY** means ...

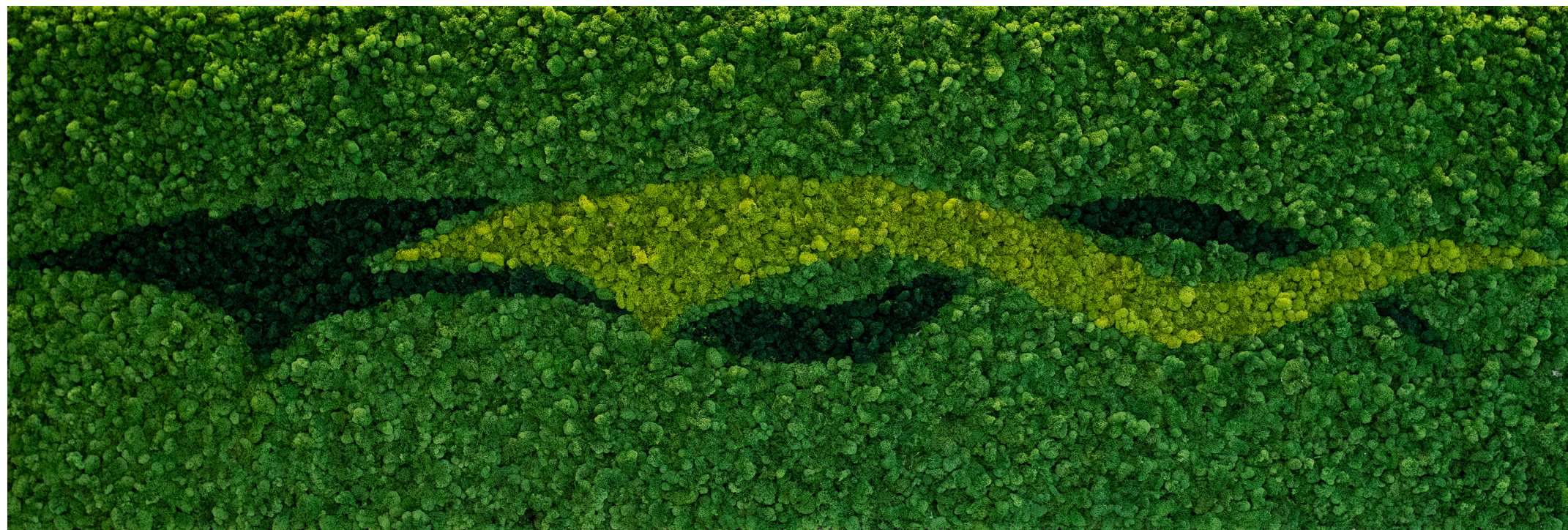
Providing safe, reliable, and resilient transportation and aviation services, facilities, and infrastructure while protecting our environment and community.

Executive Summary

Sustainability is a core value of NFTA's operations. This sustainability plan establishes authority-wide goals, measurable objectives, and desired outcomes to guide ongoing and future initiatives. As a board-approved, working document, it will be updated annually to reflect progress and define next steps.

The report includes an inventory of direct and indirect greenhouse gas emissions from transit vehicles, airport operations, and NFTA facilities – stations, administrative buildings, maintenance sites, shops, and yards. The 2024 inventory provides a baseline for tracking emissions reductions. As data quality improves, future reports may include additional emissions sources such as solid waste, water usage, and employee commuting. Total direct and indirect emissions for FY2024 were 35,270 metric tons of CO₂-equivalent.

NFTA's goals, strategies, and actions focus on the following areas: fleet management, utility consumption, waste and water, safety and resilience, property development, energy supply and renewables, and sustainability leadership and programming. This plan is designed to ensure that NFTA's services remain resilient for future generations while supporting long-term opportunities for the Buffalo-Niagara region.



NFTA AT A GLANCE



The Niagara Frontier Transportation Authority is a multi-modal entity encompassing a skilled and dedicated workforce.

Introduction

NFTA's mission is to provide safe, efficient, professional, and sustainable transportation services that enhance the quality of life in the Buffalo Niagara region in a manner consistent with the needs of our customers.

In support of this mission, NFTA's Strategic Plan Roadmap for 2023-2033 called for the development and adoption of an authority-wide Sustainability Plan to set goals and objectives to guide progress across the organization's business centers. NFTA has continuously incorporated sustainable practices into its planning and operations for decades, predating more recent state and federal mandates and required reporting. We are firmly committed to our mission of utilizing sustainable technologies and transitioning our fleet without negatively impacting service reliability.

Furthermore, NFTA will continue to support and implement climate resilience planning in the region to prepare for extreme heat and severe winter storms impacting NFTA's service area.

1,500+
EMPLOYEES

16M
ANNUAL METRO RIDERS

5M
ANNUAL ENPLANEMENTS



OVERVIEW

The NFTA operates Buffalo Niagara International Airport (BUF), Niagara Falls International Airport (IAG), and through its subsidiary corporation, Niagara Frontier Transit Metro System, Inc. (NFTA-Metro), operates bus, paratransit, and light rail public transit systems in the counties served by the NFTA, Erie and Niagara. NFTA's 1,500+ employees operate, maintain, and support services for more than 16 million Metro riders and 5 million airport passengers annually.

Today, the NFTA also manages a portfolio of over 480,000± square feet of warehouse & office space (with over 85 ground leases), 200+ acres of real estate, and historical railroad rights-of-way.



This SUSTAINABILITY PLAN

recognizes and celebrates the NFTA's efforts to date while laying out a strategic framework for progress.

PURPOSE

The purpose of this plan is to establish goals, measurable objectives, and desired outcomes to direct the performance of future sustainability initiatives. This plan is intended to serve as a living document that will be updated periodically to reflect progress made toward goals, completion of named projects, and identification of future efforts. NFTA will utilize this plan to encourage interdepartmental communication and consistent project tracking. NFTA acknowledges that paths may change as new technology develops and funding opportunities arise.

NFTA's sustainability initiatives to date are a culmination of the organization's executive vision and responsible capital planning through an understanding of the service impact on WNY's community and environment. The list provided in this document is not exhaustive but rather a high-level overview of the biggest projects. A full description of the scope and limits of the emissions inventory can be found in the corresponding section.

PLANNING PROCESS

This plan was developed over two years involving NFTA staff at the department level, including Aviation, Finance & Administration, Risk Management, Public Transit, Bus Maintenance, Consumer & Government Affairs, Grants & Development, Health Safety and Environmental Quality (HSEQ), Counsel & Procurement, and Engineering & Facilities Management. Two internal committees, a Steering Committee and Stakeholder Committee, formed during early staff efforts to coordinate sustainability and resiliency initiatives. These committees continue to meet to collect, share and discuss information about projects and initiatives.

Although the NFTA has completed many sustainability projects, prior to the development of this plan, the organization did not immediately dive into the action planning process. To ensure that all NFTA departments were engaged in the process, the organization began with pre-planning initiatives that focused on defining the scope of authority-wide sustainability efforts and responsibilities and engaging NFTA staff more broadly to provide input for future planning. NFTA staff were engaged through an online survey, a series of department leader interviews, and mini roundtables to provide input on a range of sustainability topics. This pre-planning and scoping effort generated an outline for this sustainability plan. With plan scope defined, NFTA's Sustainability Steering and Stakeholder Committees continued to meet at least quarterly to review developed materials, provide feedback, and offer input from new and recently completed projects. Prior to approval and finalization, the included action plan was presented to internal and public advisory groups, including the Executive Safety Committee and the NFTA-Metro Citizens Advisory Committee. This process was necessary to determine highest-priority projects to achieve further long-lasting sustainability and decarbonization.

