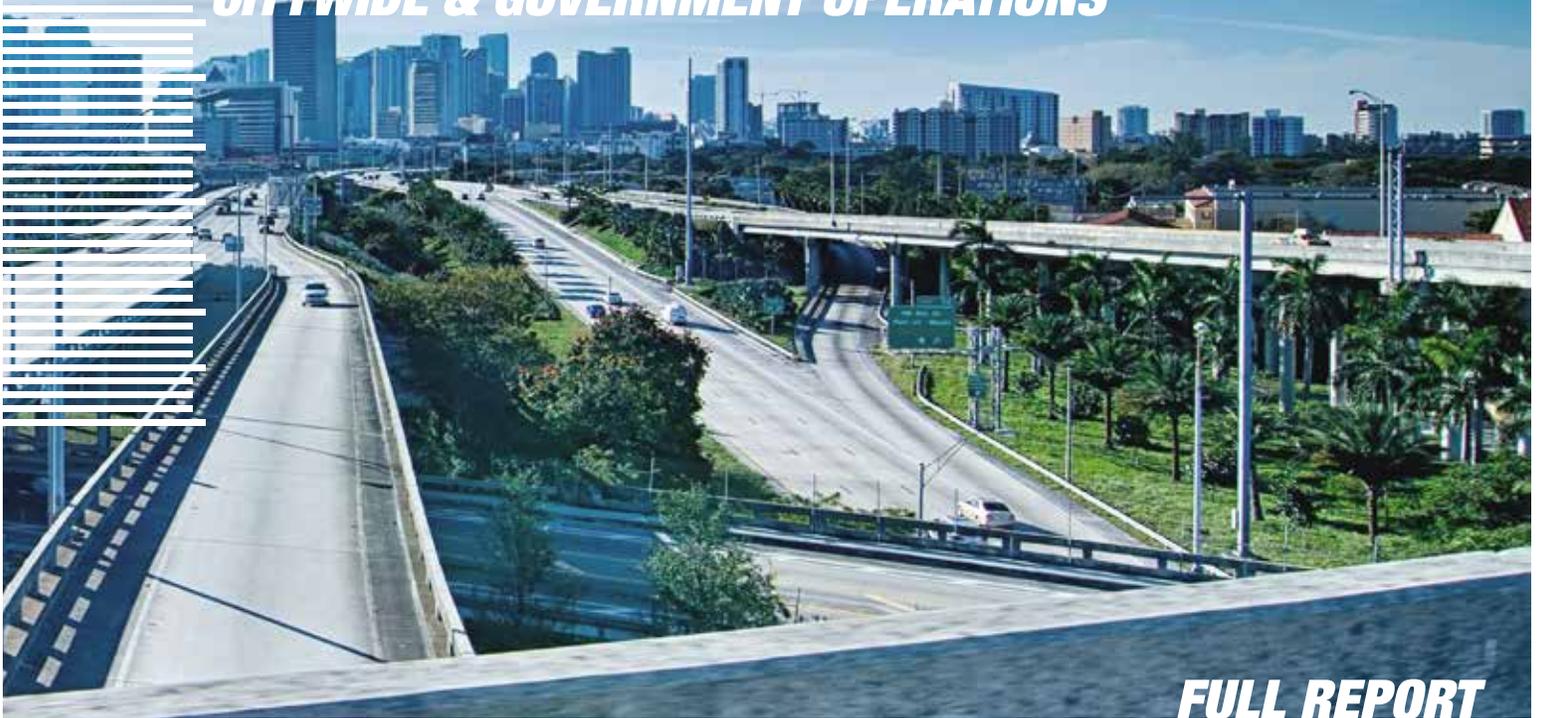


CITY of MIAMI ***2018*** ***GREENHOUSE*** ***GAS*** ***INVENTORY***

CITYWIDE & GOVERNMENT OPERATIONS



FULL REPORT



MIAMI FOREVER
CLIMATE READY



City of Miami has always been vulnerable to hurricanes, storm surge, flooding, and extreme heat and we have a strong history of thriving in the face of adversity. However, climate change is increasing these risks and threatening our health and economy. Miami has led by taking actions to adapt to and mitigate these increasing risks. An equally important step is to understand Miami's contribution to global warming by taking inventory of greenhouse gas emissions produced by the City and its operations.

City of Miami's last greenhouse gas inventory was completed in 2008 with baseline years of 2006 for citywide greenhouse gas emissions and 2007 for government operations emissions. That inventory was used to develop the City's first climate action plan, MiPlan. This 2018 inventory will provide the City's first update in over a decade, and likewise will be used to inform a new climate action plan that will lead us towards Mayor Suarez's goal of carbon neutrality by 2050.



