



MARTA Sustainability And Beyond....

Riders' Advisory Council

Richard Thomas, Director of Sustainability

May 3, 2023

Agenda

- MARTA Sustainability Progress to Date
- MARTA ESG Programming
 -  Environmental
 -  Social
 -  Governance
 -  Economic Benefits
- What's Next for MARTA Sustainability?

What is Sustainability?



Sustainability

The property of being environmentally sustainable; the degree to which a process or enterprise is able to be maintained or continued while avoiding the long-term depletion of natural resources.

<https://www.oed.com/viewdictionaryentry/Entry/299890?print>

Triple Bottom Line (TBL) Approach

A holistic approach to sustainability which addresses an organization's **social** and **environmental** impacts, in addition to its **economic** impacts.



MARTA Sustainability Progress to Date

MARTA Sustainability Timeline



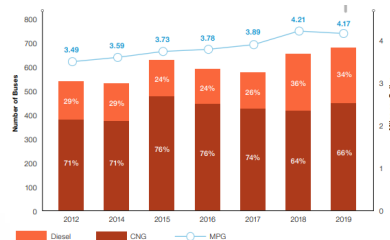
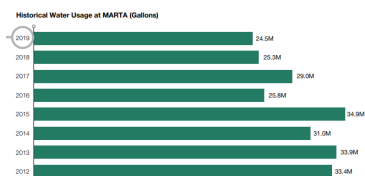
2009

- Served as a founding signatory to the APTA Sustainability Commitment
- Secured Laredo solar panels grant funding



2012

- Established sustainability baseline for most metrics



2015

- Achieved the APTA Bronze Level



2018

- Achieved the APTA Silver Level
- MARTA's Inaugural Sustainability Report released
- ESCO projects began



2019

- MARTA's 2019 Sustainability Report Released
- Secured EV bus grant funding



Federal Transit Administration

2021

- Achieved the APTA Gold Level
- MARTA's 2020 Sustainability Report Released



2022

- MARTA's Office of Sustainability founded
- MARTA's 2021 Sustainability Report Released
- EV bus service launched



MARTA Sustainability in the News

RAILWAY AGE

RAILWAY AGE

NEWS FREIGHT PASSENGER MECHANICAL M/W C&S/IT FINANCE REGULATORY

May 14, 2021 | Passenger

WSP, MARTA Take Top Honors in APTA Sustainability Program

Written by Marybeth Luczak, Executive Editor



MARTA earned Gold in APTA's Sustainability Commitment Program for successfully achieving ISO 55000 certification for its asset management program, and ISO 14001:2015 Environmental Management System certification at nine facilities.



MARTA Sustainability Efforts Boosted By FTA Low-No Grant For Electric Buses



MARTA introducing electric fleet of buses in celebration of Earth Day



By WSBTV.com News Staff

April 22, 2022 at 5:06 pm EDT



APTA honors MARTA for sustainability efforts



MARTA has reduced water usage by 40% over a seven-year period. Photo - @marta.com

Planetizen

NEWS EXCLUSIVES JOBS TRAINING

Atlanta Introduces Electric Buses

In a nod to Earth Day, MARTA added three electric buses to its transit fleet this week, with plans to expand the electric fleet to 12 buses.

Read Time: 1 minute
April 20, 2022, 8:00 AM PDT
By Diane Ionescu @dianekoffaction



Bill Gonsky / MARTA Bus Atlanta



Green investing options emerge as MARTA buys its first sustainable bonds

David Pendered • December 20, 2021 6:04 pm



Intelligent Transport SIGN UP FOR FREE TODAY

MARTA awarded federal grant for new electric buses and charging infrastructure

Provided as part of the Federal Transit Administration's Low or No Emission Program, the \$19.3 million funding will allow MARTA to continue transitioning away from diesel-powered vehicles.



MARTA Sustainability Reports



2021:

https://www.itsmarta.com/uploadedFiles/More/About_MARTA/MARTA%20Sustainability%20Report%20052322.pdf



2020:

<https://itsmarta.com/uploadedFiles/MARTA%20Sustainability%20Report%20030321.pdf>



2019:

https://itsmarta.com/uploadedFiles/More/About_MARTA/MARTA%20Sustainability%20Report%20120519%20Digital.pdf



2018 (Inaugural):

https://itsmarta.com/uploadedFiles/MARTA_101/Why_MARTA/MARTA%20Sustainability%20Report%20091018.pdf



MARTA Sustainability Programming

ESG



Environmental

Having a net positive impact on the environment



Social

Improving the communities in which we operate, work, & live and supporting our employees



Governance

Being transparent, pursuing integrity and diversity in leadership, and being accountable

