

MIAMI BEACH  
RISING  
ABOVE

# Climate Action Plan



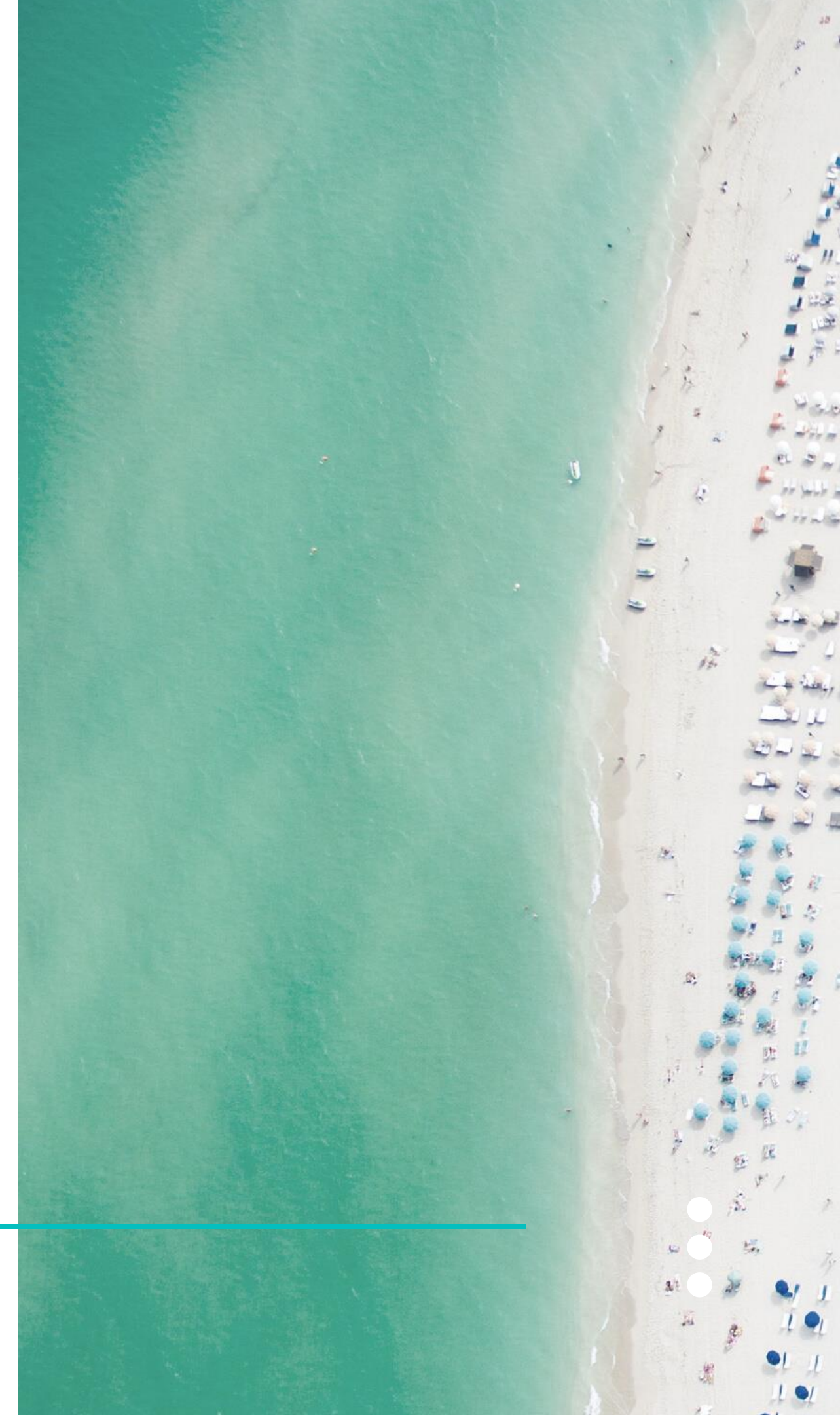
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A roadmap to a net-zero future



# WHILE ON ZOOM

- All participants are muted, and videos are disabled.
- If you would like to ask a question, type it in the Q & A box.
- In the chat, to share comments with the whole group, send to “Everyone” or “All panelists and attendees”.



