

MIAMI FOREVER CARBON NEUTRAL

City of Miami Greenhouse Gas Reduction Plan
and Pathway to Carbon Neutrality by 2050



MIAMI **FOREVER**
CLIMATE READY

CLIMATE RESILIENCE

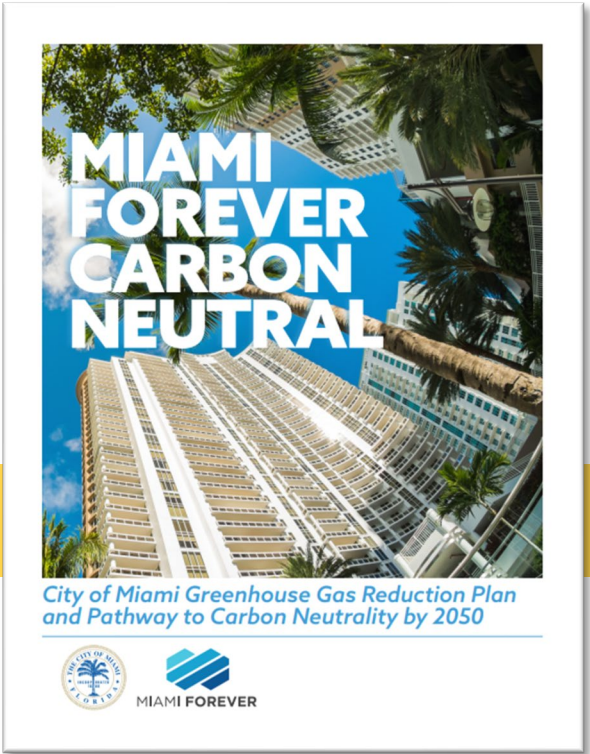
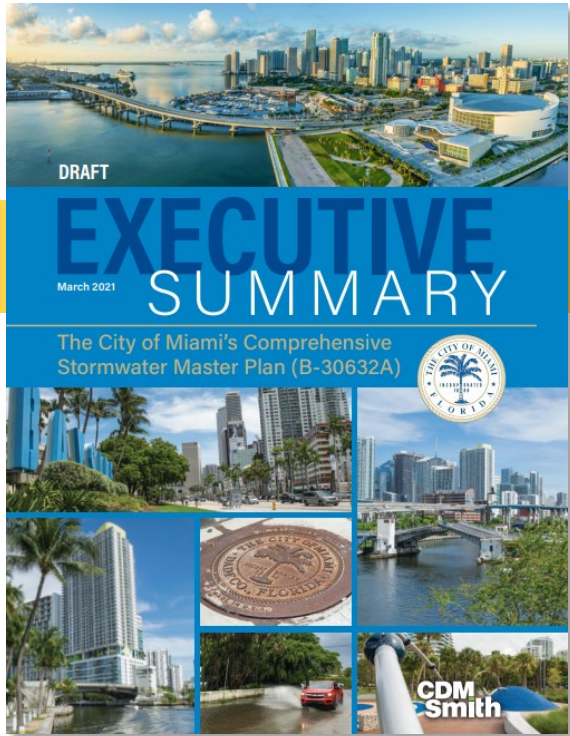
ADAPTATION