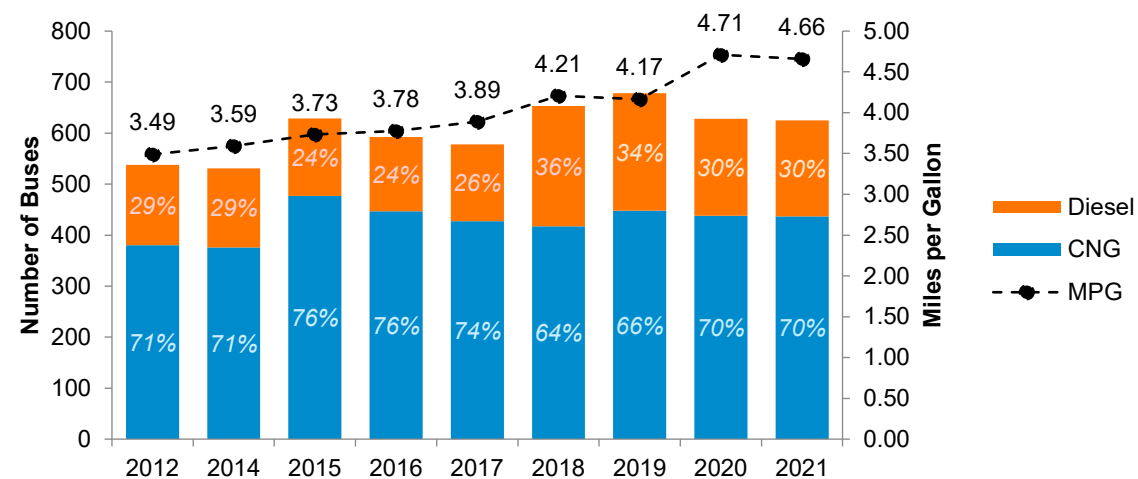


Environmental

- **Electric Bus Conversion Project**
 - Funding from FTA and partners New Flyer, Siemens and the Center for Transportation and the Environment (CTE)
- **Cleaning the bus fleet fuel**
 - Clean Diesel & CNG, EV Bus
 - 33% increase in overall fuel efficiency of bus fleet since 2012
- **Railcar Refurbishing Project & New Cars**
 - More efficient railcars, replacing fleet from 1979 to 2005
 - Railcar donation to Southeastern Railway Museum in Duluth and New York Trolley Museum



14,000
boardings
per week on **NEW**
battery-electric
buses





Environmental

Electrification of Non-revenue Fleet

Ford Escape
Hybrid PHEV
Annual Fuel Savings
\$2,350



Ford Explorer
Hybrid HEV
Annual Fuel Savings
\$650

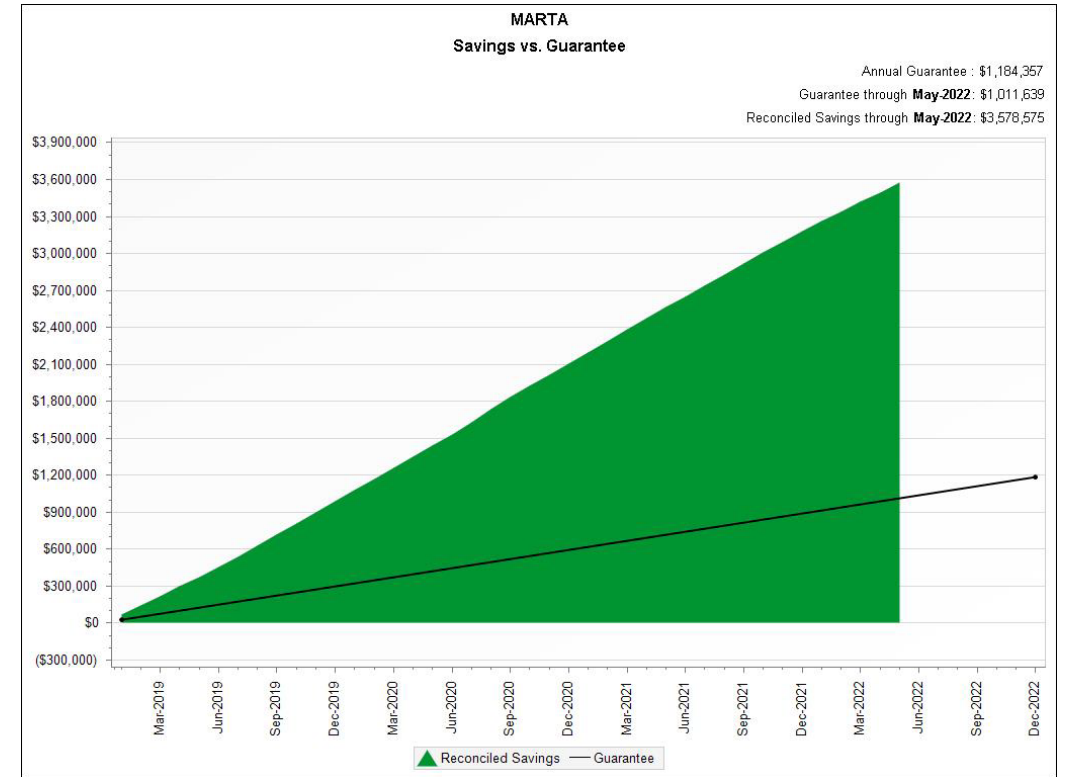




Environmental

• ESCO Contract and Upgrades

- Started in 2017 with Schneider Electric
- Guaranteed \$55M in avoided costs realized over the 17 Year Guarantee
- Installation included energy efficiency upgrades, LED lighting replacements, HVAC upgrades, etc.
- As of 2021, savings are \$1.2M above guaranteed at the current phase of the project



Year	Option A Utility Savings	Option C Utility Savings	Non-Measured Utility Savings	Non-Measured O&M Savings	Total Savings	Guarantee
Installation	\$1,040,463	\$591,953	-\$9,596	\$553,415	\$2,176,236	\$991,247

*Savings through May '21 are presented as preliminary until Guarantee Commencement is reached and Installation Savings can be finalized.



Environmental





- **Bus and rail wash water recycling**
 - Saves an estimated 3.5M gallons of water each year that would otherwise be drawn from the City's potable water system
- **ISO 14001:2015 Environmental Management System**
 - Authority-wide external certification
- **Material recycling and reuse**
 - Scrap metal, fiberglass, used oil, tires, batteries, halon
 - Track replacement work.