# YOUR CAP TEAM

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JOSHUA LATHAN

Senior Associate, AECOM





# AGENDA

## TOPICS AND HIGHLIGHTS

Climate Action Planning

Greenhouse Gas Emissions

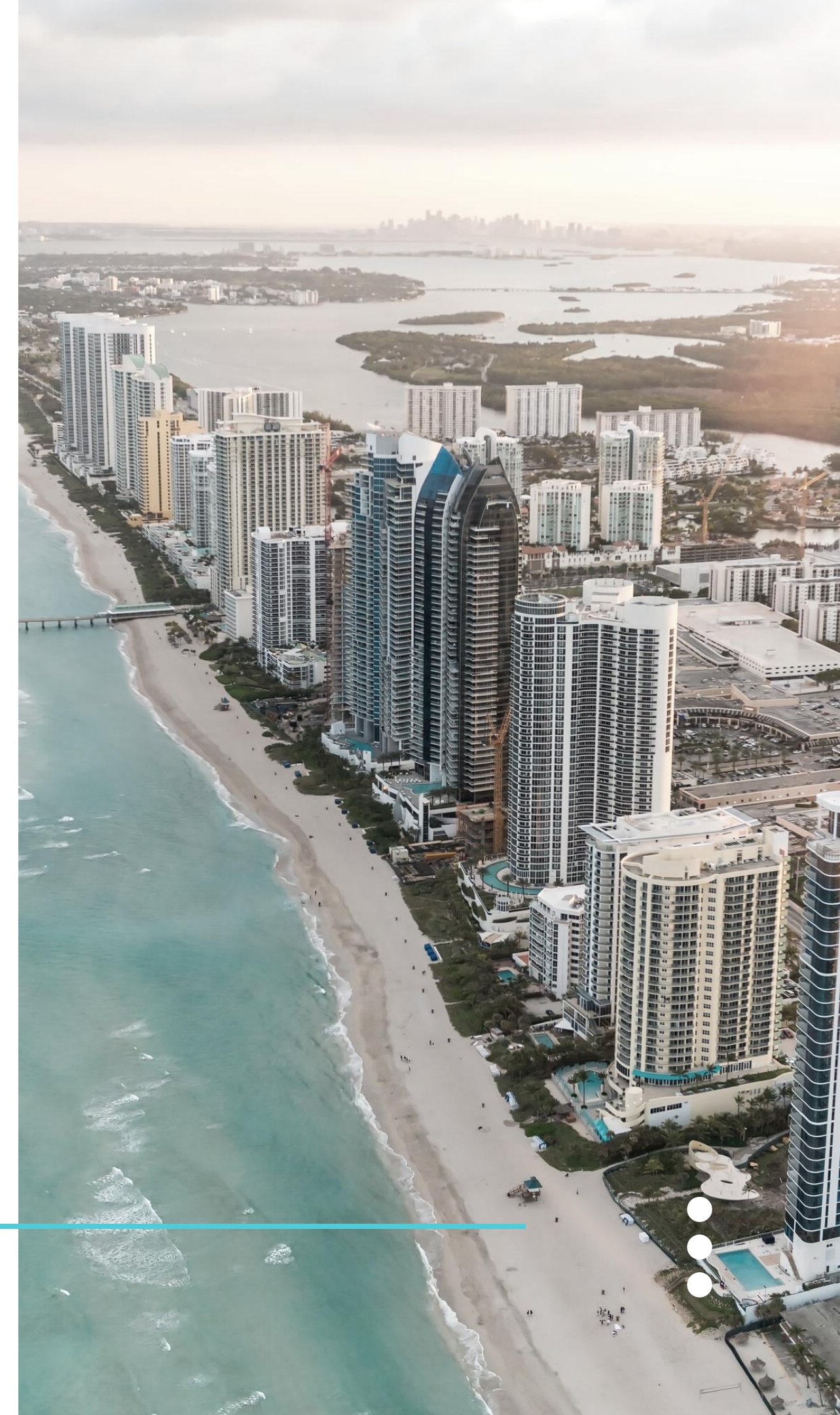
GHG Reduction Pathway and Actions

Group Discussion

Timeline and Next Steps

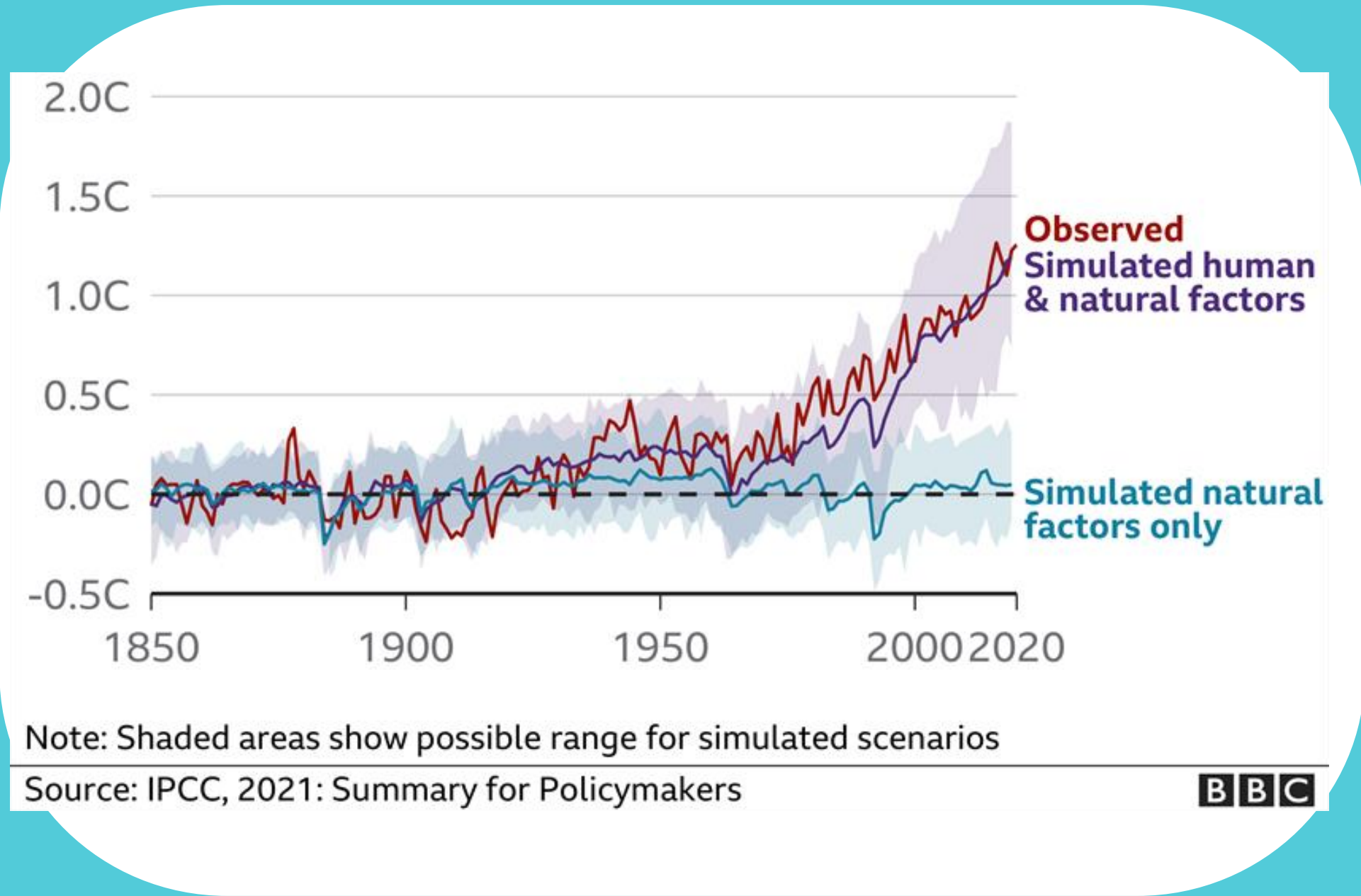
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# WHAT IS CLIMATE CHANGE?



- Shift in long term, average weather pattern
- Driven by human-caused greenhouse gas emissions (GHGs)
- Majority of these emissions come from burning fossil fuels such as coal, natural gas, or oil
- Causing planet's temperature to rise on dangerous trajectory





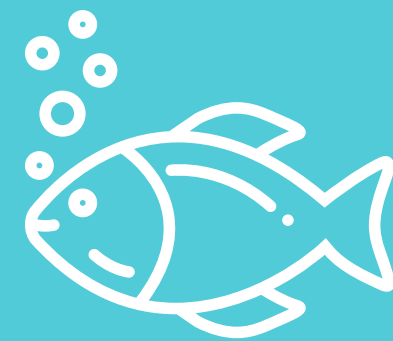
# WHAT DO WE EXPECT TO SEE IN 2050?



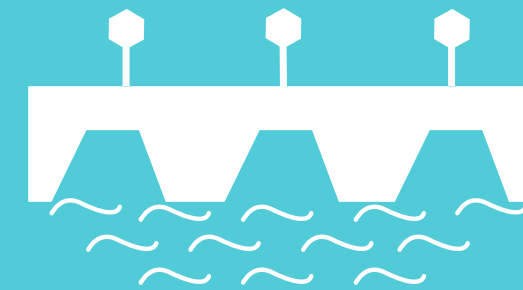
**EXTREME  
TEMPERATURES**



**MORE INTENSE  
STORMS**



**WILDLIFE  
IMPACTS**



**HIGHER  
TIDES**



**LESS  
TOURISM**



**LOWER WATER  
QUALITY**



**PUBLIC HEALTH  
IMPACTS**



**AGING  
INFRASTRUCTURE**





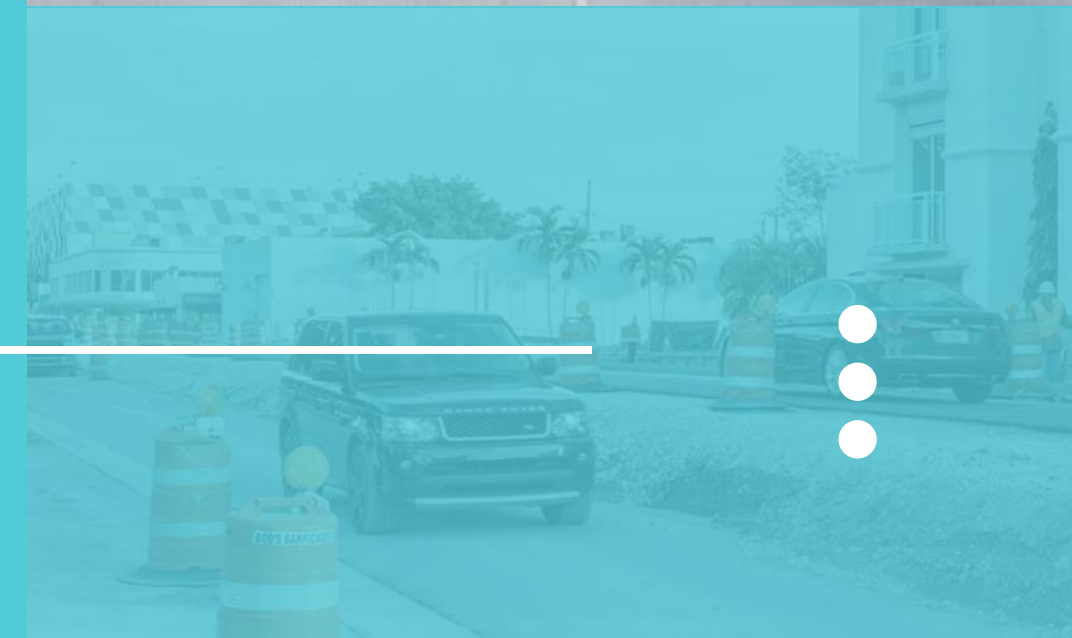
# WHAT IS THE CITY DOING?

Many ongoing projects and initiatives in Miami Beach take into consideration climate change risk

Adaptation and mitigation efforts are focused on addressing current impacts and working to decrease future risks from climate change.

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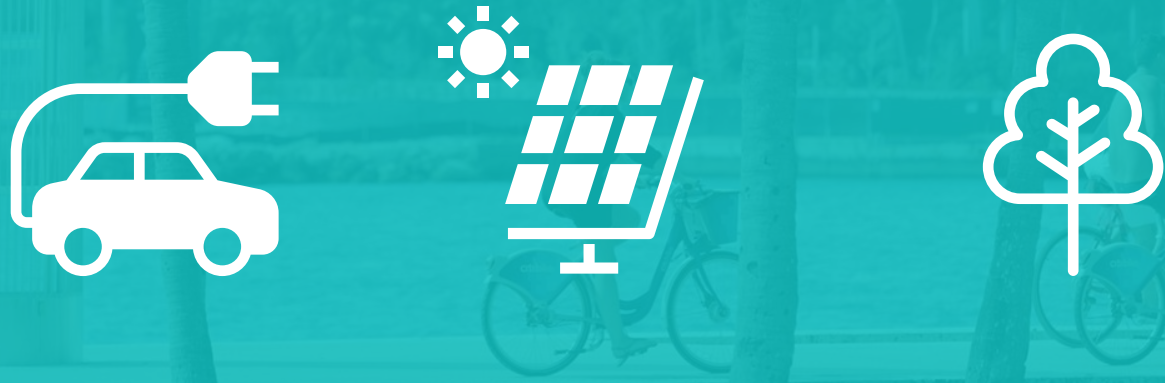
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# MITIGATION

Reduce and Curb  
Greenhouse Gas Emissions



# ADAPTATION

Actions to Reduce Vulnerability  
to Climate Change





# ADAPTATION



## RAISING ROADS

Roads are being elevated to address flooding in low-lying areas.