METHODOLOGY

There are national and international standardized protocols on how to conduct greenhouse gas inventories. Below is a summary of the basic data used in the Citywide and Government Operations inventories. Data collected was input into ICLEI Clearpoint software to calculate emission totals. ICLEI (formerly International Council for Local Environmental Issues, now ICLEI - Local Governments for Sustainability) is a global network of more than 1,750 local and regional governments committed to sustainable urban development. The organization is a founding partner

of the Global Covenant of Mayors for Climate and Energy, and proprietor of the Clearpath software, a tool used worldwide to conduct greenhouse gas inventories. To read more detail about how each inventory was calculated, read Appendix 1: Methodology Report.

Emissions totals are reported using carbon dioxide equivalent (CO₂e) which is calculated using the Global Warming Potentials (GWP) for methane and nitrous oxide from the IPCC 5th Assessment Report:

GREENHOUSE GAS	GLOBAL WARMING POTENTIAL
Carbon Dioxide (CO ₂)	1
Methane (CH ₄)	28
Nitrous Oxide (N ₂ O)	265



The **Global Protocol for Community-scale Greenhouse Gas Emission Inventories** (GPC) was used to calculate citywide greenhouse gas emissions. This protocol is the standard used by cities worldwide and required of those in the C40 Cities network.

The citywide inventory accounts for emissions from the five Basic Emissions Generating Activities (BEGAs). These activities are:

- Use of electricity by the community
- Use of fuel in residential and commercial stationary combustion equipment
- On-road passenger and freight motor vehicle travel
- Use of energy in potable water and wastewater treatment and distribution
- Generation of solid waste by the community

The citywide inventory also includes the following activities:

- Wastewater processing
- Fugitive emissions from natural gas leakage

The **Local Government Operations** (LGO) Protocol serves as the national standard, and was used to calculate greenhouse gas emissions generated from the City's operations and services.

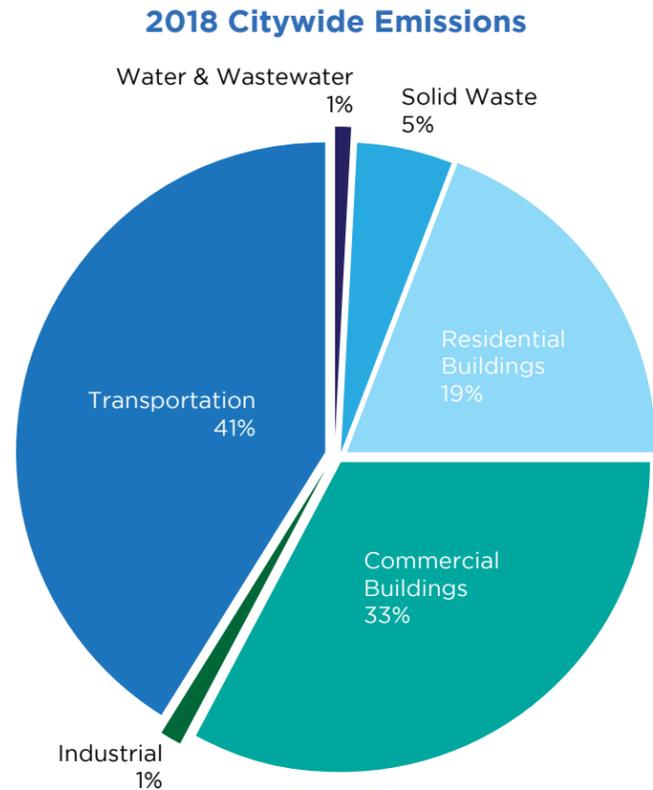
- The following activities are included in the LGO inventory:
- Energy and natural gas consumption from buildings & facilities
 - On-road transportation from employee commute and vehicle fleet

Most LGO inventories include data about solid waste generated from government operations. The City's Department of Solid Waste does not currently track waste collected from government facilities separately from overall collections so this emission source was omitted.

CITYWIDE EMISSIONS (2018)

Total Citywide emissions in the City of Miami in calendar year 2018 were 3,490,318 metric tons (MT) of carbon dioxide equivalent (CO₂e).