Sustainability Metrics

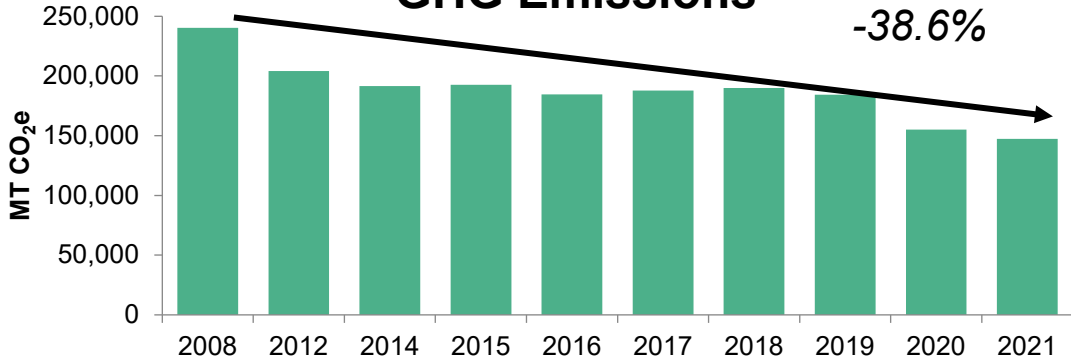
- Full baseline year: 2012
- Normalized by vehicle revenue mile (VRM) to account for growing and continued service at MARTA
 - *Metric divided by VRM*
- Observed decrease in normalized resource usage and emissions over time

		2012	2021	CHANGE
GHG Emissions (lbs. CO ₂ e per VRM)		9.57	6.68	-30%
Water (gallons per VRM)		0.71	0.41	-43%
Waste/Recycling (lbs. per VRM)		0.12	0.10	-12%
Energy (kBtu per VRM)		27.73	24.19	-13%