## STORMWATER PUMPS

Storm water pumps are being installed throughout remove flood waters

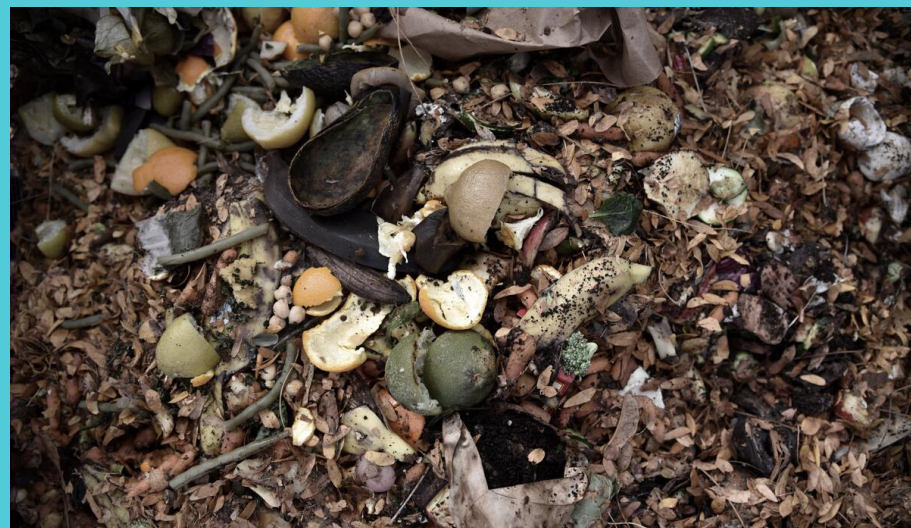
## GREEN INFRASTRUCTURE

Nature is being integrated to supplement man-made infrastructure





# MITIGATION



## URBAN FORESTRY

The urban canopy is protected and expanding to provide more shade and environmental benefits.

## BEHAVIORAL CHANGE

Programs to encourage sustainable habits and increase efficiency.

## GREENHOUSE GAS INVENTORY

An annual inventory is compiled to track emissions community-wide and in government operations.