REACTIVE

MITIGATION

PROACTIVE

CLIMATE RESILIENCE PLANS



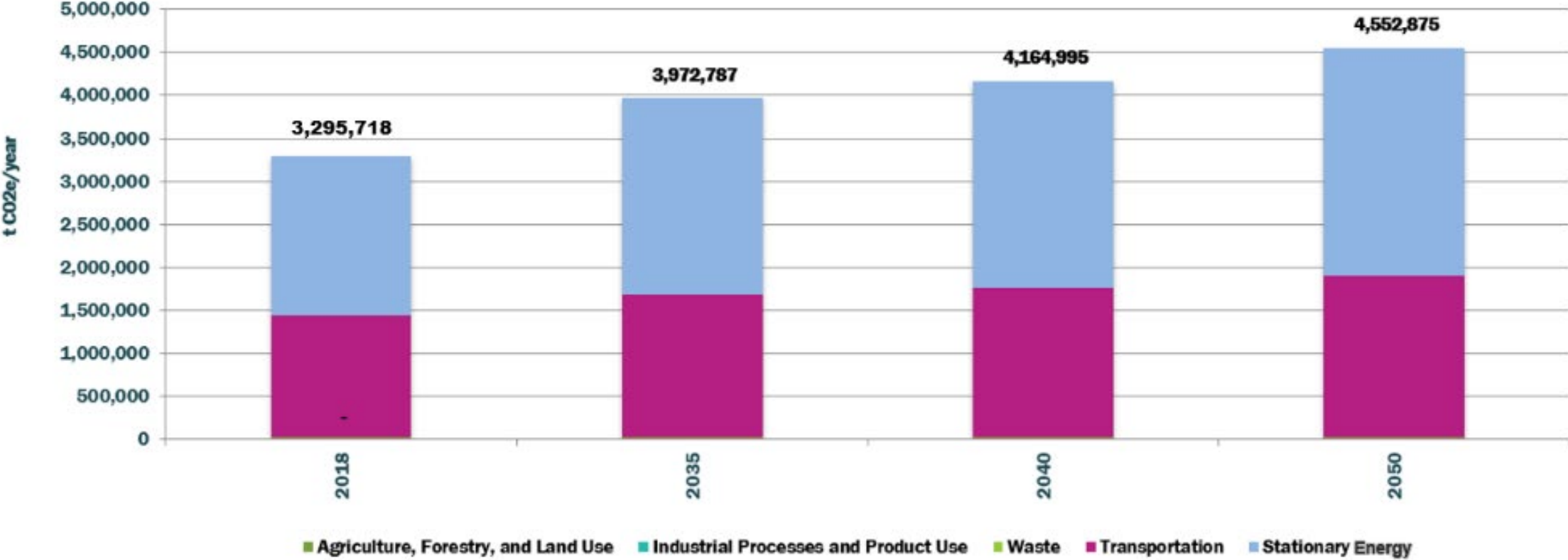
THE GOAL

CARBON NEUTRALITY BY
2050

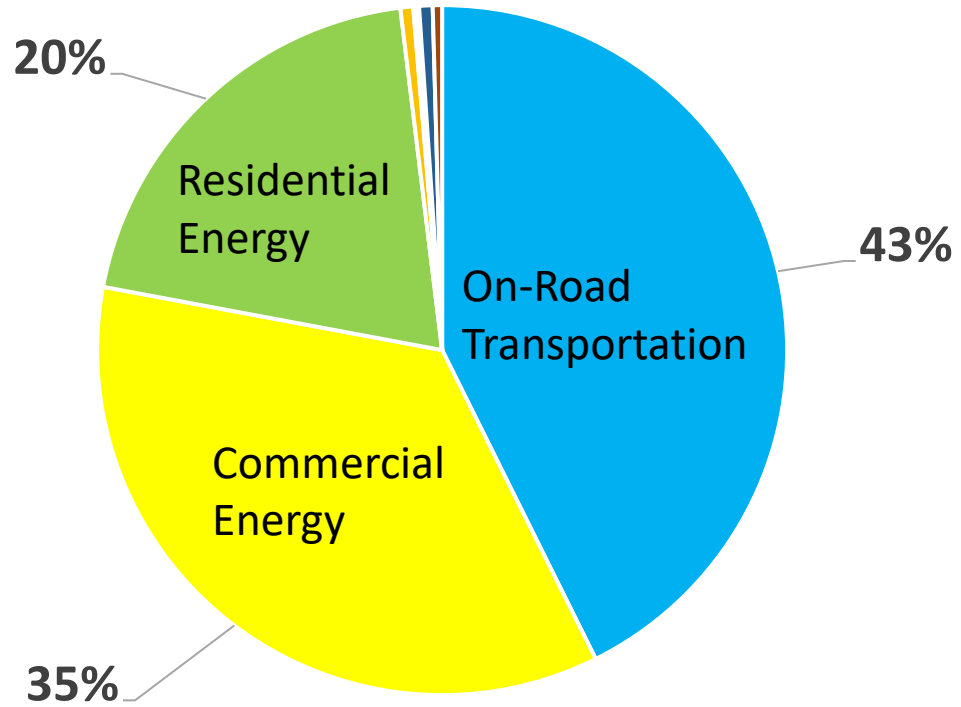
STEEP GREENHOUSE GAS
REDUCTIONS BY 2035



CITY NEEDS TO ACT

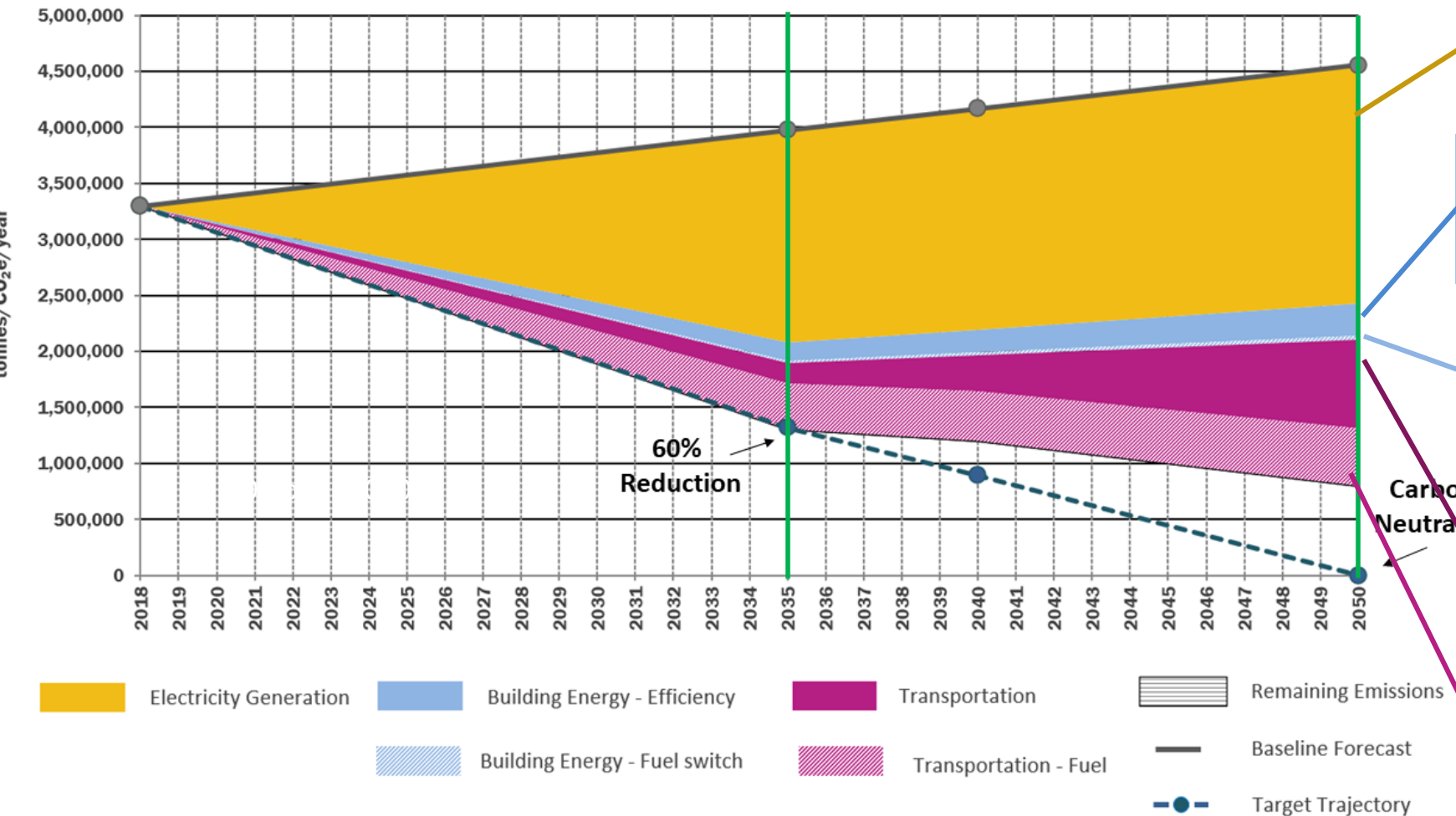


2018 GREENHOUSE GAS INVENTORY



- On-Road
- Residential Energy
- Fugitive Emissions
- Railways
- Commercial Energy
- Manufacturing/Construction Energy
- Non-Specified Energy Sources
- Wastewater

2035 GOAL – 60% REDUCTION



Clean Electricity – 100% carbon free electricity

Energy Efficiency – Improve energy efficiency in buildings

Fuel Switch – 35% reduction in on-site natural gas emissions

Travel Mode – 15% less single occupant vehicle trips

Passenger EVs – 40% of passenger vehicles



WE NEED TO GO GREEN

- **G**etting around Miami
- **R**enewable Energy
- **E**Vs
- **E**nergy Efficiency
- **N**ew Green Economy