Recent local and regional sustainability planning initiatives, including the One Region Forward's (1RF) Priority Climate Action Plan and Comprehensive Climate Action Plan, Erie County Community Climate Action Plan, and City of Buffalo Climate Action Plan, were reviewed for alignment and methodology. Statewide policies and guidance, including New York State (NYS) Executive Order 22, the NYS Climate Leadership and Community Protection Act (CLCPA), and GreenNY guidance and specifications, were consulted often throughout the development of the action plan goals and strategies. To support regional sustainability coordination and learning across peer organizations, NFTA staff participate in ongoing meetings of the 1RF Implementation Council and GreenNY Working Groups.

Emissions Inventory

APPROACH

This Greenhouse Gas Inventory (GHGI) was developed in accordance with the approach laid out in the Greenhouse Gas Protocol together with guidance contained in American Public Transportation Association's Recommended Practice for Quantifying Greenhouse Gas Emissions from Transit. A GHGI establishes accountability for an organization's emissions so that it can take a systematic approach to the reduction. The general transportation sector is estimated to have been responsible for 41% of total emissions in the Buffalo-Niagara region based on the 2024 Comprehensive Climate Action Plan developed through the U.S. Environmental Protection Agency's Climate Pollution Reduction Program. NFTA plays an important role in reducing the region's emissions.

This document includes an inventory of scope 1 (direct) and scope 2 (indirect) greenhouse gas (GHG) carbon dioxide equivalent (CO₂e) emissions in metric tons (MT) from public transit – through revenue and non-revenue vehicles, airport operations, and NFTA facilities, including stations, administrative buildings, maintenance facilities, shops and yards. The inventory includes authority-wide baseline data from the year 2024 and trends with sources and assumptions to also make an estimate of public transit bus emissions from the year 2005. Establishing these baselines allows NFTA to understand how to measure future success in reducing emissions and how far we have come since historical sustainability initiatives.

When determining the baseline, NFTA considered the availability of high-quality data and general baselines or goals used in local and regional greenhouse gas reduction planning. Therefore, the current inventory does not include scope 3 emissions data such as solid waste, water consumption, or employee commuting. That information is acknowledged in the "Action Plan" section of this document. A total net GHG impact for 2024 was estimated through a calculator created by the Transit Cooperative Research Program, with annual National Transit Database information, and is included in the Emissions Inventory section. Upstream fuel emissions have been estimated here with assumptions for informational purposes only. In future sustainability planning, NFTA seeks to do a comprehensive analysis that includes scopes 1, 2, and 3 – while also estimating displaced GHG emissions, i.e., GHG emissions avoided due to mode shift to transit or active transportation. NFTA has access to some of the least carbon-intensive electricity in the United States due to our location in the New York Upstate (NYUP) electric grid region, an area rich in hydroelectric and nuclear generation capacity. Together with alternative fuel options, NFTA plans to continue decarbonization initiatives to reduce our carbon footprint.

FY2024
SCOPE 1 & 2 TOTAL EMISSIONS:
35,270 MT CO₂e

NFTA has defined and set the emissions boundary as follows:

SCOPE 1

Mobile: consumption of fossil fuels (e.g., diesel, gasoline, natural gas) by NFTA-Metro revenue fleet, non-revenue fleet, and the vehicle fleets at both airports

Stationary: consumption of natural gas for heating facilities and domestic hot water

Refrigerants: used in air conditioning equipment, heat pumps, and refrigerators as a working fluid to absorb and release heat

SCOPE 2

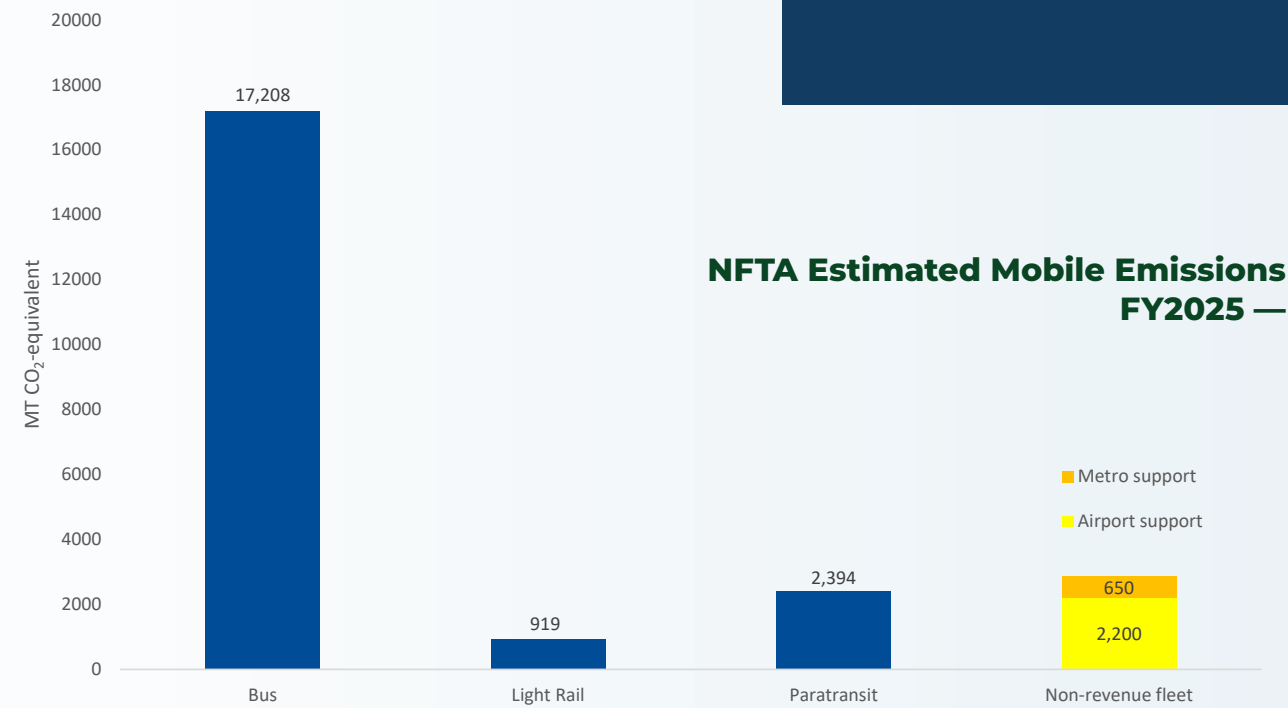
Mobile: purchased metered electricity consumed by electric buses and the light rail system

Stationary: purchased metered electricity consumed at facilities

Offsets: These include the Tier 1 Renewable Energy Credits (RECs) purchased by NFTA from NYSEERDA to satisfy E.O.22 requirements and the Clean Energy Standard. NFTA purchased 1,265 Tier 1 RECs in FY2024, and 2,670 Tier 1 RECs in FY2025.

NFTA also has two renewable energy installations: solar photovoltaic panel systems on both the BUF terminal and Frontier garage roofs, which reduce total electricity consumed at each facility.

Emissions Inventory



SUMMARY

The above figure shows a general breakdown of NFTA’s mobile emissions of its revenue and non-revenue fleet. A summary of carbon dioxide equivalent emissions for NFTA facilities can be found further in this section. The NFTA followed Climate Registry protocol and guidance through the American Public Transportation Association. Performance metrics by passenger mile or vehicle mile are optional in this protocol, and therefore are not included in this document – however, NFTA plans to include region-wide metrics in the next phase of sustainability planning. All mobile source emissions were disaggregated into National Transit Database categories. Administrative and maintenance facilities were disaggregated, while the light rail non-traction power was aggregated singularly, as well as general bus stops and park-and-ride loops. Nonrevenue vehicles for the different business centers were aggregated.

The bus fleet is made up of diesel, compressed natural gas, diesel-hybrid-electric, and battery-electric buses. The light rail, as displayed further in this report, is fueled entirely by electricity. The paratransit fleet is comprised of diesel, gasoline, and compressed natural gas buses and vans. Metro non-revenue vehicles, or support vehicles, include but are not limited to supervisor trucks, Transit Authority Police, rail utility trucks and loaders, bus tow trucks, and maintenance equipment. Airport support vehicles include snow removal equipment, emergency vehicles and firefighting equipment, maintenance vehicles, supervisor trucks, aircraft tugs, parking shuttles, and various other vehicles.