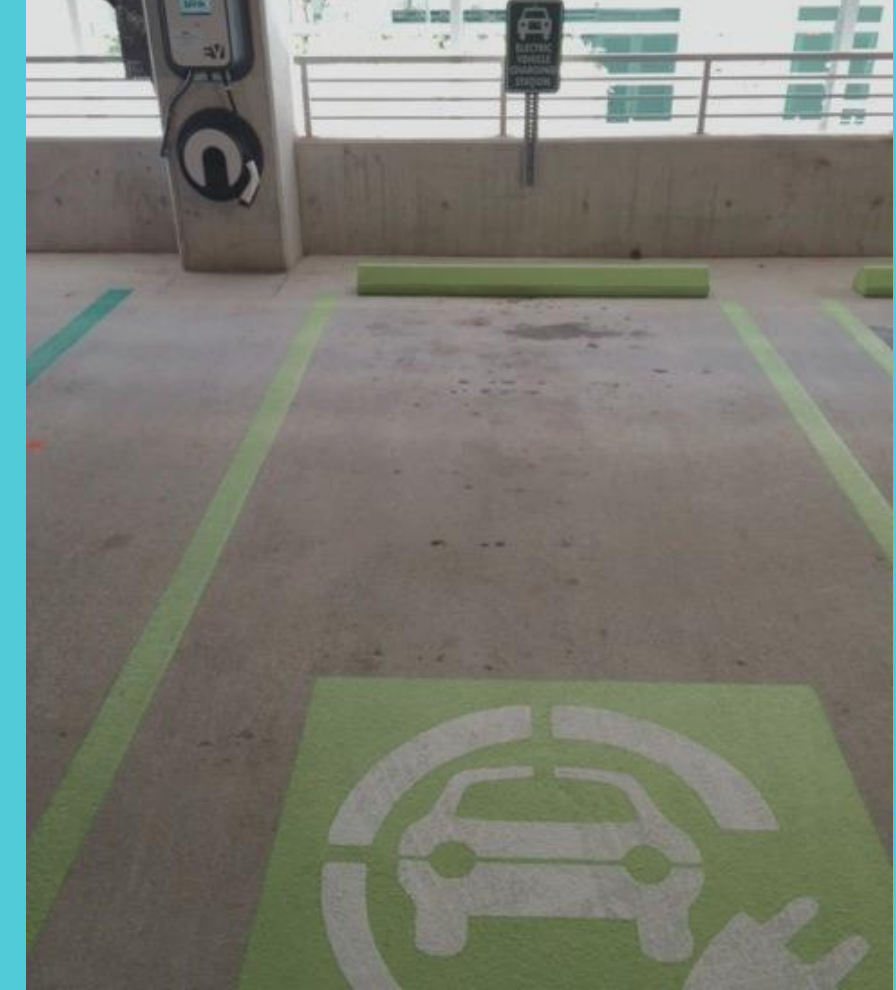




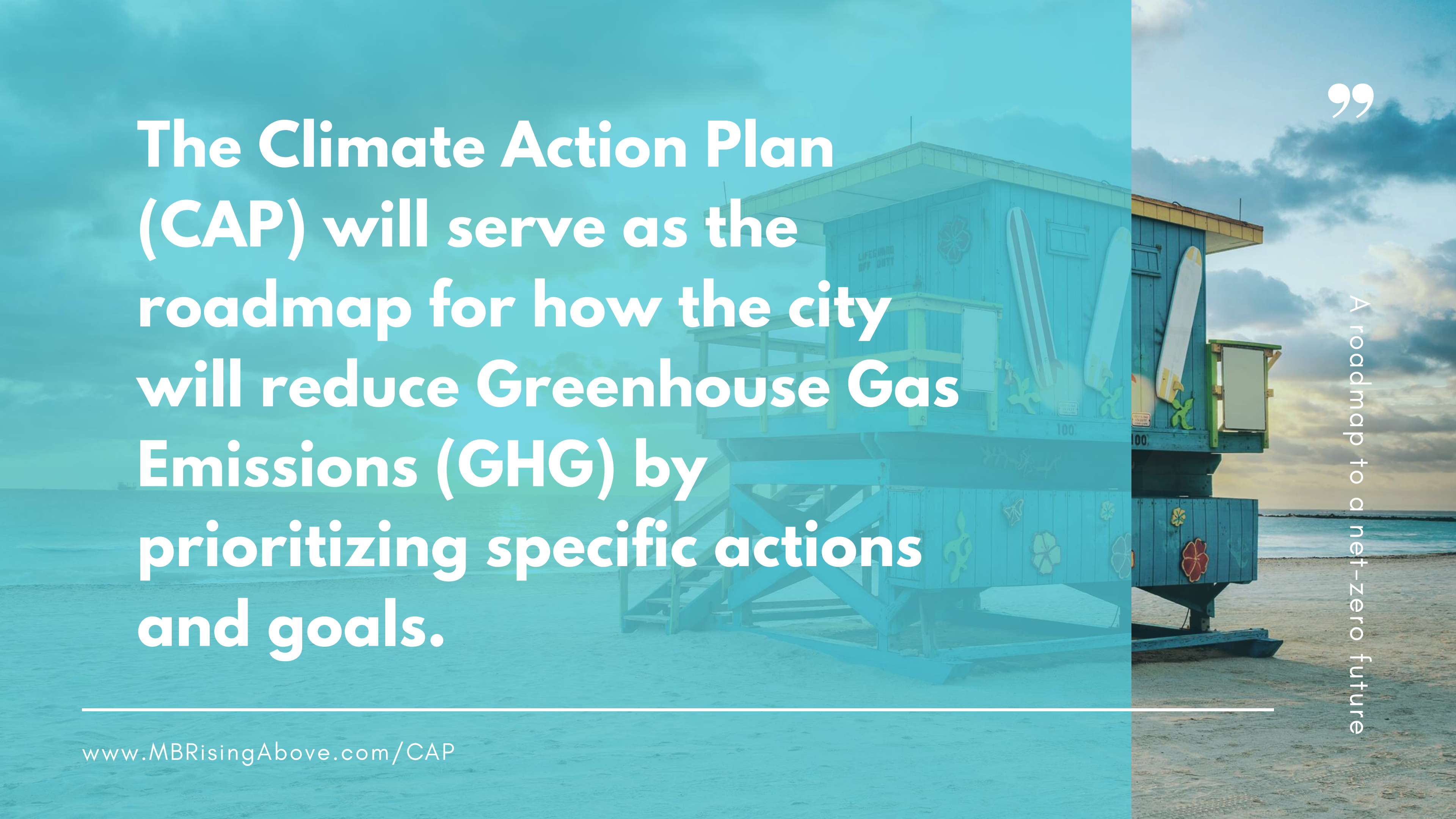
# ACCOMPLISHMENTS

- Transitioning the fleet to hybrid and electric vehicles
- Installing EV charging stations in municipal garages
- Creating a composting hub to divert waste
- Benchmarking and tracking electricity consumption
- Creating #PlasticFreeMB program to reduce single-use plastics in businesses
- Establishing a green procurement policy
- Green Building Ordinance requiring third-party certification for new construction > 7,000 sq. ft.
- Recycling Ordinance requiring recycling programs
- Urban Heat Island Ordinance establishing requirements to help reduce heat island effect

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A blue lifeguard stand on a beach, partially obscured by a teal overlay. The stand has surfboards mounted on it and the number '100' is visible. The background shows the ocean and a cloudy sky.

**The Climate Action Plan (CAP) will serve as the roadmap for how the city will reduce Greenhouse Gas Emissions (GHG) by prioritizing specific actions and goals.**

”

A roadmap to a net-zero future

# WHY SHOULD I BE INVOLVED?

## EVERYONE HAS A ROLE

Success of the plan depends on collaboration with the community including Miami-Dade County, neighboring municipalities, businesses, non-profits, local leaders and YOU.

## FEEDBACK CREATES COMMUNITY CHANGE

Your feedback shared in today's workshop and through the CAP questionnaire will help us prioritize actions and support ideas and strategies within the plan.

## SHAPE ENVIRONMENTAL OUTCOMES AND IMPROVE QUALITY OF LIFE

Participation helps ensure cleaner air, more transportation options, a healthier environment, and increased equity