*GREEN actions will spur the **green economy***



ACTION BREAKDOWN

- 55 Actions
 - 33 directly address GHG mitigation, 9 address the new green economy, and 13 are additional enabling actions
- Departments involved: Building, City Manager's Office, Comms, DREAM, GSA, HR, Human Services, MPA, OCI, Parks, Planning, Procurement, RPW, Solid Waste, Special Events
- 20 Prioritized Actions



GETTING AROUND MIAMI – 10 actions



PHASE 1: 1-3 years (significant progress by end of 2024)

- G-1: Reduce emissions from City employee commute.
- G-2: Collaborate with Miami-Dade County and local advocacy groups to increase utilization of biking as a transit method by implementing the Bicycle Master Plan and expanding the number of protected, green bikeways.
- G-3: Expand micromobility options throughout the entire city including Citibikes, scooters, and electric bikes.
- G-4: Develop a Trolley Master Plan including a long-term vision for the program and route updates.



GETTING AROUND MIAMI – 10 actions



PHASE 2: 4-6 years (significant progress by end of 2026)

- G-5: Build upon existing transit-oriented development policies in Miami21 to increase residential density, access to goods and services, and decrease single-occupancy vehicle use focusing on areas surrounding Metrorail stations.
- G-6: Establish parking disincentives, such as parking maximums and dynamic parking prices, to discourage the use of single occupancy gas vehicles.
- G-7: Adopt transportation demand management ordinance to require certain employers and developers to establish plans to reduce single-occupant vehicle use and traffic during peak hours among employees and residents.



GETTING AROUND MIAMI – 10 actions



PHASE 2: 4-6 years (significant progress by end of 2026)

- G-8: Work with partner entities to create bus lanes in strategic, key corridors.
- G-9: Work with Miami-Dade County and local advocacy groups to increase utilization of public transit through investments in safety, improving public transit literacy, and campaigns.
- G-10: Improve pedestrian experience and safety through investments in sidewalks such as ADA compliance measures and increasing number of crosswalks, especially in low-medium income areas.



RENEWABLE ENERGY – 6 actions



PHASE 1: 1-3 years (significant progress by end of 2024)

- R-1: Starting in 2024, require all new buildings to be solar-ready and storage-ready.
- R-2: Join FPL SolarTogether program to purchase City's building electricity from solar.
- R-3: Promote community participation in FPL SolarTogether program, especially among renters, to purchase 100% of their electricity from solar.



RENEWABLE ENERGY – 6 actions



PHASE 2: 4-6 years (significant progress by end of 2026)

- R-4: Provide additional policy and financial incentives to encourage private solar installations and identify incentives that would appeal to owners of affordable housing.
- R-5: Install solar and storage in public buildings or parking structures where feasible, prioritizing critical facilities.
- R-6: Partner with community organizations such as local non-profits, trade organizations, and electric and gas utilities, to develop a building electrification education program to provide information and technical assistance.



ELECTRIC VEHICLES – 8 actions



PHASE 1: 1-3 years (significant progress by end of 2024)

- EV-1: Develop EV Master Plan to support the growth of electric vehicle ownership.
- EV-2: Develop technical guidance for building owners/managers to assist in EV charging infrastructure installations in existing buildings.
- EV-3: Partner with major employers and multifamily building owners to install EV chargers in parking lots/garages.
- EV-4: Build on EV Capability Ordinance to require EV charger installations in new developments starting in 2025.
- EV-5: Partner with existing electric vehicle non-profits to promote public awareness of the benefits and real costs of EV purchasing and ownership, especially addressing low-income drivers and their concerns.



ELECTRIC VEHICLES – 8 actions



PHASE 3: 7+ years (significant progress by 2027 and beyond)

- EV-6: Adopt EV infrastructure and procurement policy to electrify 100% of public vehicle fleet, including trolleys by 2035.
- EV-7: Evaluate the potential to implement a low emission zone in the urban core.
- EV-8: Evaluate implementing an electric vehicle-sharing program within neighborhoods with low car ownership.



ENERGY EFFICIENCY – 9 actions



PHASE 1: 1-3 years (significant progress by end of 2024)

- E-1: Implement Building Efficiency 305 (BE305) program requiring energy benchmarking and disclosure for commercial, multi-family residential, and City of Miami municipal buildings over 20,000 sq. ft.
- E-2: Improve public benefits and green buildings tracking to increase program participation and impact.
- E-3: Require all new public buildings to be built to zero net energy standards starting in 2025.
- E-4: Adopt a residential, single-family home energy rating and disclosure ordinance.