NFTA maintains an inventory of all NFTA-owned or leased vehicles, organized by department and location, to track monthly fuel and mileage. The GHG emissions factors associated with each fuel type are from the EPA 2025 GHG Emissions Factors Hub. The emissions factors for NYUP grid-provided electricity were provided by EPA eGRID using the 2023 emissions profile.

When examining existing and future options for fuel types, NFTA takes a holistic, cradle-to-grave approach and considers all elements of vehicle and facility life cycle, including impacts on air, water, waste, and worker exposure. The authority also considers emissions from electricity generation and upstream fuel sourcing, including mining activities and processing or transportation of raw materials.

Impacts of Recent Trends in Ridership and Land Use Development Patterns

Public Transit is SUSTAINABILITY

A variety of factors both within and outside of NFTA’s operational control have a significant impact on emissions. The higher rate of emissions per passenger mile compared from 2010 to now can be attributed to the compounding effects of several factors, including but not limited to recent dramatic changes in travel behaviors (such as an increase in remote work), the impact of sprawling development patterns linked to requests to expand NFTA’s service area, as well as necessary, event-based responses to direct community need in recent years.

2020 was a unique year across the board for many transportation agencies, NFTA included. Not only did we maintain 2019 service delivery levels through September 2021, but we also did not retire any buses that year. Many of our buses carried fewer riders than usual due to mandated COVID precautions and the historic decrease in ridership from closures and daily behavior change. NFTA also partnered with FeedMore WNY to collect and distribute food and supply donations during COVID-19 using Metro buses, contributing to the increase in emissions that year.

NFTA again partnered with FeedMore the following year after May 14, 2022, when Buffalo experienced a racially-motivated mass shooting at a Tops grocery store. NFTA also suspended fares on the four most-affected routes to help residents access groceries while the Tops was closed and find essential services like grief counseling. More information on this can be found in our 2023 Community Impact Report.

Therefore, NFTA-Metro’s emissions are highly dependent on specific changes in delivery and how many people we serve. Being involved in the community is critically important to NFTA’s mission. As NFTA-Metro adapts to changing travel patterns and shifting trip demand, we remain committed to evolving to meet contemporary needs without compromising our reliability and role in regional environmental stewardship. Bottomline, two key statements summarize public transit’s relationship to regional emissions, land use development planning, and ability to serve the community more sustainably:

- ▶ The more people that ride our system, rather than a personal car, the more Western New York’s regional emissions will naturally decrease per person.
- ▶ Minimum density is required for transit to be more carbon efficient, and urban areas of the WNY region will benefit the most from equitable, transit-oriented development.

Emissions Inventory

Metro Emissions

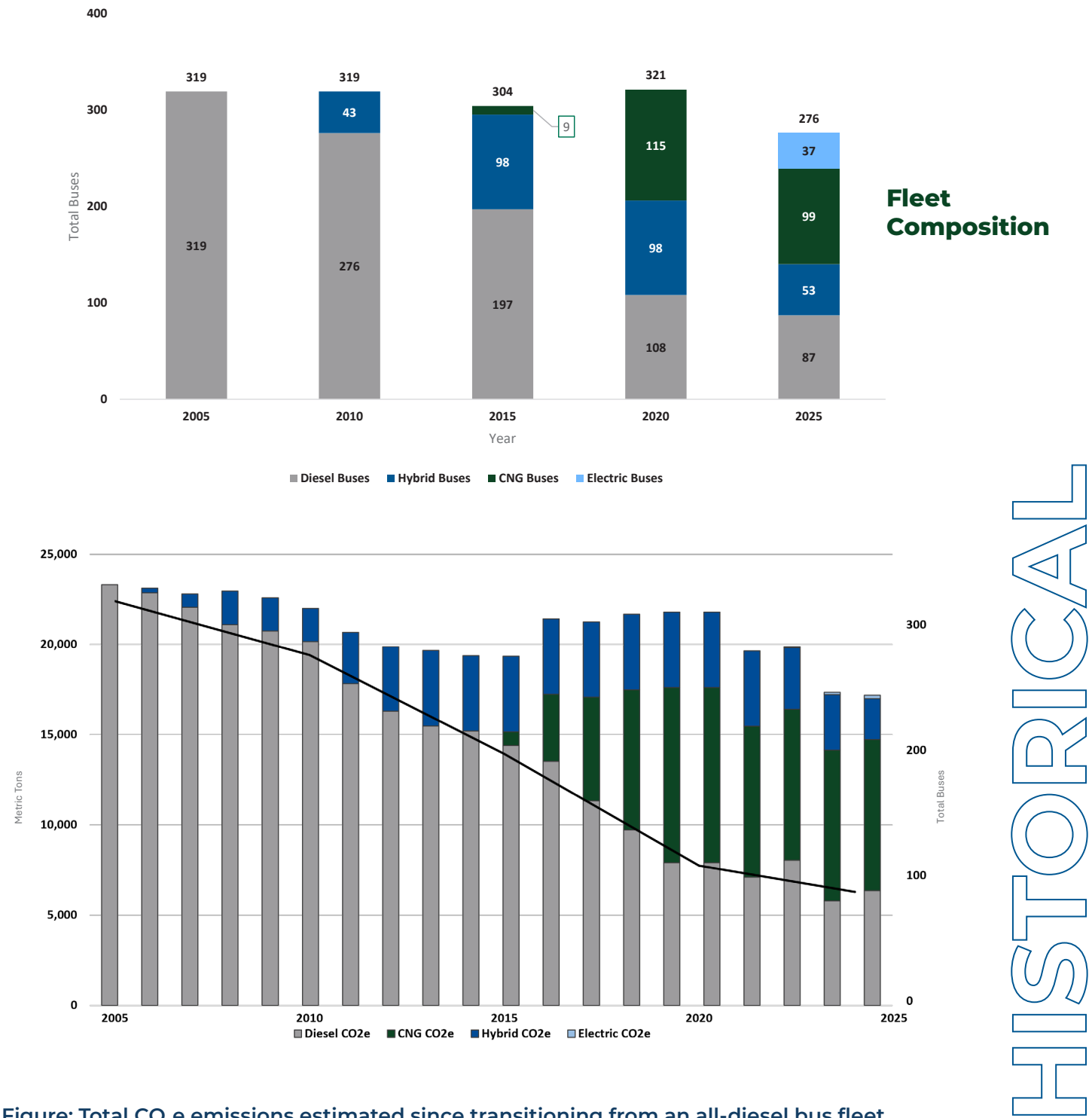
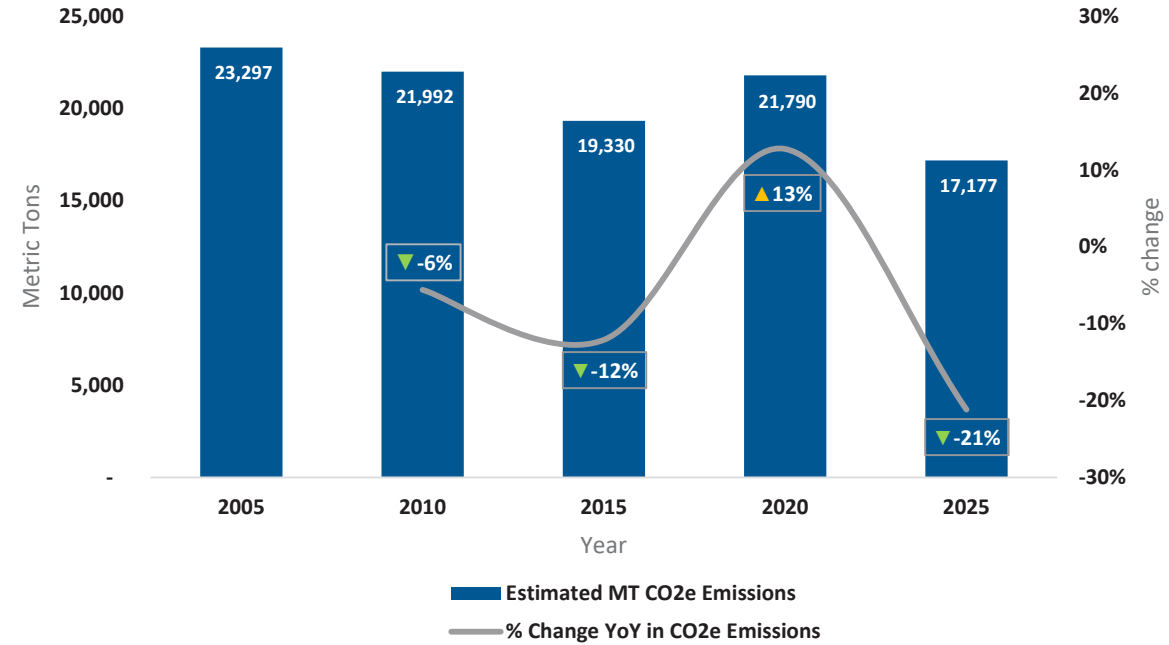