# BENEFITS OF A CAP



ENHANCES LOCAL  
HABITAT AND  
RECREATIONAL  
OPPORTUNITIES



IMPROVES QUALITY  
OF LIFE, WELL-BEING,  
AND THE LOCAL  
ECONOMY



PROMOTES HEALTHIER  
LIFESYYLES AND  
PUBLIC HEALTH



2019 COMMUNITY WIDE  
GHG INVENTORY



**67%**

ENERGY IN BUILDINGS



**20%**

TRANSPORTATION

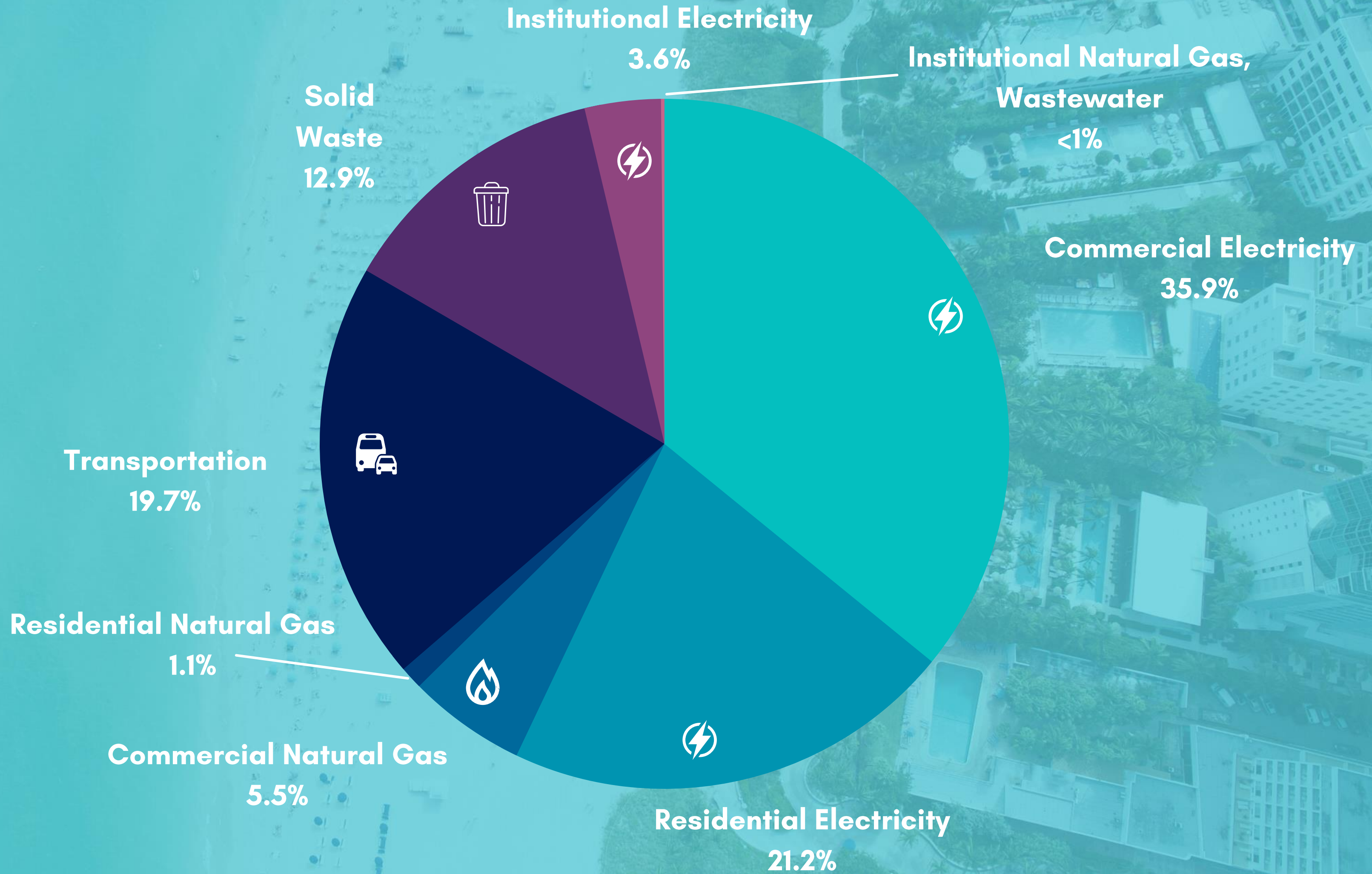


**13%**

WASTE



# 2019 COMMUNITY WIDE GHG INVENTORY





**1,202,664**  
METRIC TONS  
OF CARBON DIOXIDE

Greenhouse gas  
emissions from



**2,984,277,916**  
Miles driven by an average  
passenger vehicle

CO<sub>2</sub> emissions  
from



**135,328,457**  
Gallons of gasoline  
consumed



**1,325,170,734**  
Pounds of coal burned

CO<sub>2</sub> emissions  
absorbed by



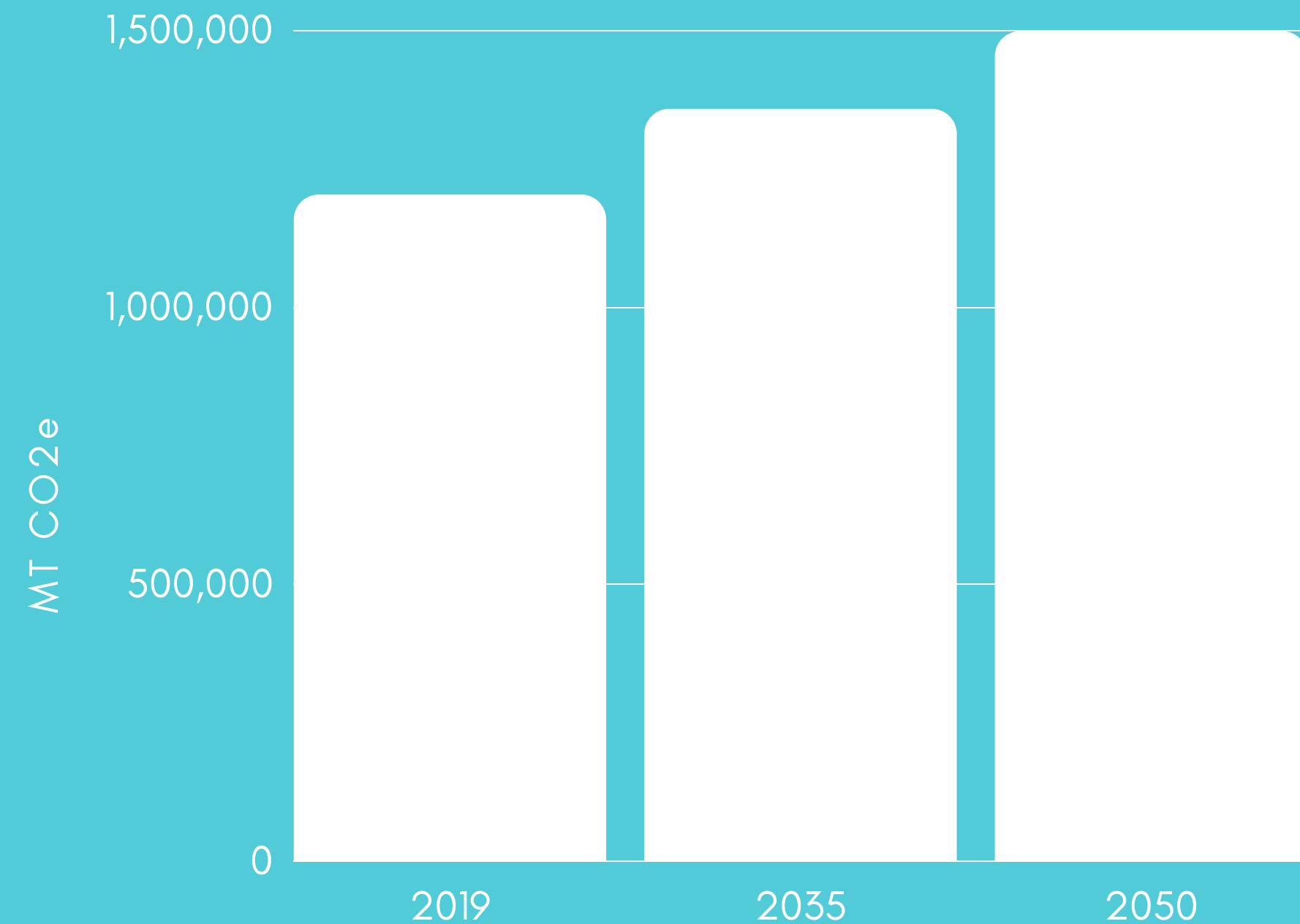
**65.6%**  
of the Everglades in one year

# GREENHOUSE GAS EMISSIONS EQUIVALENCIES





# GHG EMISSIONS FORECASTS

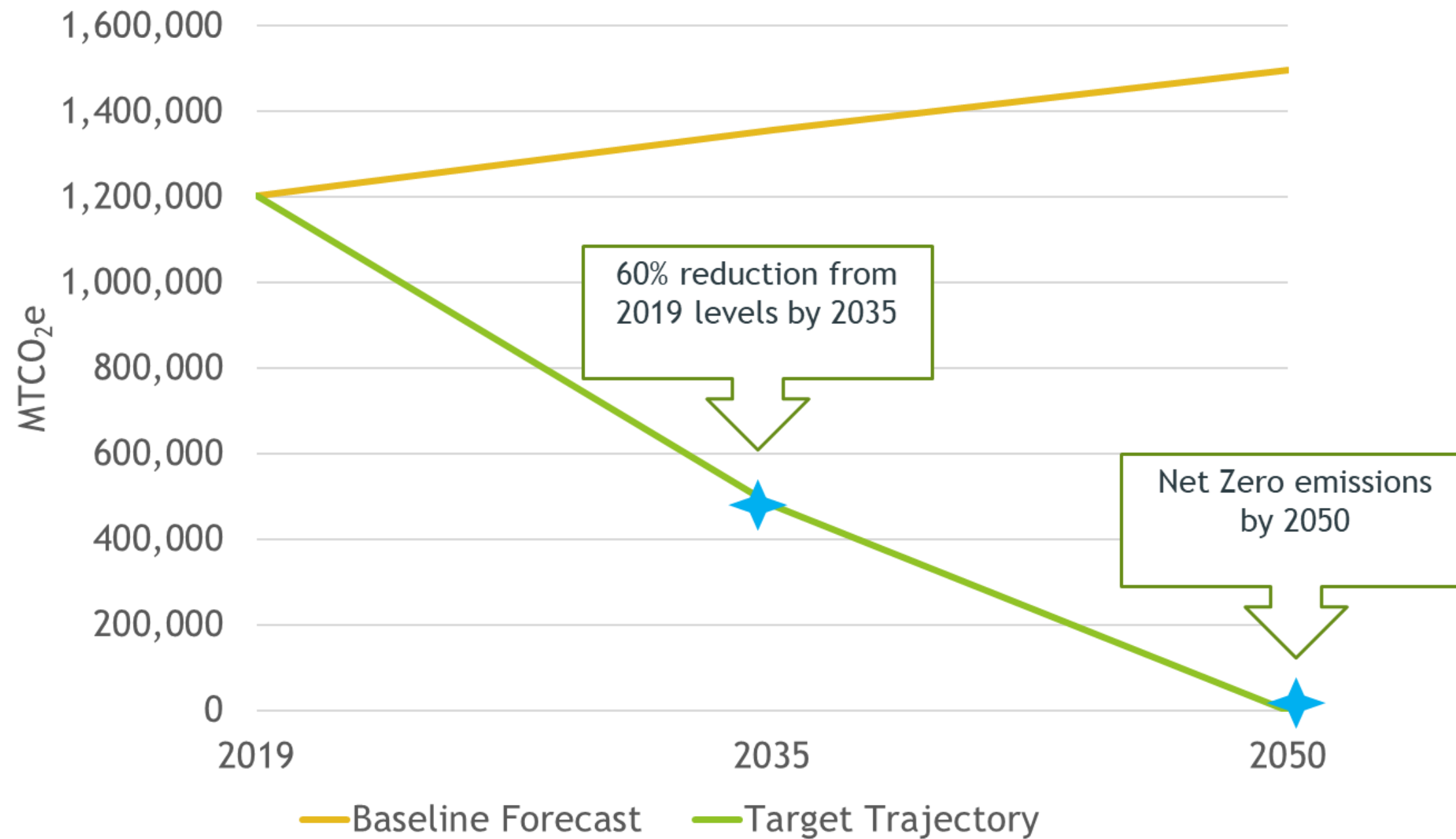


- Emissions forecasted using growth indicators (e.g., population, jobs, etc.)
- Forecasts tell us magnitude of action needed to achieve GHG targets
- Without further action, emissions increase by 24% from 2019-2050





# GHG EMISSIONS REDUCTION TARGETS





# CLIMATE COMMITMENTS

Resolution 2021-31664: Recognizing the effects of climate change caused by human activity, and establishing a climate action goal to achieve net zero greenhouse gas emissions by 2050.