Here is a breakdown of Citywide emissions in MT by sector:

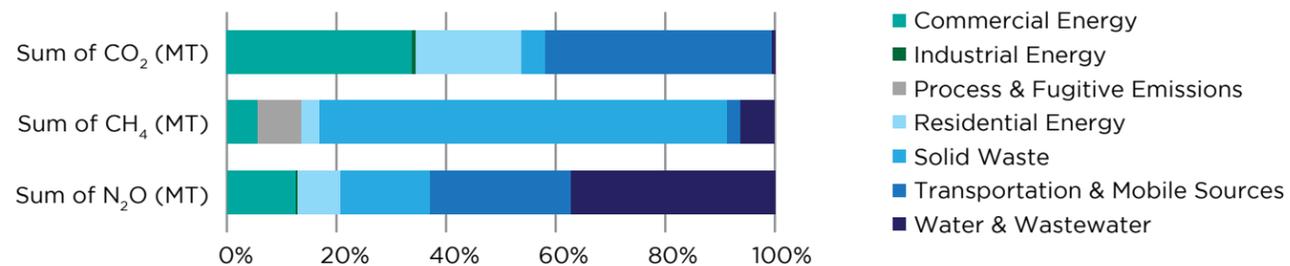


52% of City of Miami's citywide emissions come from the electricity and natural gas used to power residential and commercial buildings. The next largest emission generating activity is transportation and mobile sources, 41%, which accounts for emissions from on-road vehicles, freight, and the Metrorail and Metromover. The remaining

7% of emissions are from solid waste generated and water used by residents, and industrial processes.

The table on the next page details exact emissions from each sector.

2018 Citywide Greenhouse Gas Emission Distribution by Sector



SECTOR	FUEL OR SOURCE	2018 TOTAL USAGE	USAGE UNIT	2018 EMISSIONS (MT CO ₂ E)
RESIDENTIAL ENERGY	Electricity (Florida Power & Light)	2,100,317,614	kWh	643,287
	Natural Gas (TECO and Florida City Gas)	3,748,422	Therms	19,936
Residential energy total				663,223
COMMERCIAL ENERGY	Electricity (Florida Power & Light)	3,330,062,614	kWh	1,019,935
	Natural Gas (TECO and Florida City Gas)	23,593,957	Therms	125,488
Commercial energy total				1,145,421
INDUSTRIAL ENERGY	Electricity (Florida Power & Light)	64,107,705	kWh	19,635
	Natural gas (TECO only)	777,731	Therms	4,128
Industrial energy total				23,761
ON-ROAD TRANSPORTATION	Gasoline (passenger vehicles)	2,861,070,448.65	VMT	1,045,928
	Diesel (passenger vehicles)	49,222,717.35	VMT	20,768
	Diesel (freight trucks)	206,539,826.3	VMT	339,065
PUBLIC TRANSIT *Metrobus is not included	Diesel (Trolleys)	374,191	Gallons	3,822
	Electricity (Metrorail and Metromover)	55,671.9	kWh	17,051
Transportation total				1,426,633
SOLID WASTE	Waste Landfilled	49,271.81	Tons	40,832
	Waste-to-Energy	443,446.29	Short Tons	153,703
Solid waste total				194,534
WATER AND WASTEWATER	Potable Water Supplied (Electricity)	23,683,267.48	kWh	7,260.6
	Potable Water Supplied (Natural gas)	173,031.39	Cubic feet	
	Wastewater Treated (Electricity)	32,912,148.75	kWh	10,104
	Wastewater Treated (Natural gas)	505,629.99	Cubic feet	
	Digester Gas Produced (Daily)	1,277,074.5	Cubic feet	1,590.5
	Nitrogen Discharge (Daily N Load)	13,683	kg N	10,396
	Septic	16,747.63	People	2,034.77
Water and wastewater total				31,865
FUGITIVE	Natural gas leakage	28,138,110	Therms	4,881
Fugitive total				4,881
TOTAL COMMUNITYWIDE EMISSIONS				3,490,318

*Totals shown here are reflective of true totals. Trace sources have been omitted from this table therefore the summation of the table elements may differ slightly from the presented values.

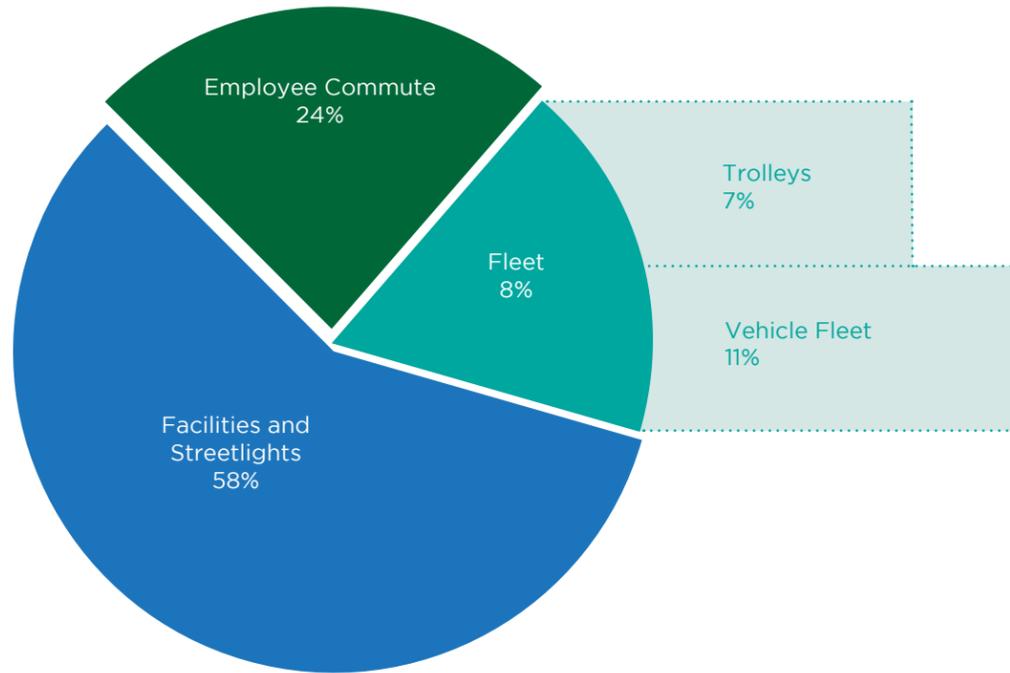
Adjusted for Global Warming Potential, CO₂ makes up 97% of Citywide emissions (CH₄ makes up 2% and N₂O makes up the last 1%). The leading driver of CH₄ emissions is predictably solid waste and similarly the drivers of NO₂ are predictable: car emissions and wastewater processing