Figure: Total CO₂e emissions estimated since transitioning from an all-diesel bus fleet

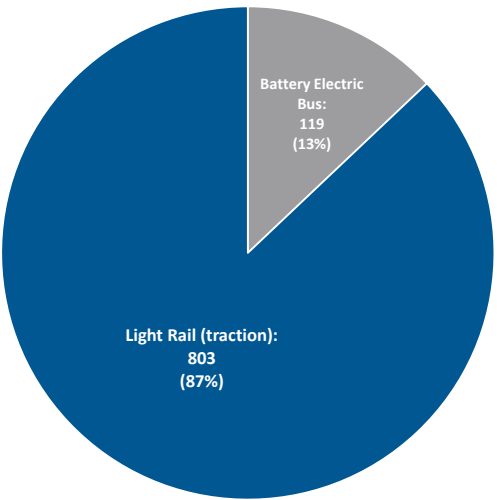
- The graph above estimates annual emissions from the Metro Big Bus fleet, going back to the year 2005, through taking annual bus counts by fuel types.

Estimated MT CO₂e Emissions

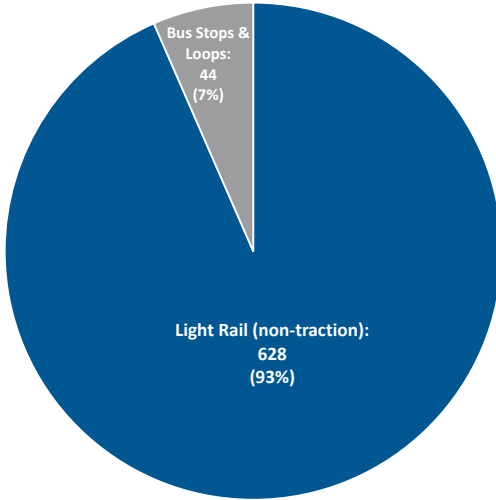


CURRENT

Mobile Electricity MT CO₂e FY2024



Stationary Electricity MT CO₂e FY2024



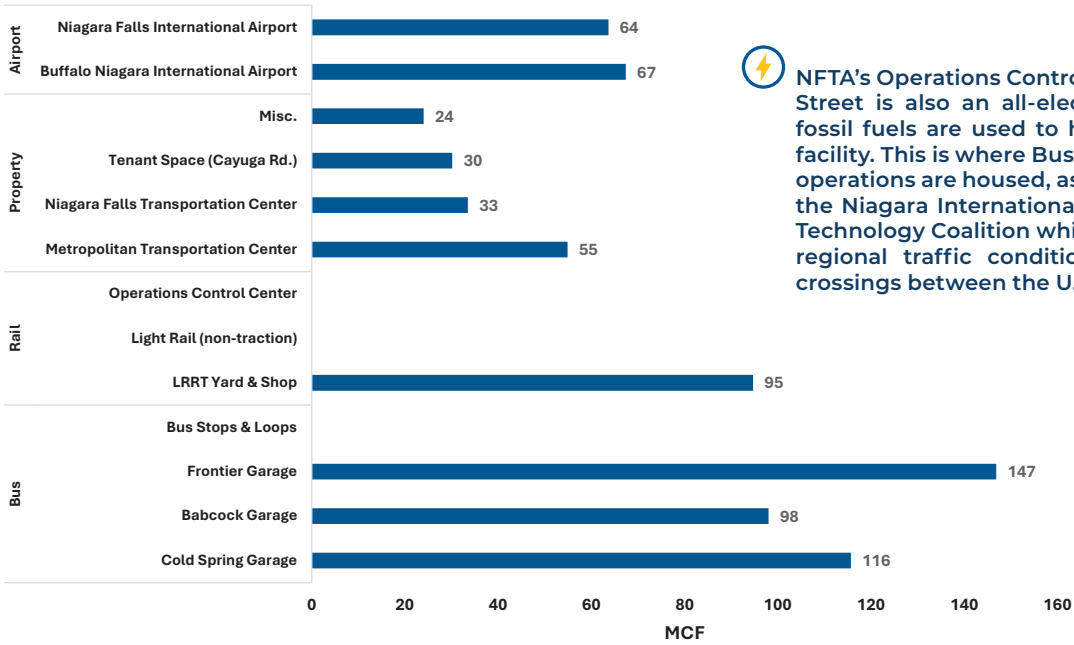
Left: distribution of total electricity from Metro revenue mobile operations
Right: distribution of total electricity from Metro revenue stationary operations

Emissions Inventory

Facilities Emissions

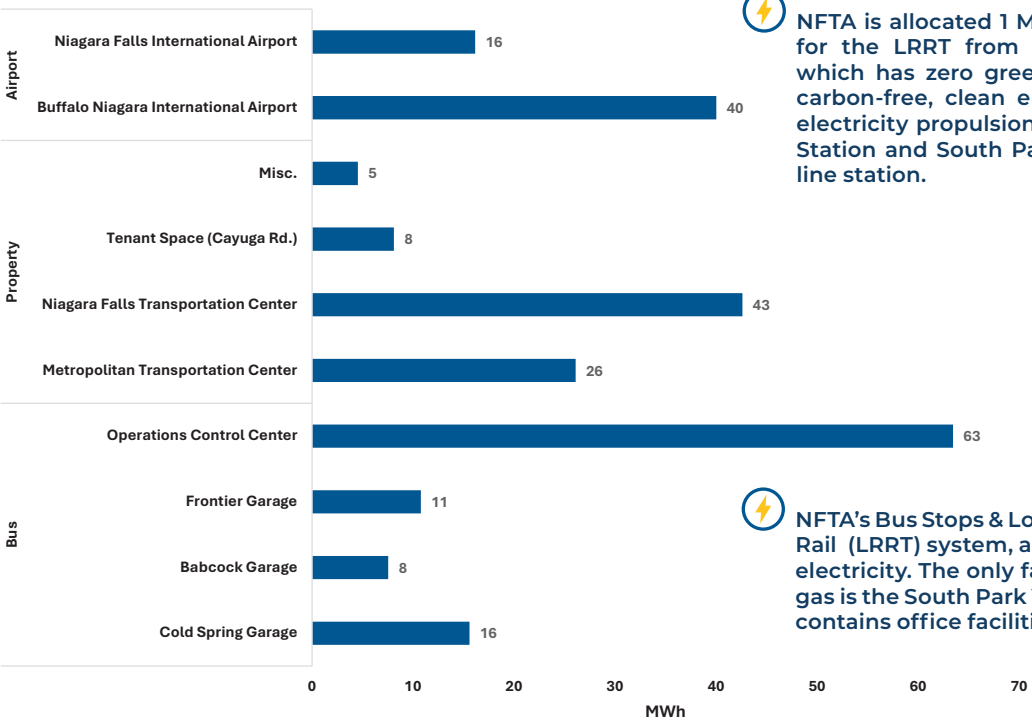
NFTA followed the Climate Registry protocol for facility-level reporting, which details emissions for each facility on an individual basis. Total consumption by facility was gathered from individual monthly utility bills.