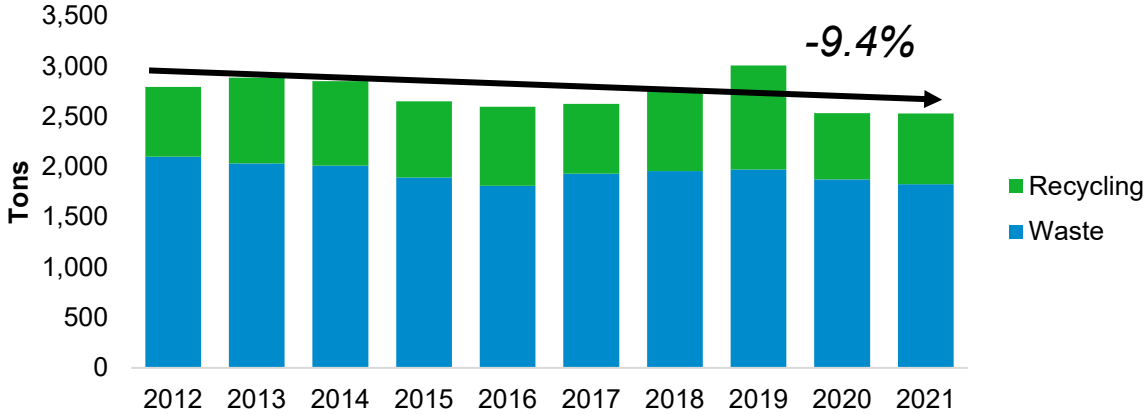


Sustainability Metrics

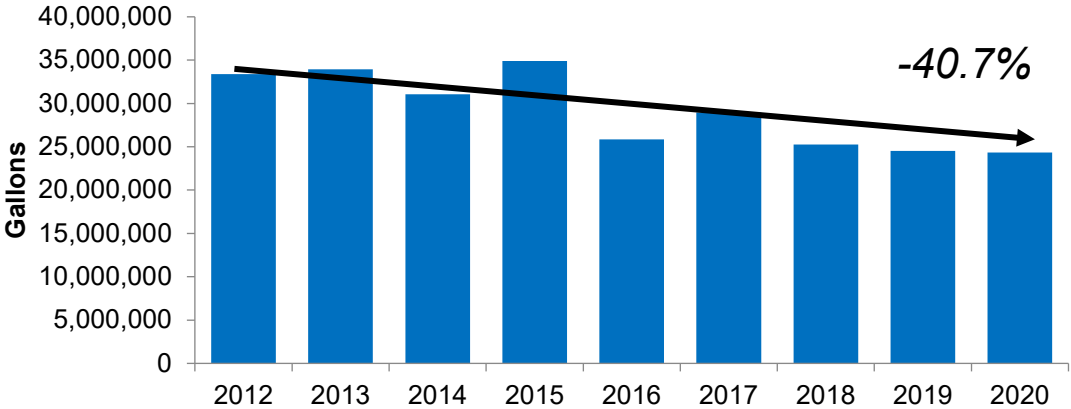
GHG Emissions



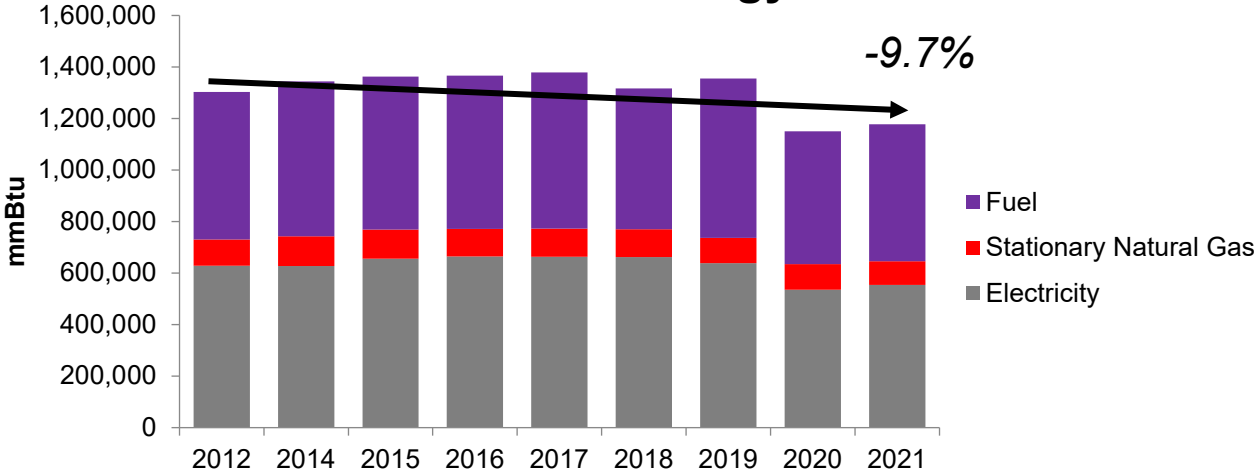
Waste and Recycling



Water



Overall Energy

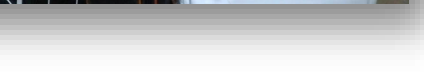




Social

Elevating Our Community

- MARTA HOPE Program
 - Partnership with HOPE Atlanta to aid individuals experiencing homelessness who have taken refuge on the transit system
- COVID-19 Support, Testing, and Vaccinations
 - Hosted at stations, provided masks, etc.
- Affordable Housing at TODs
 - Currently 3,200 affordable housing units preserved, completed, under construction, in negotiation, or in procurement/planning
 - Partnership with Goldman Sachs to finance new affordable housing developments
- MARTA Reach
 - Launched in 2022, provides first-mile/last-mile service on-demand





Social

Stations that Serve the Community

- MARTA Fresh Market
 - Improving food security
 - \$852,000 grant in December 2021 from the USDA to expand

- ArtBound
 - Improve station atmosphere and elevate local artists
 - Upcoming at Five Points

- StationSoccer Project
 - 4 locations across the Authority





Social

Improving Stations and Stops for Our Riders

- MARTA Elevator and Escalator Rehabilitation Program & Maintenance Contract
- Increased and improved bus shelters
 - Protection for riders during inclement or extreme weather
- Station rehabilitation program
 - Improved structures and station amenities to improve longevity of system and ridership experience
- EV Charging Stations
 - Passengers and employees access to charging while riding MARTA





Social

Supporting Our Employees

- Demand Response ADA Sensitivity Training for paratransit operators run by MARTA employee with a visual disability and current Mobility customer
- MARTA Heroes Program recognizing our employees
- COVID-19 pandemic payment in 2021
- Celebrating service anniversaries of our long-term operators
- Increased Health & Safety provisions for employees due to pandemic

“Our frontline employees are the backbone of this organization and on behalf of my fellow board members, I want to thank our frontline workers for continuing to provide essential transit service and ensuring our patrons are safe during one of the most difficult periods in recent history.”

– Rita Scott, MARTA Board Chair

MARTA Heroes



MARTA CELEBRATES 50-YEAR SERVICE ANNIVERSARY OF BUS OPERATOR COY DUMAS, JR.



Governance

Corporate Governance

- New Office of Sustainability reports directly to MARTA Chief Customer Experience Officer
 - All hold responsibilities for MARTA ESG
- Integrity and diversity of the Board

Agency Values

- MARTA's Vision, Mission, and Priorities all hold the Authority and its employees to high standards
- Mission centers on ESG

ESG Management Structure

MARTA Board of Directors

- Oversight of ESG / Sustainability

C-Suite

- Provides direction to Office of Sustainability
- Participates in Board briefings

Office of Sustainability

- Briefs C-Suite and Board of progress
- Management of ESG programs
- Responsible for disseminating Sustainability information across Authority

Our Mission

To advocate for and provide safe, multimodal transit services that advance prosperity, connectivity and equity for a more livable region.



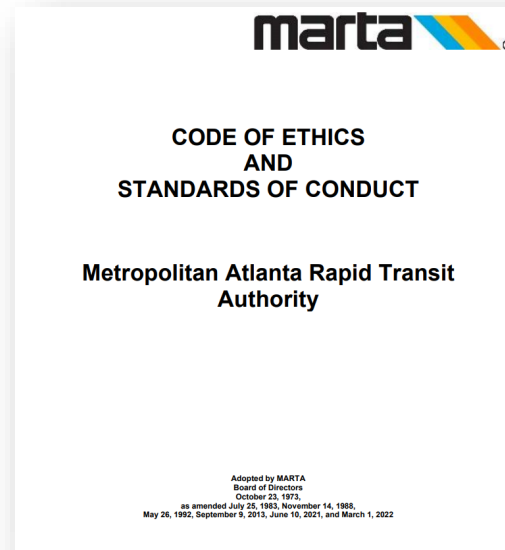
Governance

Transparency

- Public Sustainability, Financial, Audit
 - Planning for additional public-facing reports and studies
- Public KPIs and data reporting

Ethics

- High standards for performance and behavior for employees and contractors in Code of Conduct