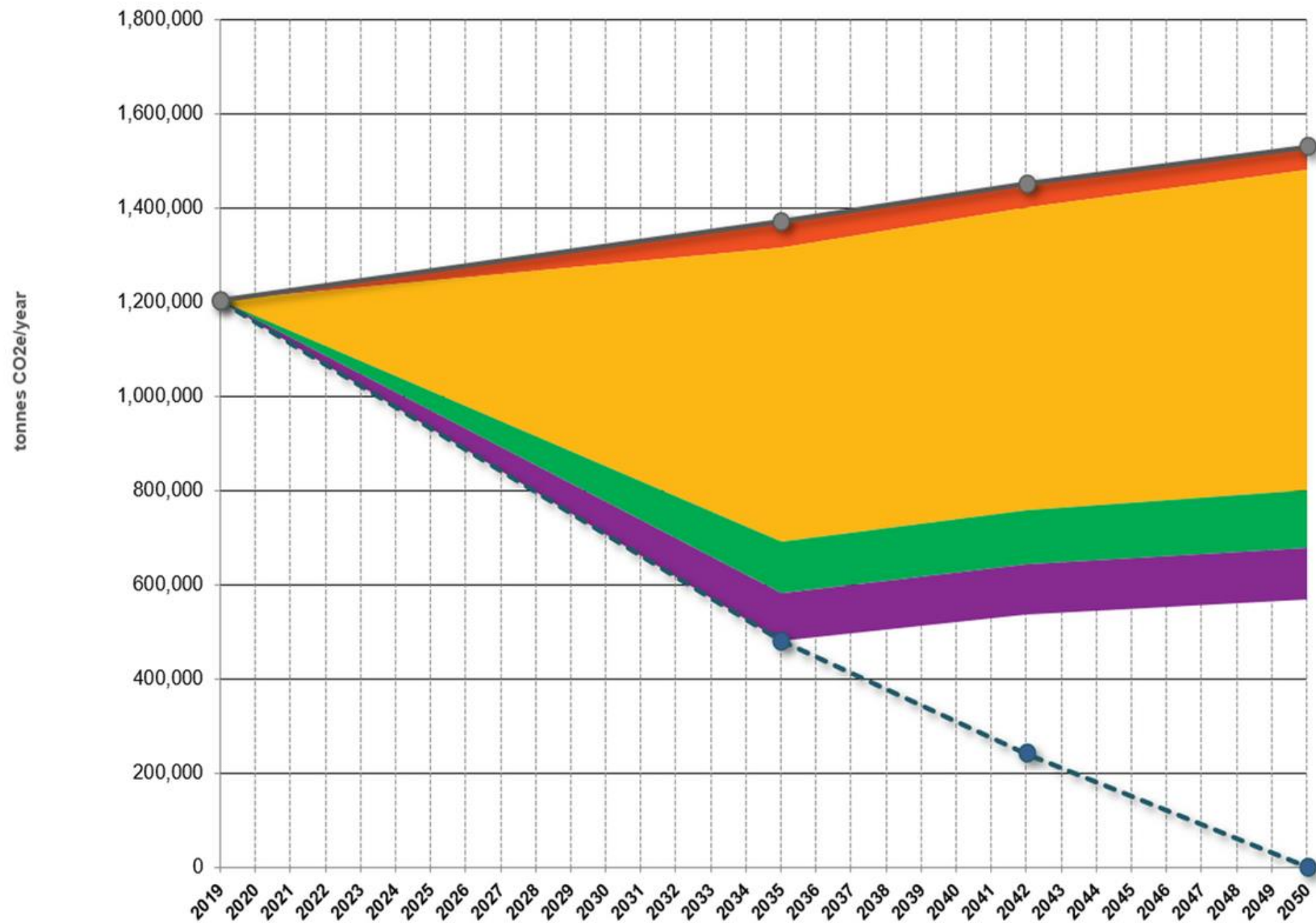
NET-ZERO EMISSIONS: GHG EMISSIONS HAVE BEEN REDUCED AS MUCH AS POSSIBLE AND ANY REMAINING EMISSIONS ARE CANCELLED OUT BY OFFSETTING OR REMOVING CARBON DIOXIDE FROM THE ATMOSPHERE.

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# EMISSIONS PLANNING SCENARIO



## ACHIEVE BY 2035:

Highly efficient new construction and existing building retrofits, 25% of maximum local solar potential (100 GWh/yr)

70% carbon-free electric grid

80% recycling rate, 25% organic waste diversion

35% electric passenger vehicles, 100% electric buses, 28% of all trips made via non-private vehicles (from 15% in 2019)

# FOCUS AREAS

## Buildings/Solar



- Highly efficient new construction and existing building retrofits
- **25%** of maximum local solar potential (100 GWh/yr)
- **70%** carbon-free electric grid

## Transportation



- **35%** electric passenger vehicles
- **100%** electric public transportation
- **28%** of all trips made via non-private vehicles (from 15% in 2019)

## Solid Waste



- **80%** recycling rate
- **25%** organic waste diversion





# HIGH PRIORITY



Establish a Benchmarking, Performance and Disclosure Ordinance to require buildings to benchmark their energy and water consumption and improve efficiency.

Develop and implement incentive programs, such as rebates, for energy efficiency improvements and renewable energy installations.



Develop a solar transition program that promotes voluntary participation in utility solar programs in advance of considering longer-term building requirements.

Require all new construction to reach higher levels of energy efficiency.

Expand on the existing Sustainability and Resilience Ordinance (Green Building Ordinance) to increase water and energy efficiency.

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Electrify the trolley fleet.



Expand EV charging stations network.

Promote the use of Transit Oriented Development strategies in future developments

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Require waste contractors to implement programs to improve recycling education and reduce recycling contamination.

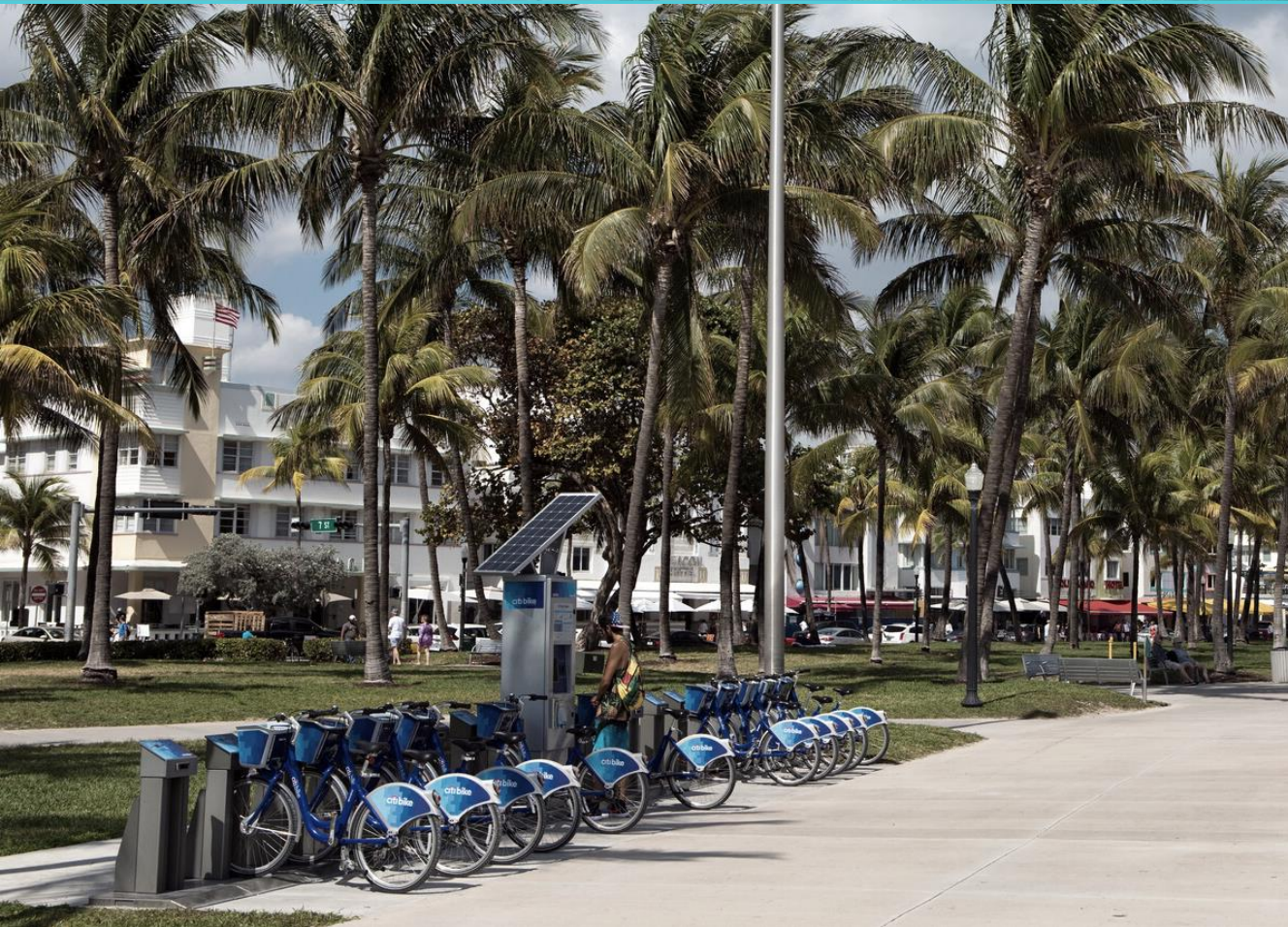


Require a food waste diversion program for large grocery stores, restaurants and other businesses that serve food.





# MEDIUM PRIORITY



Develop and implement a municipal energy management plan for municipal operations to reach 100% renewable energy.

Implement standard specs for energy efficiency, water efficiency, and sustainability in all municipal buildings.



Establish a residential energy conservation ordinance (RECO) to require energy efficiency upgrades.

Establish a green revolving loan fund for energy efficiency projects in commercial properties.

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Establish parking disincentives to discourage personal vehicle use.

Expand mixed-use zones along major corridors and public amenities at the neighbourhood level.



Expand the existing electric bicycle network.

Transition the municipal fleet to low-emissions and no-emissions vehicles.