Facility Natural Gas Consumption —
(per 1000 sq ft)



⚡ NFTA's Operations Control Center on Oak Street is also an all-electric facility. No fossil fuels are used to heat or cool the facility. This is where Bus and Rail control operations are housed, as well as NITTEC, the Niagara International Transportation Technology Coalition which monitors the regional traffic conditions and border crossings between the U.S. and Canada.

Facility Electricity Consumption —
(per 1000 sq ft)



⚡ NFTA is allocated 1 MW of hydropower electricity for the LRRT from New York Power Authority which has zero greenhouse gas emissions. This carbon-free, clean electricity contributes to the electricity propulsion of our Light Rail at Delavan Station and South Park Yard & Shop, the end-of-line station.

⚡ NFTA's Bus Stops & Loops, as well as the Light Rail (LRRT) system, are all solely powered by electricity. The only facility that uses natural gas is the South Park Yard & Shop, which also contains office facilities.



ONGOING INITIATIVES

As the Buffalo-Niagara region's public transportation provider, NFTA plays a significant role in improving sustainability and reducing GHG emissions from transportation sources. This section of the plan highlights past projects, ongoing efforts, and best practices at the core of NFTA's progress.



Decades of ACCOMPLISHMENTS

NFTA is a leader in delivering projects that have positive impacts on our regional transportation network and improve mobility for residents and businesses, while working to reduce or mitigate by products or emissions.

Sustainability projects and initiatives at every level of the organization show a long track record of steady, consistent improvement across day-to-day operations, planning, and facilities. This section includes a selection of projects highlighting NFTA's commitment to responsible use and treatment of the region's resources.

First 'Green Airport' Pilot Study

BUF partnered with EPA, NYSEDA, and several non-profits to address existing environmental challenges and create a roadmap for future programming.

Initiation of Hybrid Buses

NFTA-Metro adds diesel-hybrid-electric buses to its fleet.

2006

Construction of Engineered Wetland Treatment System

This technology at BUF aids the treatment of airfield runoff contaminated with de-icing fluid, diverting from entering the storm water system. The wetlands have been in operation since 2009 and recently expanded in 2022.

2008

Solar Photovoltaic Array Syatem on Frontier Garage Roof

The 250-kW system contributes approximately 16% of garage's total electricity.

2010

Development of Buffalo Niagara International Airport Sustainable Master Plan

BUF becomes one of the first airports in North America to develop a sustainable master plan focusing on reducing the airport's carbon footprint and minimizing waste.

Quieter Homes Program Completed

BUF examined existing noise conditions and projected noise issues for a five-year period, identifying what effect noise had on those who live and work aroundthe airport and recommended appropriate mitigation and schedules.

2011

Installation of Living Roof Bus Shelter

NFTA-Metro pilots a living roof demonstration project at North Division & Ellicott St, one of the busiest in the city.

2012

2014 2015 2022 2023 2025

Installation of EV Charging Stations at Airports

NFTA installs EV charging stations at Niagara Falls International Airport and Buffalo Niagara International Airport in partnership with New York Power Authority and New York Stahte Energy Research and Development Authority as part of a broader initiative to install 100 chargers at 37 public and workplace locations around the state.

Construction begins on Allen Street Station Transit-Oriented Development

University at Buffalo awards its first construction contract to build a new School of Medicine and Biomedical Sciences building at the Buffalo Niagara Medical Campus directly over the Allen / Medical Campus light rail station.

Rollout of CNG-fueled Buses

NFTA further diversifies its fleet with buses fueled by compressed natural gas at Frontier Garage.

Development of Niagara Falls Airport Sustainable Master Plan

The NFTA submits IAG sustainable master plan to FAA.

Metro Railcar Rebuild Completion

NFTA finishes a \$45 million program to rehabilitate all 27 railcars, now more lightweight and require less propulsion energy.

Deployment of Battery Electric Buses

NFTA's first battery electric buses are put in service, powered at Cold Spring Garage.

Implementation of MetGo Fare Collection System

NFTA-Metro implements a cashless smartcard and app-based fare payment system, offering customers greater flexibility and reducing bus idling time.

Airport Electrical Infrastructure Study

NFTA Engineering completes an inventory of existing and future EV demands at BUF, establishing NFTA's existing electrical capacity and assessing future expansion and investment supply needs.

Completion of Airport Waste Audit

Following up on a 2003 authority-wide audit to the EPA, NFTA staff audit trash & recycling compactors at BUF with the assistance of the waste hauler to identify additional opportunities for recycling.



RECOGNITION

- 2009 - American Public Works Association Project of the Year Award
BUF Eng. Wetland Treatment System
- 2010 - American Council of Engineering Companies Honor Award
BUF Eng. Wetland Treatment System
- 2022 - FTA Sustainable Transit for a Healthy Planet Climate Challenge
- 2023 - American Public Works Association Transportation Project of the Year Award
University Station Bus Loop
- 2024 - American Public Transportation Association: Sustainability Commitment
- 2025 - Erie County Environmental Excellence Award
Battery Electric Buses

Aviation Projects

Buffalo Niagara International Airport (BUF) Sustainable Master Plan

The Sustainable Master Plan is in-progress and will evaluate changes to the airport, surrounding land uses, obstructions, forecasts and demand since the last Master Plan was completed in 2012. The plan will also include a Pavement Management Update to evaluate all airfield pavements.

"The ongoing Sustainable Master plan will be the roadmap for our airport for the next 20 years, which includes proposed improvements to the Terminal, Landside, and Airfield areas. The plan is developed from input by NFTA staff, airport stakeholders, and comments we received from our public outreach event during the 2025 Taste of Buffalo. The sustainability aspects of this Master Plan will be woven throughout all proposed projects and will align with policies and actions within the NFTA Sustainability Plan".

Samantha Brenzel,
Senior Aviation Planner

BUF Terminal Expansion

The largest expansion in the history of the Buffalo-Niagara airport was completed in 2022, adding over 50,000 SF and renovating over 30,000 SF of space. This included the addition of four baggage claim carousels, upgraded concessions and improved passenger flow areas with a green wall and daylighting, taxiway rehabilitation and enhanced security, and a 50,000-watt roof-mounted solar photovoltaic system.

"True sustainability blends environmental care with human connection. My role has given me a deep understanding of how funding shapes capital projects, and balances efficiency and environmental responsibility with the human side of travel. From projects like the green wall, the Hidden Disabilities Sunflower Program, and the upcoming sensory room, our passenger terminal is not only more sustainable but more inclusive and welcoming for all."

Marcela Hernandez,
Senior Grants Specialist



BUF Subsurface Engineered Wetland Deicing Fluid Treatment System (WTS)

Buffalo air service uses approximately 200,000 gallons of deicing fluid yearly. To limit discharge to Town of Cheektowaga sanitary sewers, NFTA captures, stores and treats glycol-contaminated stormwater within the airfield limits. Glycol-contaminated stormwater runoff from throughout the airport is detained in a 3-million-gallon storage tank. Pumping stations then draw collected runoff into a subsurface engineered wetland treatment system (WTS) and a 5-million-gallon storage lagoon.

The treatment system consists of four cells located on the west side of the airfield between the main runway and the airport's operations and maintenance headquarters. Treated water from the WTS flows by gravity to a regulated outfall. Flow into the wetland cells is measured and the influent and effluent concentration of Total Organic Carbon (TOC) is analyzed.



"Our award-winning Wetland Treatment System was born from the idea of using pioneering technology to treat our de-icing fluids on site and provide a sustainable method of water treatment. Regardless of the intensity of our winter weather, in coordination with airfield staff, we always make sure we are dynamic and efficient in our treatment to ensure the safety of all passengers, as well as the safety of our environment."