ENERGY EFFICIENCY – 9 actions



PHASE 2: 4-6 years (significant progress by end of 2026)

- E-5: Adopt building performance standard for commercial, multi-family residential, and City of Miami municipal buildings over 20,000 sq. ft.
- E-6: Establish residential, single-family home energy conservation requirements.
- E-7: Develop energy reduction targets for City of Miami municipal buildings.
- E-8: Provide incentives for construction firms to use locally-sourced materials with low-embodied carbon and high efficiency fixtures



ENERGY EFFICIENCY – 9 actions



PHASE 3: 7+ years (significant progress by 2027 and beyond)

- E-9: Make all non-emergency energy use in existing public buildings carbon-free by 2035. Explore and adopt as much carbon-free emergency energy generation and storage as possible.



NEW GREEN ECONOMY



- **Grow the Green Economy Ecosystem**
 - Inform economic development organizations of our climate plans
- **Recruit and Retain a Green Workforce**
 - Devote City resources and staff to intentional green economy sector growth – VentureMiami, Opportunity Center, develop a plan (research)
- **Open Occupational Pathways**
 - Summer Jobs Connect
- **Welcome and Support Green Industry**
 - Green procurement



ADDITIONAL ENABLING – 13 actions



PHASE 1: 1-3 years (significant progress by end of 2024)

- A-1: Improve city data on waste streams and disposal. Establish a per capital waste goal.
- A-2: Train City employees on emerging resilient and sustainable buildings initiatives and technologies including solar PVs, energy storage, EV charging, energy efficiency, electrification, and climate adaptation policies.
- A-3: Implement green and sustainable special events program.
- A-4: Train City staff on climate change.
- A-5: Work with existing advocacy organizations and non-profits to improve citywide climate literacy and awareness.

ADDITIONAL ENABLING – 13 actions



PHASE 1: 1-3 years (significant progress by end of 2024)

- A-6: Improve recycling participation and reduce contamination.
- A-7: Work with community composting organizations to increase household composting.
- A-8: Help restaurants and businesses reduce their waste stream by connecting them with resources to reduce single use plastic, integrate composting, and recover and redistribute surplus food.
- A-9: Lobby for climate-forward policies at the state and federal level.
- A-10: Advocate for climate-forward policies from FPL that support clean energy at scale and energy efficiency.



ADDITIONAL ENABLING – 13 actions



PHASE 2: 4-6 years (significant progress by end of 2026)

- A-11: Develop a financial and technical assistance program that helps residents, particularly low-income, to pursue climate action.
- A-12: Establish construction and demolition waste diversion requirements.
- A-13: Develop end-of-life requirements for solar PV and other relevant renewable energy technologies, including battery storage.



TRACKING SUCCESS

- GHG Inventory and metrics tracking report every 2 years (minimum)
- GHG Plan update every 5 years (2026)
- Top Down
 - Total emissions and % changed
 - % of trips taken in private vehicles
 - % of electricity fuel mix that is carbon free
 - % of passenger vehicles that are electric
- Bottom Up
 - Prioritized actions metrics



NEXT STEPS

- Plan was adopted at November 18th Commission
- Implementation will start with prioritized Phase 1 actions
 - Building framework to electrify the fleet is starting initiative



Miami
FL

Resolution
R-21-0472

A RESOLUTION OF THE MIAMI CITY COMMISSION, WITH ATTACHMENTS, ADOPTING THE MIAMI FOREVER CARBON NEUTRAL GREENHOUSE GAS REDUCTION PLAN, ATTACHED AND INCORPORATED AS EXHIBIT "A", FOR PURPOSES OF GUIDING THE CITY OF MIAMI TOWARDS NET ZERO GREENHOUSE GAS EMISSIONS BY 2050; FURTHER DIRECTING THE CITY MANAGER TO CONSIDER THE CARBON NEUTRALITY GOAL AND ASSOCIATED ACTIONS IN UPDATES TO LAND USE PLANS AND CODES, THE ANNUAL BUDGET AND CAPITAL EXPENDITURES, UTILITY AGREEMENTS, AND ADMINISTRATIVE POLICIES AND TO ALLOCATE ADEQUATE RESOURCES TO ENSURE COMPLIANCE WITH C40 LEADERSHIP STANDARDS.



MIAMI FOREVER
CLIMATE READY