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Encourage and support Miami-Dade to establish an industrial composting facility.



Establish a standardized program in the city to increase recycling rates and decrease contamination.





# LOWER PRIORITY



Establish a green fund for municipal energy efficiency projects.

Implement an Electric Carshare Program to provide short term rental vehicle rental options and encourage EV adoption.

Transition the public EV charging stations network to renewable energy.



Implement a commute reduction program to require employers to reduce employees' personal vehicle use and promote alternative modes of transportation.

Expand and improve bicycle and pedestrian networks.

Expand bicycle facilities.

Expand and increase participation for community composting programs.



Establish a construction and demolition debris diversion ordinance.

Implement a composting program at all municipal buildings/spaces.

Achieve 22% tree canopy cover citywide by 2040, as outlined in the Miami Beach Urban Forestry Master Plan.





# GROUP DISCUSSION

**01**

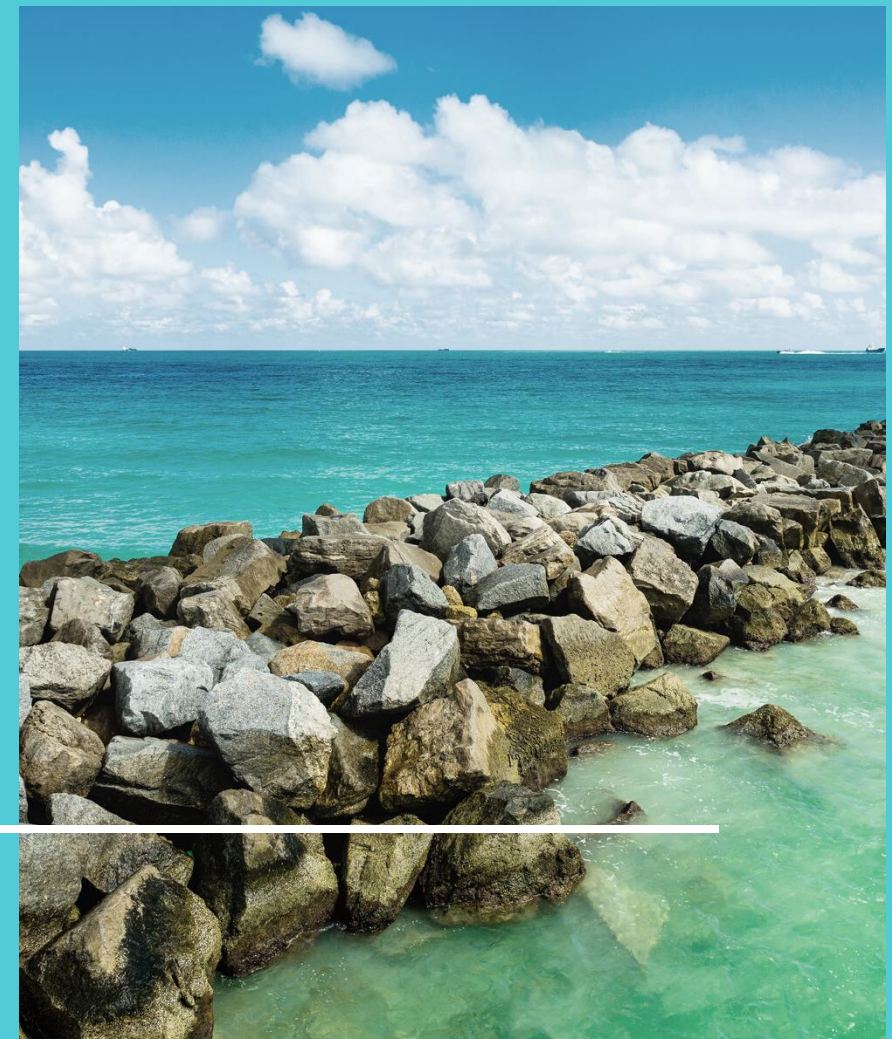
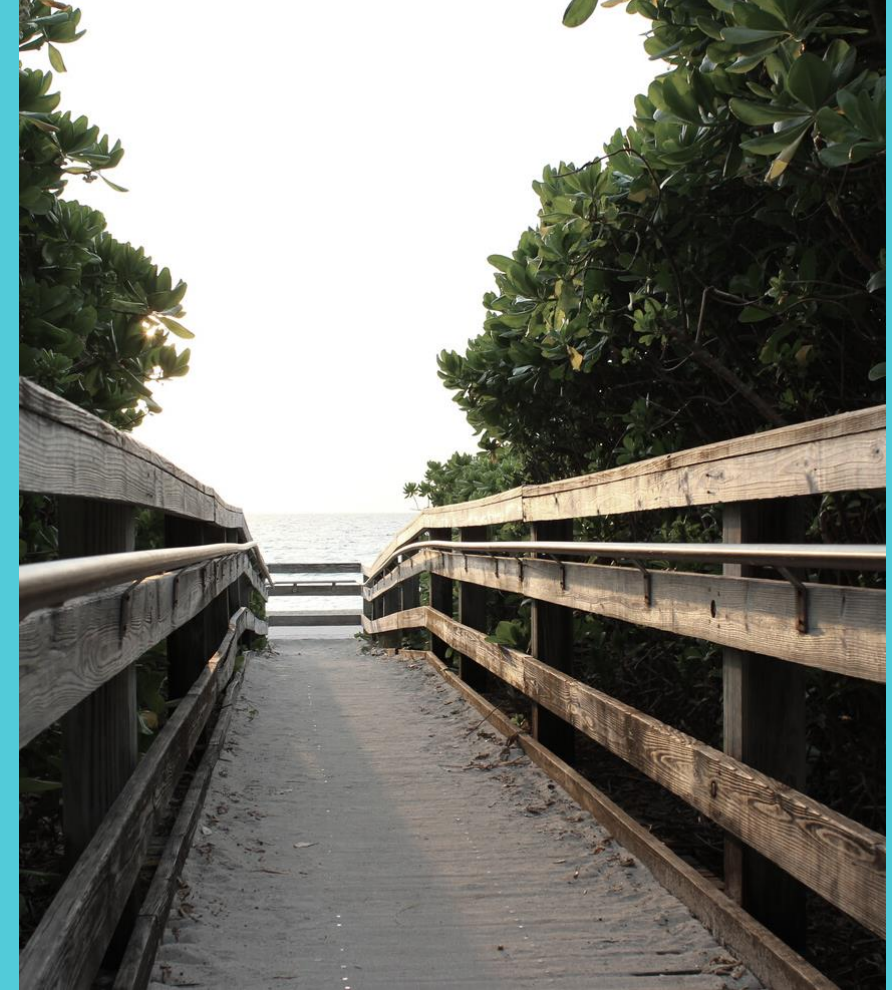
What are the barriers to achieving these actions?

**02**

What tactics can the City take to help you participate in these actions?

**03**

What else should the City consider when planning to implement these actions?





**SHARE YOUR IDEAS AND FEEDBACK!**

**Go to: kahoot.it**

**Enter the Game Pin**

**Type in your nickname**

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# TIMELINE AND NEXT STEPS

January - June  
2020

## INTERNAL MEETINGS

Staff met with internal departments to learn about projects and programs that contribute to climate change mitigation and emissions reduction.

June 2020 - March  
2021

## DRAFT PLAN

Staff developed a draft Climate Action Plan based on internal meetings with departments and research of best practices.

June 2021 - March  
2022

## PLAN DEVELOPMENT

AECOM was retained to work on the development of the Climate Action Plan.