Jordan Skrzynski,
Environmental Specialist

Surface Transportation Projects

Metro Transit Expansion

The Metro Transit Expansion project proposes to expand high-quality transit service from the existing Metro Rail terminus at University Station, along Kenmore Avenue, Niagara Falls Boulevard, Maple Road, and Sweet Home Road, through the University at Buffalo North Campus to Audubon Parkway and I-990. Ten stations, two with park & ride facilities and an overnight storage and light maintenance facility are proposed for both alternatives.

"Sustainability in rail maintenance is crucial to the NFTA-Metro System. My team strives to find innovative ways to keep the system rolling while looking to future technologies to improve customer experience. The light rail expansion as well as the improvements to the current system ensures long-term operational efficiency while minimizing environmental impact."

Mike Degenaars,
General Manager of Metro Rail



Bus Fleet and Facilities Fueling Diversification

NFTA-Metro's fleet and facilities form the backbone of the organization's ability to deliver reliable, efficient and high-quality transit services, which remains paramount for all fleet decision-making. As the organization works to maintain its assets, NFTA-Metro also continues to develop its approach for making strategic investments in fleet vehicles and fueling options. In 2025, NFTA-Metro's fleet consists of a mix of vehicles fueled by diesel, diesel-electric-hybrid, compressed natural gas, and battery electric. As the bus garages become specialized for their primary fueling types, NFTA continues to develop stronger tools to conduct lifecycle and return-on-investment analyses for planned fleet purchases and upgrades. These tools will help weigh the benefits and challenges of newer technologies and evaluate the impacts of fleet transition.

Bailey Avenue Bus Rapid Transit (BRT)

The Bailey Avenue BRT project involves design and construction of a BRT line and context-sensitive roadway safety improvements along Bailey Avenue in the City of Buffalo, from NFTA-Metro Rail's University Station to South Park Avenue. The purpose of the Bailey Ave BRT project is to provide faster, more efficient high-quality transit service that improves the quality of life for residents in the Bailey Ave corridor, an area comprised mostly of disadvantaged and transit-reliant census tracts and supports mitigation in areas of high environmental and climate vulnerability.

"In Bus and Paratransit operations, sustainability is embedded in how we plan, train, and deliver service every day. Since Metro operators live in the communities we serve, there's an intrinsic commitment to ensuring our operations support greater community access, cleaner air, and safer streets. We see every decision as an investment in the future of our employees, riders, neighborhoods, and region."

Rachel Maloney,
Manager of Bus & Special Service Operations



"Here in Service Planning we focus on serving the community, and its collective sustainability goals, by making bus and rail services in the Buffalo-Niagara region as frequent, fast, clean, and reliable as possible. All riders, whether they have been riding for years or it's their first time on a bus or train, want the same things. Many of us ride transit daily, which allows us to connect with the riding public and informs our work, but also reduces our individual carbon footprints, and means we can own fewer cars and spend less on gas and maintenance."

Nadine Chalmers,
Manager of Service Planning

Property and Facilities Projects



LaSalle Station Redevelopment

NFTA owns more than 200 acres of developed and undeveloped real estate and over 14 miles of former railroad rights of way. Over the past decade, the organization's property and facilities management teams have continued to review the organization's property holdings to consider strategic investments ensuring the highest and best use of the Authority's real estate assets. After property analysis identified high development potential for the parcels adjacent to LaSalle Station, NFTA entered a partnership with the City of Buffalo to pursue redevelopment of LaSalle Station with the adjacent park and ride lot. The project now envisions redevelopment of 10.9 acres with mixed ownership between NFTA, City of Buffalo, and Buffalo Urban Renewal Agency to bring affordable and market rate housing, retail, commercial and other amenities to the site.

Metropolitan Transportation Center (MTC) Chiller Replacement

The MTC, originally constructed in 1974, is the downtown Buffalo transportation center for several Metro routes and long-distance charter bus lines, and above it are the primary office facilities for the organization. In 2019, a State of Good Repair report indicated that the 1999 air-cooled chiller was beyond its useful life and needed replacement. Further, the 1999 chiller utilized R-22 refrigerant, which releases hydrochlorofluorocarbons (HCFCs) known to deplete the Earth's protective ozone layer and contribute to climate change. Refrigerants are contained within closed systems, but can leak gradually as these systems operate, or quickly if the systems break. Leakage is recorded and reported during the inspection and re-charge of these systems during annual preventative maintenance.

Following robust evaluation of replacement options, based on initial cost, efficiency, global warming potential (GWP), and constructability, NFTA was able to replace its MTC chiller in 2024 with a model that uses R-515B. This is both non-flammable and non-toxic, it exceeds required NYS Energy Conservation Code efficiency by 44%, meets BuildSmart program goals, and has a GWP of <300, much less than the 1,810 GWP of R-22.



Action Plan

Authority-Wide Fleet

Goal: Decarbonize NFTA's revenue and non-revenue fleet by 2040

STRATEGIES	ACTIONS	TIMEFRAME	DEPARTMENT LEAD
Transition 100% of Metro rolling stock to low- or no-emission alternatives	Replace buses past age of useful life with low-no alternatives	Long-term (10-15 years)	Metro Bus
	Replace paratransit vans past age of useful life with low-no alternatives	Long-term (10-15 years)	Metro Bus
	Rebuild all railcars by 2025	Complete	Metro Rail
	New, upgraded rolling stock purchases for Rail Expansion project	Mid-term (5-10 years)	Metro Rail
Transition Metro and Aviation non-revenue, non-emergency support fleet and equipment to low- or no-emission alternatives	Ensure buying standards and timelines are in accordance with NYS mandate	Mid-term (5-10 years)	Procurement
	Determine fleet location & charging needs capacity with current study regarding vehicle manufacturer	Short-term (0-5 years)	Aviation
	Begin transitioning shuttle bus fleet with internal combustion engines to battery-electric in phased approach	Mid-term (5-10 years)	Aviation
	Begin transitioning airport ground support equipment with support and coordination from airlines	Mid-term (5-10 years)	Engineering
Transition off-road vehicles & specialized equipment to low-no emission alternatives	Review current equipment inventory by business center and designate key players	Short-term (0-5 years)	Authority-wide
	Explore research options at universities to assist with such a study	Short-term (0-5 years)	Authority-wide

STRATEGIES	ACTIONS	TIMEFRAME	DEPARTMENT LEAD
Expand fleet charging infrastructure at all facilities to support transition	Expand on alternative fuel monitoring feasibility studies at bus garages, including airports, properties, etc., for all types of fueling and charging methods to understand usage & capacity	Short-term (0-5 years)	Authority-wide
	Install additional Bus Charging Pantograph Infrastructure (Phase 2)	Mid-term (5-10 years)	Metro Bus
	Expand charging at End of Line stations and/or University for Bus Rapid Transit	Mid-term (5-10 years)	Metro Bus
	Standardize preferred charging methods so entire fleet has charging consistency (pantographs vs. in-road vs. plug-in vs. dynamic)	Long-term (10-15 years)	Authority-wide
Develop replicable, standard lifecycle analysis and return-on-investment research tools to evaluate impacts of fleet transition	Explore financial feasibility of new vehicle options with procurement team	Short-term (0-5 years)	HSEQ
Explore alternative fuels	Complete alternative fuel feasibility study for Babcock & Frontier Garages & review results for options to expand at other locations	Short-term (0-5 years)	Engineering
	Evaluate options for sustainable aviation fuel at fuel farm	Short-term (0-5 years)	Aviation
Evaluate options to increase service for higher revenue	Optimize and reduce non-service miles, effectively reducing inefficient deadhead miles	Mid-term (5-10 years)	Service Planning
Improve scheduling efficiencies	Incorporate GHG planning into service scheduling through VMT or PMT	Mid-term (5-10 years)	Service Planning
	Analyze airport shuttle routes with timing	Mid-term (5-10 years)	Aviation

Action Plan

Utility Consumption

Goal: Reduce facility and infrastructure total energy consumption, particularly from use of fossil fuels