Key Performance Indicators

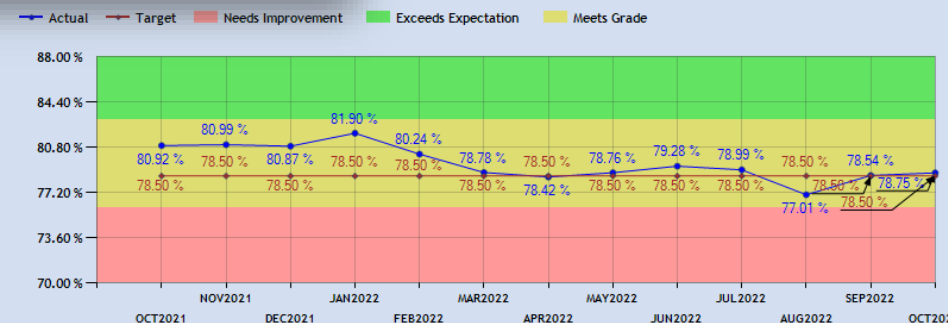
Bus On-Time Performance

Definition: Measures how closely service runs to schedule. Departures are considered on-time, if made between 0 and 5 minutes after the scheduled departure times.

OCT2021: 80.92% FY2022 To-Date: 82.12%*

OCT2022: 78.75% FY2023 To-Date: 78.33%*

* System-wide value



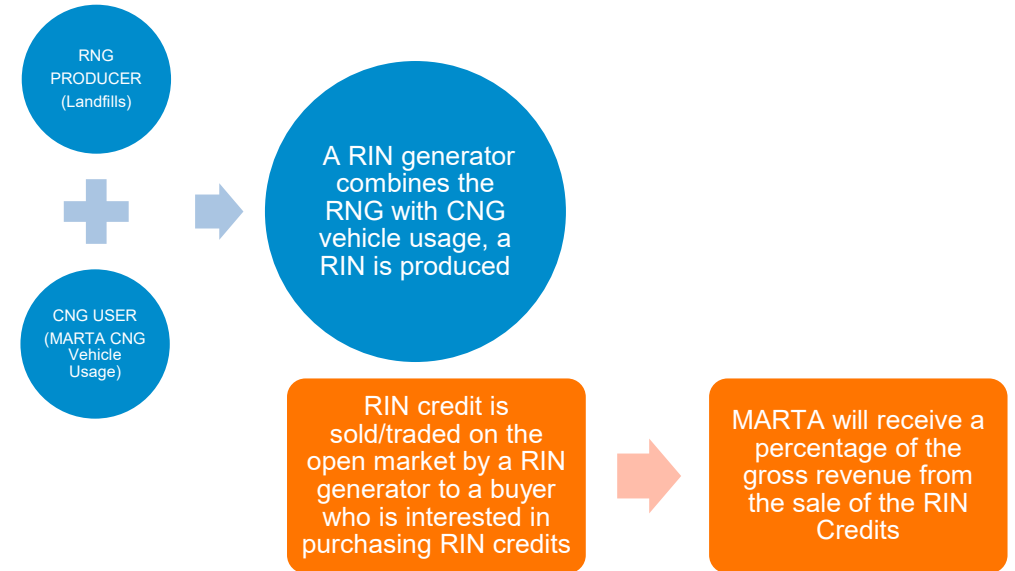


Economic Benefits of MARTA Sustainability



Revenue Generation

- Renewable Identification Number (RIN) program for biofuels
 - MARTA, as a CNG user, will receive a percentage of gross revenue from the sale of RIN credits
 - Estimated net revenue to MARTA
 - \$1.3M/year years one through five
 - \$1.4M/year option years six and seven
- Laredo solar panels sell back program with Georgia Power
- Halon Recycling (Phase 1)
 - Sell back program netted \$376K in FY20
- Scrap metal recycling
 - >\$279K 2012-2021





Cost Savings

- Energy efficiency projects
 - Building automation, HVAC upgrades & LED lighting; 20-25% efficiencies savings so far
 - ESCO and Georgia Power Energy Efficiency Incentives
- Diverted water program
 - Cooling towers and Industrial Wastewater Treatment Program, over \$120K/yr. savings

Marta Energy Efficiency Rebate Summary 2012-2021 YTD	
	Total Rebate
2020	\$146,678.41
2019	\$98,659.50
2016	\$4,384.00
2015	\$5,368.00
Grand Total	\$255,089.91





Green Bonds and Regional Economy

Green Bonds

- Issued in 2021
- Refunding bonds with a par value of \$369.6M

Regional Economy

- Growing job opportunities across ATL
- Expanding network to new employers, attractions, etc.