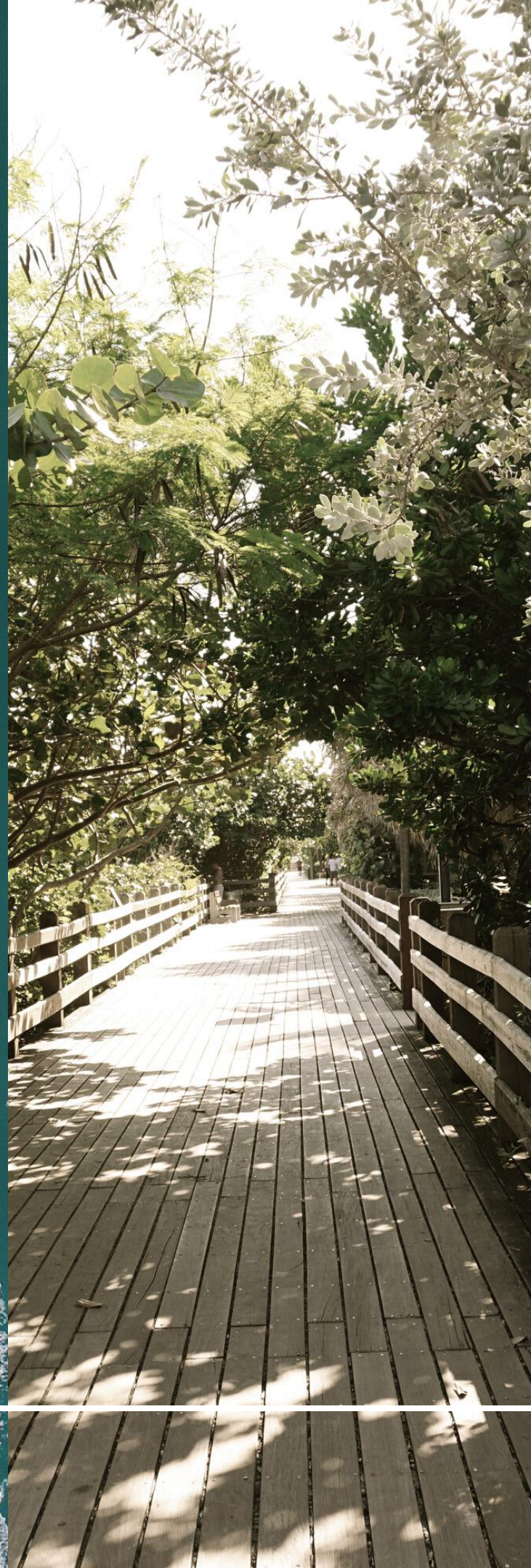
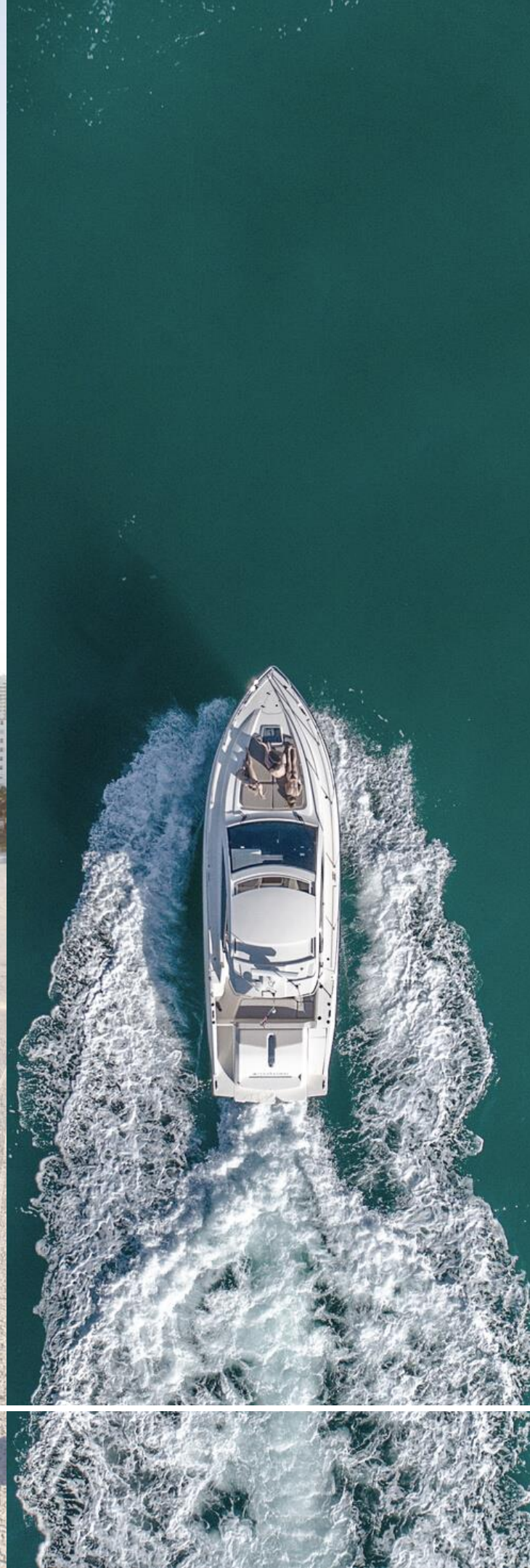
January  
2022

## PUBLIC WORKSHOP

A public survey is open for the month for the community to provide their feedback and a public workshop is held.







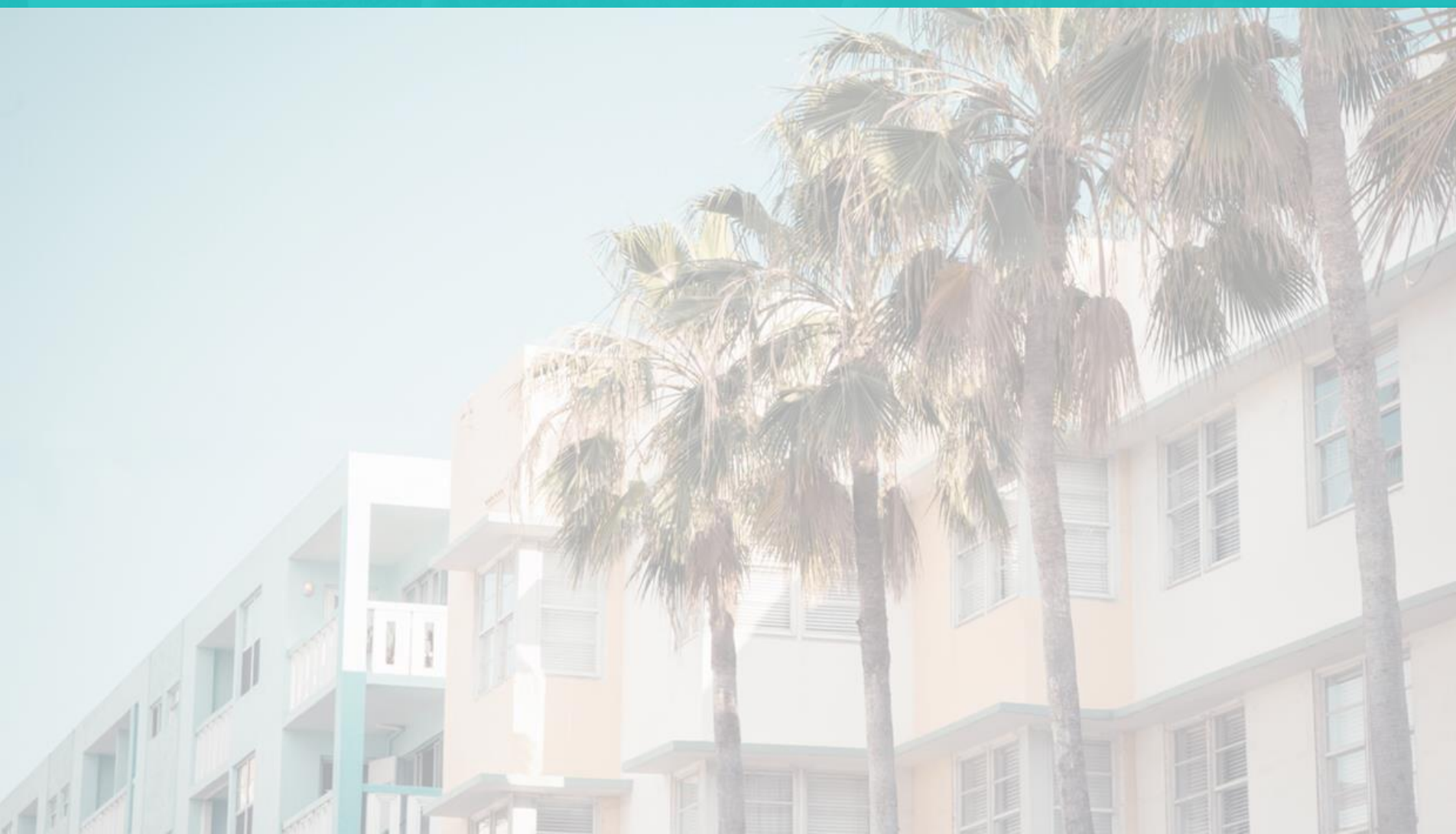
## HOW CAN I BE MORE ENGAGED?

- Visit [www.mbrisingabove.com/CAP](http://www.mbrisingabove.com/CAP)
- Complete online questionnaire
- Share the questionnaire with your friends and family in Miami Beach
- Participate in the monthly resident Sustainability Committee
- For more information, visit <https://www.miamibeachfl.gov/city-hall/environmental-sustainability/sustainability/sustainability-committee/>





# QUESTIONS?







**THANK YOU**

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