STRATEGIES	ACTIONS	TIMEFRAME	DEPARTMENT LEAD
Transition all applicable lighting to LED lighting to meet NYS timeline	Ensure all indoor & outdoor lighting be retrofitted to LED or is scheduled to be replaced by December 31, 2025	Complete	Authority-wide
Reduce natural gas consumption in facilities in compliance with state requirements	Continue capital planning process of upgrading HVAC as useful life expires	Mid-term (5-10 years)	Engineering
	Optimize fueling of compressed natural gas buses	Short-term (0-5 years)	Metro Bus
Reclaim electrical consumption	Fully insulate all central buildings and garages to retain heat & cooled air	Short-term (0-5 years)	Facilities
	Determine source usage & increase submetering	Mid-term (5-10 years)	Engineering
	Optimize light rail electricity use and evaluate NYPA electrical sourcing breakdown of rail exclusively	Mid-term (5-10 years)	Metro Rail
	Connect all facilities to existing Power Monitoring Expert/ Building Management System	Mid-term (5-10 years)	ITS
Improve energy efficiency of BUF wetlands treatment building	Install variable frequency drives on blowers at central facility (currently only on/off option)	Mid-term (5-10 years)	HSEQ
Install energy-efficient heating & cooling	HVAC/Air Handling Units/ITS replacements phased at airports	Short-term (0-5 years)	Facilities
	Roof & Air Handling Units replacement at Bus garages	Short-term (0-5 years)	Bus Maintenance
	Rail HVAC units installation (system currently only has units in Train Control Center rooms)	Mid-term (5-10 years)	Metro Rail

STRATEGIES	ACTIONS	TIMEFRAME	DEPARTMENT LEAD
Assess electrical infrastructure needs and make upgrades for electrification	Reevaluate results and recommended projects in Energy Management Plan	Short-term (0-5 years)	Authority-wide
	Explore "Smart Parking" implementation options for premium and long-term parking	Short-term (0-5 years)	Aviation
	Investigate rental car facilities & infrastructure for future expansion	Short-term (0-5 years)	Aviation
	Develop Electrical Master Plans for both airports, prioritizing Buffalo Niagara	Mid-term (5-10 years)	Aviation
	Investigate alternative methods of future light rail propulsion (example: catenary vs. battery)	Mid-term (5-10 years)	Rail
Update building energy audits	Periodically and methodically update the energy audit report that was completed as part of the NYSERDA On-Site Energy Manager program in 2023	Long-term (10-15 years)	HSEQ
Explore transition to renewable energy sources	Replace fossil fuel systems and change to renewables in capital planning where possible (see "Energy Supply" Focus Area)	Long-term (10-15 years)	Engineering

Utility Consumption

Action Plan

Waste & Water

Goal: Improve processes while reducing total waste produced and water consumed

STRATEGIES	ACTIONS	TIMEFRAME	DEPARTMENT LEAD
Decrease total amount of solid waste per person produced annually	Review total waste by facility, airport enplanements, and number of employees	Short-term (0-5 years)	HSEQ
	Conduct data reconciliation of previous report submissions to New York State	Short-term (0-5 years)	HSEQ
	Work with waste hauler to obtain better data collection & display options	Short-term (0-5 years)	HSEQ
	Campaign to reduce waste authority-wide	Short-term (0-5 years)	HSEQ
Collaborate with tenants & vendors to decrease total amount of non-recyclable solid waste at all facilities	Implement a pilot composting program at airport and/or support facilities	Short-term (0-5 years)	HSEQ
	Reduce NFTA-internal printing and paper drawing packages	Short-term (0-5 years)	Authority-wide
	Eliminate single-use plastics in operations	Short-term (0-5 years)	Authority-wide
Increase quantity of material recycled	Explore better marketing with waste hauler to increase public participation in recycling	Short-term (0-5 years)	HSEQ
	Incentives for tenants, contractors, vendors, and employees to properly recycle materials	Mid-term (5-10 years)	HSEQ
Optimize battery disposal of vehicles or infrastructure	Explore vendor agreements/ contracts for disposal options	Short-term (0-5 years)	HSEQ
	Find other opportunities for rebuild & confirm safety requirements	Short-term (0-5 years)	HSEQ

STRATEGIES	ACTIONS	TIMEFRAME	DEPARTMENT LEAD
Decrease authority-wide water consumption	Begin tracking and reporting authority-wide water usage	Short-term (0-5 years)	HSEQ
	Determine specific locations and submetering options to see details of water consumption	Mid-term (5-10 years)	HSEQ
	Explore options for decreased water use by high users, such as bus washes and large airport facilities	Mid-term (5-10 years)	HSEQ
	Investigate graywater reuse potential at BUF (and subsequently other facilities)	Short-term (0-5 years)	HSEQ
Improve resiliency of BUF wetlands system	Install backup generator to lower risk of bypass, risk of flooding, and human inefficiencies from manually closing pump valves	Mid-term (5-10 years)	HSEQ
Upgrade/optimize BUF glycol treatment wetlands system	Rebuild 4 wetland beds, including an updated aeration system and walls	Long-term (10-15 years)	HSEQ
	Explore capacity upgrades for glycol treatment at wetlands, as it can get up to 600k gallons per day	Long-term (10-15 years)	HSEQ
	Minimize stormwater inputs from non-glycol areas to decrease amount of water to be treated and flooding risk	Long-term (10-15 years)	HSEQ

Action Plan

Safety & Resilience

Goal: Create healthier workplaces & communities by integrating sustainability into safety requirements

STRATEGIES	ACTIONS	TIMEFRAME	DEPARTMENT LEAD
Prepare systems for extreme weather and infrastructure events	Install backup generators and power sources at all critical locations after conducting needs assessment	Short-term (0-5 years)	Authority-wide
	Participate in Erie County/Niagara County Extreme Heat and Extreme Cold planning sessions	Short-term (0-5 years)	HSEQ
	Conduct Cold Spring fire suppression analysis, then additional garages	Short-term (0-5 years)	Engineering
Implement fire safety training for all business centers	Conduct methodical and organized electrical safety training for all existing operators/mechanics and new hires	Short-term (0-5 years)	HSEQ
	Conduct EV safety/fire suppression analysis at BUF CONRAC	Mid-term (5-10 years)	ARFF
	Investigate alternative fire-fighting foams	Short-term (0-5 years)	ARFF
Ensure safety during all vehicle recovery	Investigate changes in towing practices for new buses	Mid-term (5-10 years)	Metro Bus
Improve indoor environmental air quality	Continuously work to improve through ventilation, practice proper cleaning procedures, and reduced noise to boost employee satisfaction and productivity	Mid-term (5-10 years)	Facilities

Action Plan

Development

Goal: Ensure all construction and redevelopment projects use the most efficient and sustainable standards

STRATEGIES	ACTIONS	TIMEFRAME	DEPARTMENT LEAD
Implement design and construction requirements	Determine relevant federal & NYS legislation for new development	Complete	Government Affairs
	Integrate GreenNY Sustainable Resilient Design Network standards into contracts & expand embodied carbon reporting on construction	Short-term (0-5 years)	Engineering
	Connect properties inventory to new ERP system	Short-term (0-5 years)	Facilities
Review development potential of all NFTA-owned facilities, properties, and rights-of-way	Pursue and support station redevelopment and transit-oriented development for high-potential locations	Mid-term (5-10 years)	Grants & Development
	Consider Rail-to-Trail partnerships for NFTA properties included in GBNRTC's Regional Bike Masterplan	Mid-term (5-10 years)	Grants & Development
	Complete Property Master Plan	Short-term (0-5 years)	Facilities
Green procurement of commodities, services, and technology	Develop and issue internal sustainable procurement specifications	Short-term (0-5 years)	Procurement
	Develop an authority-wide process for purchases of electric vehicles	Short-term (0-5 years)	Procurement, Engineering
	Work closely with authority MWBEs to increase awareness of Green Procurement standards	Short-term (0-5 years)	Procurement
Reduce use of toxic substances	Follow requirements for purchase of refrigerants & cleaning products authority-wide	Short-term (0-5 years)	Procurement