\$369.6M
value of first Green Bonds
issued by MARTA

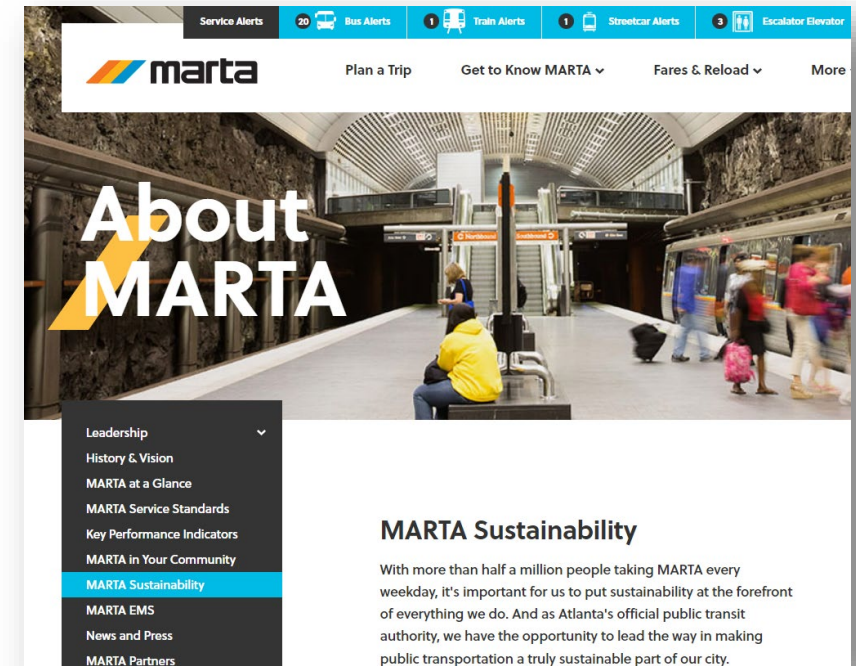




What's Next for MARTA Sustainability?

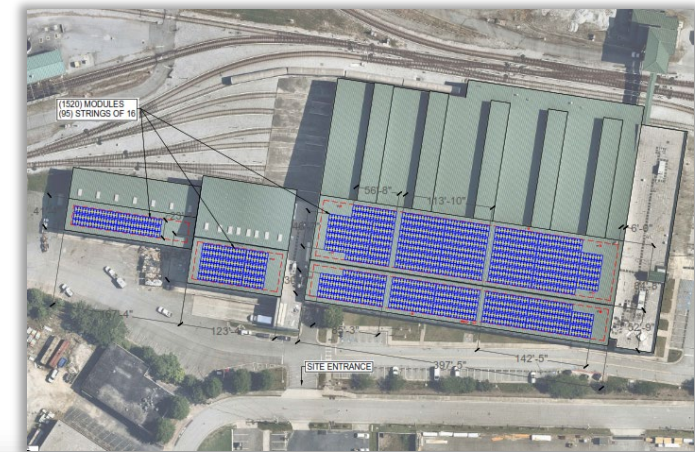
Strengthening and growing the new Office of Sustainability

- Establishing policies, conducting studies, and developing plans
 - Sustainability Policy
 - Vulnerability Study
 - Climate Resilience Action Plan (mitigation and adaptation)
 - ESG Reporting and improved Sustainability Report
 - Sustainability Management Plan



Improve and Expand MARTA Sustainability

- Prioritize green certifications including Envision and LEED
- Expand solar options on MARTA property
- Growth of MORE MARTA; expanding service to underserved areas of ATL
- Growth for the Fresh MARTA Market
- Continued State of Good Repair work
- New efficient rail cars



Improve and Expand MARTA Sustainability

- Launched new Breeze Mobile App 2.0
- Released Authority-wide Sustainability Training eCourse on MARTALearn
- Publication of Sustainability Newsletter
- Announcement of Sustainability Dashboard



In Partnership with Office of Sustainability

MARTA Sustainability Training

is now available in MARTALearn

PLEASE REGISTER & COMPLETE THIS COURSE

A key priority at MARTA is raising awareness among employees about our commitment to championing sustainability in the public transit industry. In this course you will:

- Learn a basic knowledge of sustainability and Environmental, Social, Governance (ESG) terminology and principles
- Be able to identify what drives sustainability and ESG at MARTA
- Sustainability progress to date, timeline, and programming
- Understanding how MARTA incorporates sustainability into policy and programming
- Identify how you can contribute to sustainability at MARTA

TWO WAYS TO TAKE THE COURSE

<p>DESKTOP/LAPTOP Click here to launch MARTALearn and enroll.</p>	<p>MOBILE APP Click here to download and view the mobile app reference guide.</p>
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Use Your Smartphone's Camera to Scan the QR Code and Go to MARTALearn.

Technical/Course Support

- For technical support, please contact the IT Helpdesk at x5088.
- For assistance with the course, please email martalearn@marta.com.

Contractors Only

Click [here](#) to access the training. Fill out the survey at the end of the course to log your completion.

Learning & Development
Learn. Grow. Excel.

Office of Sustainability April 2023

MARTA Sustainability Newsletter: Earth Day Edition

Transit-Related Articles on Sustainability & Resilience

History of Earth Day

The first Earth Day celebration took place on April 22nd, 1970, when a U.S. senator from Wisconsin organized a national demonstration to raise awareness about environmental issues. Rallies and protests took place across the country, and by the end of the year, the U.S. government had created the Environmental Protection Agency (EPA). Today, over a billion people in more than 190 countries around the globe celebrate Earth Day by taking part in activities designed to protect the planet from pollution, deforestation, and other negative environmental impacts.

Earth Day is an important reminder to protect and improve the environment for future generations, but our actions to live more sustainably should be a daily part of our lives so that every day is Earth Day! You can take part by picking up litter, planting trees, recycling regularly, or saving a portion for something you would like to see changed!

Every day is Earth Day at MARTA

MARTA currently has six electric buses on the streets, with 31 more on the way, and has committed to using electric buses on all its bus rapid transit (BRT) routes. The remaining bus fleet is made up mostly of Compressed Natural Gas (CNG) buses that reduce emissions equivalent to keeping more than 370,000 cars off the road or powering almost 300,000 homes for one year.

MARTA offers free electric vehicle charging stations at six rail stations: North Springs, Edgewood/Candler Park, College Park, Lindbergh, H.E. Holmes, and Doraville, the Windward Parkway Park & Ride, and the Landis Bus Garage employee parking lot. MARTA is in the process of transitioning to electric for its non-revenue vehicles, with a goal of at least a 50 percent increase in electric non-revenue vehicles every year moving forward. And

MARTA is proud to publish its first Sustainability Newsletter!

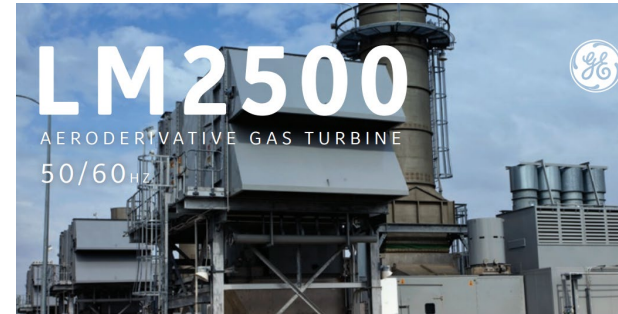
“Every day is Earth Day at MARTA,” said MARTA General Manager and CEO, Colleen Greenwood. “While using transit itself is a climate solution, we continue to lower our carbon footprint by switching to a zero-emission fleet, ensuring our facilities are energy-efficient, and providing healthy community amenities such as fresh markets, neighborhood gardens, and soccer pitches.”

MARTA strives to be a strong community partner, implementing programs that encourage healthy habits such as MARTA Markets that bring fresh produce to rail stations in food “deserts,” partnering with Global Growers to establish a farm near Indian Creek Station for local farmers from Burundi, and building soccer pitches at rail stations for a citywide youth soccer league.

MARTA’s transit-oriented development (TOD) program transforms under-utilized MARTA surface parking lots into mixed-use developments with an affordable housing component to ensure senior and low-income residents have convenient access to transit.

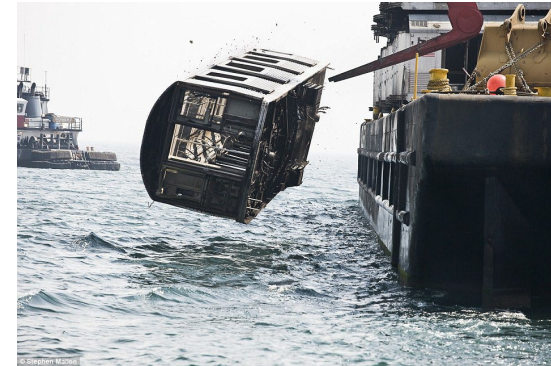
MARTA Potential Pilot Programs

- Community Charging & Wi-Fi Justice Support
- Battery Energy Storage
- Microgrids and On-site Power Generation
- GPC Hydrogen Fuel Cell Hub Collaboration
- Solar Energy Procurement Agreements (SEPA)
- Urban Tree Canopy Concepts
- Reverse Vending Machines circular recycling model



MARTA Rail Fleet: Marine Artificial Reef Project

- Dismantle of MARTA rail cars for artificial reef material off Georgia Coast
- In 2001 New York City Transit Authority (NYCTA) offered 1,300 obsolete subway cars shells to state programs as reef material. NYCTA cleaned and delivered them at no cost to the Program.
- U.S. Army Corps of Engineers and the National Marine Fisheries Service supported the use of these cars
- Georgia received 50 subway cars and after 3 months in the water, divers found a diverse array of fish species inhabiting the cars
- Rail cars have shown to be fully functional as artificial habitat, offering support to reef fish by supporting invertebrate communities



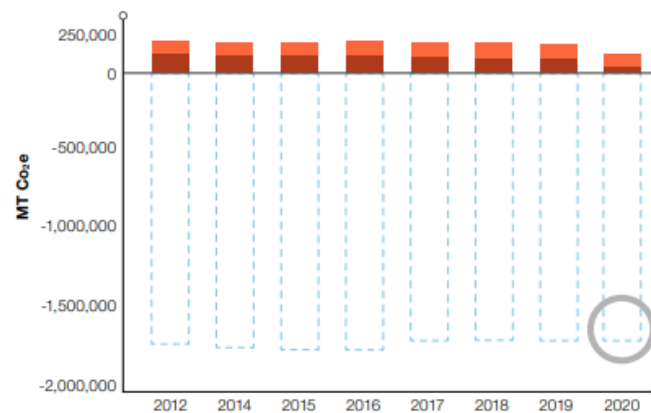
<https://coastalgadnr.smugmug.com/keyword/Subway%20Cars/>

<https://youtu.be/phLLCgGebfI?t=412>

Increase Ridership

- The biggest impact MARTA has on the region is providing public transit and shifting people from single occupancy vehicles to more sustainable modes
- Ridership increase is directly linked to sustainability
 - Reduction in regional GHGs