Action Plan

Energy Supply

Goal: Increase renewable energy sourcing, purchasing, and generation across NFTA business centers

STRATEGIES	ACTIONS	TIMEFRAME	DEPARTMENT LEAD
Increase on-site solar photovoltaic installations	Work with NYPA to evaluate existing locations and enter into developing agreements	Complete	Grants & Development
	Review locations of current fiber optic lines	Short-term (0-5 years)	Engineering
Upgrade fiber optics infrastructure	Engage all necessary utility companies during various project points	Short-term (0-5 years)	Engineering
	Install fiber optic cables and tunnel lighting in rail system alignment	Mid-term (5-10 years)	Engineering
	Develop relationship with fiber provider for future BRT stations	Mid-term (5-10 years)	Service Planning
Strategic purchases of renewable energy certificates	Continue collaboration with current energy consultant to fully understand NFTA's renewable energy needs and requirements	Short-term (0-5 years)	Procurement
Explore clean energy storage options and evaluate microgrid potential to meet demand and resiliency of NFTA	Complete additional studies to determine if alternative energies are feasible (example: geothermal)	Mid-term (5-10 years)	HSEQ
	Review newer innovations such as fuel cells, battery storage, or small-scale wind technology	Mid-term (5-10 years)	HSEQ
	Resilient backup operations (ex: Rail -- see Safety)	Mid-term (5-10 years)	HSEQ

Action Plan

Leadership & Programming

Goal: Grow culture of sustainability at NFTA to become a leader in New York State

STRATEGIES	ACTIONS	TIMEFRAME	DEPARTMENT LEAD
Publish NFTA Sustainability Plan	Publish phase 1 after board approval in January 2026	Complete	HSEQ
Establish Greenhouse Gas Inventory Baseline	Actual FY2024, Estimated FY2005	Complete	HSEQ
Pursue external sustainability accreditation	Pledge American Public Transportation Association's Sustainability Commitment	Complete	HSEQ
	Obtain independent Airport Carbon Accreditation through Airports Council International of carbon footprint in accordance with ISO14064	Mid-term (5-10 years)	HSEQ
Conduct Climate Change Vulnerability Assessment and Hazard Analysis	Part of sustainability plan phase 2	Short-term (0-5 years)	HSEQ
Review authority-wide financial sustainability	Conduct participatory budget sessions between applicable departments to ensure Metro & Aviation projects are scheduled in appropriate timing with relevant requirements	Short-term (0-5 years)	Administration & Finance
Educate public on benefits of transit	Continue to work with community partners to demonstrate how increased transit service will reduce GHG emissions region-wide	Mid-term (5-10 years)	Public Affairs
	Expand relationships with community & non-profit organizations focused on sustainability in transportation	Mid-term (5-10 years)	Service Planning

STRATEGIES	ACTIONS	TIMEFRAME	DEPARTMENT LEAD
Build a strong internal culture of sustainability	Add sustainability training to New Hire Orientation	Short-term (0-5 years)	HSEQ
	Encourage attendance at continuing education sessions & conferences	Short-term (0-5 years)	HSEQ
	Obtain employee environmental certifications such as ENV-SP or LEED	Short-term (0-5 years)	HSEQ
	Deliver ongoing presentations on organizational sustainability to NFTA executive team	Short-term (0-5 years)	HSEQ
Support multi-modal connections with first/last mile mobility	Explore use of bikeshare, scootershare, and carshare programs to connect with all-access transit and pedestrian planning	Short-term (0-5 years)	Service Planning
Leverage innovative technologies	Ongoing IT initiatives ("Project Connect" ERP upgrade, submetering, etc.)	Short-term (0-5 years)	ITS
Partner with universities or other organizations to study impacts of NFTA operations	Ongoing One Region Forward planning with UBRI, Building Cleaner Communities Competition with University at Buffalo	Short-term (0-5 years)	HSEQ

Implementation

MANAGEMENT

Implementation of the Sustainability Plan will be led by the Steering Committee, listed in the acknowledgements section of this document, and meet on a monthly frequency to keep the plan on track for scheduled implementation. Quarterly updates occur with: a) the Executive Director to ensure the Sustainability Plan corresponds to original goals and principles of the Roadmap document; and b) the Engineering and Facilities teams to review other applicable E.O. 22 requirements. The Sustainability Manager will monitor progress towards meeting NFTA's goals laid out in the Action Plan section and will provide metrics through annual reporting, shared widely throughout the authority to encourage information and data-sharing. New versions of this document will be posted on NFTA's website.

COMPLIANCE & FUNDING

Funding will be through regular budget processes through Admin & Finance, with grants sourced by the Departments of Grants & Development and Government & Consumer Affairs. NFTA will consider the implementation of a "Climate Action Fund" to assist with related projects, much like many SUNY schools and other transit agencies have done. NFTA will continue to work toward compliance with regulatory mandates and available guidelines at all levels of government. Where incentives are made available through programs, grants, rebates, or other means, NFTA will review and pursue opportunities in-line with the goals, strategies, and actions identified in this plan.

EMERGING CHALLENGES AHEAD

The transition to decarbonization will require active participation and will affect the duties & responsibilities of NFTA personnel. Due to aging infrastructure, careful safety procedures must be in place before transition of facilities or large-scale electrification. The upskilling of our workforce will be crucial, as employees will need to be prepared to handle and maintain new technology and new generations of vehicles with various fueling types. Workforce development has already begun with the battery-electric manufacturer, and those efforts must continue.

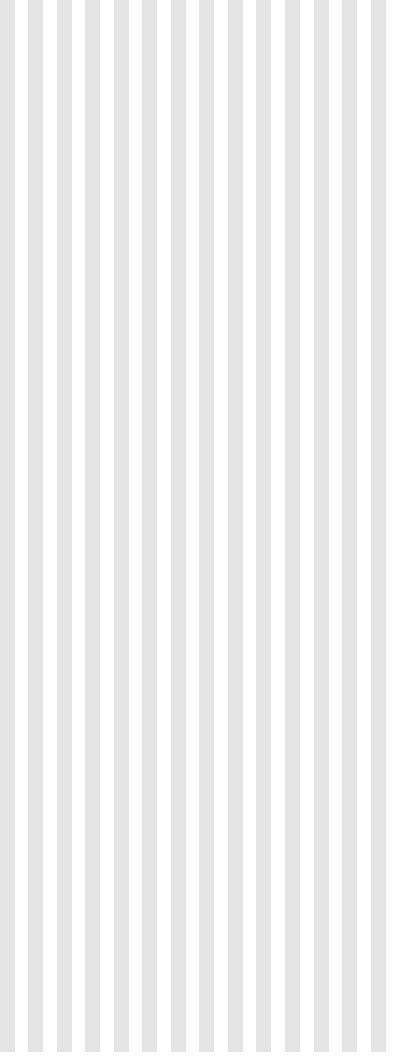
PARTNERSHIPS TO MAXIMIZE REGIONAL IMPACT

The historic efforts mentioned in this Plan could not be possible without regional collaboration between all stakeholders involved, such as bus mechanics, bus operators, airline partners, vendors and concessionaires, facility maintenance technicians, rental car companies, airfield staff, and all those who rely on NFTA operations daily. NFTA will continue to participate in working groups that include the University at Buffalo, Erie County Department of Environment and Planning, local municipalities, and others. By doing so, we can align our efforts and accurately track strong regional progress.

References

1. **NFTA Annual Performance Report***
2. **BUF & IAG Sustainable Master Plans***
3. **NFTA Roadmap 2023-2033***
4. **NFTA Public Participation Plan***
5. **NFTA Community Impact Report***
6. **Buffalo-Niagara Comprehensive Climate Action Plan***
7. **NFTA Greenhouse Gas Emissions Inventory – C&S Companies**
8. **NFTA 2023 Energy Management Plan**
9. **BNIA Noise Exposure Map 5-year Update***
10. **BNIA Environmental Achievements – Final Report 2006**

*Publicly available on NFTA's Public Information Center webpage



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