Overview of Emissions and Emissions Displaced by MARTA 2012-2019



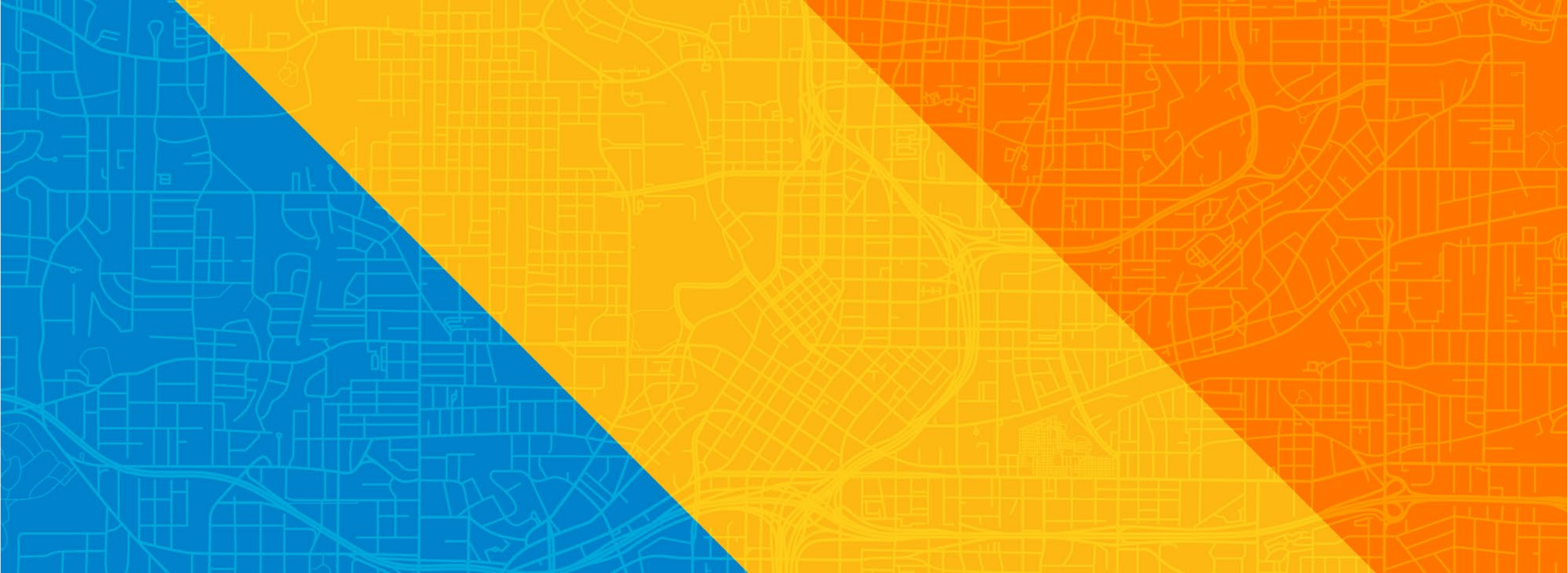
■ Scope 1 (Direct) Emissions
■ Scope 2 (Indirect) Emissions
 Total Displaced Emissions

removing
1,694,623
 MT CO₂e is equal to keeping



off the road for a year,
 or the annual
 electricity
 use from





Thank You



Questions? rthomas5@itsmarta.com



Additional Backup Slides

Detailed Sustainability Data

YEAR	2008	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
RECYCLING / WASTE											
Landfill total (tons) ¹⁷		2,100	2,036	2,014	1,896	1,812	1,932	1,958	1,974	1,875	1,828
Recycling and Reuse total (tons) ¹⁸		693	851	839	758	785	696	795	1,034	660	704
Diversion Rate (waste diverted from landfill/total waste produced)		24.8%	29.5%	29.4%	28.6%	30.2%	26.5%	28.9%	34.4%	26.0%	27.8%
Pounds (lbs.) waste & recycling / VRM		0.1189	0.1219	0.1211	0.1019	0.0959	0.0941	0.0970	0.1038	0.0909	0.1041
ENERGY USAGE											
Total Electricity consumed (kWh)	209,440,000	184,176,716	184,037,039	192,271,748	196,555,667	196,315,436	194,389,734	194,045,356	187,252,653	157,042,241	162,419,248
kWh / VRM		3.92	3.89	4.08	3.77	3.63	3.48	3.42	3.23	2.82	3.34
Stationary Combustion (therms)		1,022,933	1,161,796	1,155,237	1,124,451	1,066,777	1,090,856	1,085,084	1,022,753	990,300	924,097
Therms / VRM		0.022	0.025	0.025	0.022	0.020	0.020	0.019	0.018	0.018	0.019
MOBILE FUEL USAGE											
Total Fuel (gallons) ¹⁹	11,016,771	8,861,416		8,947,471	9,134,921	9,495,529	9,798,641	8,827,369	9,196,128	8,317,180	8,237,141
Gallons / VRM	0.199	0.189		0.190	0.175	0.175	0.176	0.156	0.159	0.149	0.169
WATER USAGE											
Water used (gallons)		33,384,685	33,940,595	31,037,073	34,900,740	25,840,667	28,964,573	25,253,976	24,535,358	24,336,576	19,814,401
Gallons / VRM		0.710	0.717	0.659	0.670	0.477	0.519	0.445	0.423	0.436	0.407
GHG EMISSIONS*											
GHG Emissions (MT CO ₂ e)	240,224	204,027		191,498	192,646	184,594	187,820	190,002	184,336	155,071	147,466
CO₂e pounds / VRM	9.574	9.569		8.960	8.156	7.517	7.417	7.380	7.011	6.13	6.68
GHG Emissions Displaced by MARTA (MT CO ₂ e)		1,469,277		1,766,711	1,779,438	1,781,410	2,304,525	2,371,830	2,452,485	2,373,595	2,229,409

Light grey boxes represent year in which the corresponding data were not collected.

2021 GHG Emissions will be updated in the next Fiscal Year.

APTA Sustainability Commitment

- **Levels**
 - Entry Level, Bronze, Silver, Gold, Platinum
- **Requirements**
 - Set of core principles
 - Sustainability as a strategic objective, sustainability champion, develop metric tracking, etc.
 - Specific improvements in metrics (2%, 5%, 10%)
 - Achieved and committed actions (short-term)
 - Achieved and committed stretch goals (long-term)
- **MARTA currently Gold**
 - Next step is Platinum