GOVERNMENT OPERATIONS EMISSIONS (2018)

Total government operations emissions for the calendar year 2018 were 60,164 metric tons (MT) of carbon dioxide equivalent (CO₂e).

Here is a breakdown of emissions from government operations by sector:

2018 Government Operations Emissions



58% of City of Miami's government operations emissions come from the electricity and natural gas used to operate buildings and facilities that City of Miami pays utility bills on. The next largest emission generating activity is employee commute, 24%, which was estimated by taking all employee zip codes of residence and calculating roundtrip mileage to Miami Riverside Center. At this time

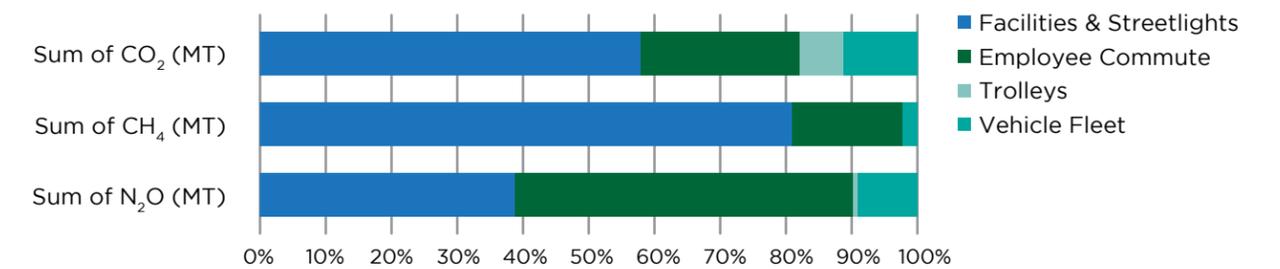
we could not differentiate between travel methods to work so this estimate assumes all employees drive to work. Lastly, gasoline and diesel consumed by city vehicles (both trolleys and all other vehicles) makes up 18% of government operations emissions.

The table below details exact emissions from each sector.

SECTOR	FUEL OR SOURCE	2018 TOTAL USAGE	USAGE UNIT	2018 EMISSIONS (MT CO ₂ E)
FACILITIES AND STREET LIGHTS	Electricity (Florida Power & Light)	68,179,300	kWh	20,882
	Natural gas (TECO)	2,644,270	Therms	14,064
Buildings & Facilities total				34,945
FLEET	Off-road Gasoline (boats)	522	gallons	5
	Off-road Diesel (boats)	10,749	gallons	111
	On-road gasoline	298,804	gallons	2,639
	On-road Diesel (trucks and trolleys)	769,864	gallons	7,867
Fleet total				10,622
EMPLOYEE COMMUTE	Gasoline	36,823,440	VMT	14,599
Employee Commute total				14,599
TOTAL GOVERNMENT EMISSIONS				60,164

Adjusted for Global Warming Potential, CO₂ makes up 99.5% of Government Operations emissions (CH₄ and N₂O split the remaining 0.5%).

2018 Government Operations Greenhouse Gas Emission Distribution by Sector



COMPARISON TO MIPLAN

The only record of the previously conducted greenhouse gas inventories is the information documented in the MiPlan report. It was not possible to directly replicate the process for the 2018 update therefore differences in greenhouse gas emissions can be explained by a number of factors but it is not possible to pinpoint exact activities

that led to emission increases and decreases. A detailed methodology report has been created (see Appendix 1), documenting the data sources and processes used to develop the 2018 inventory so direct comparisons will be possible in the future.

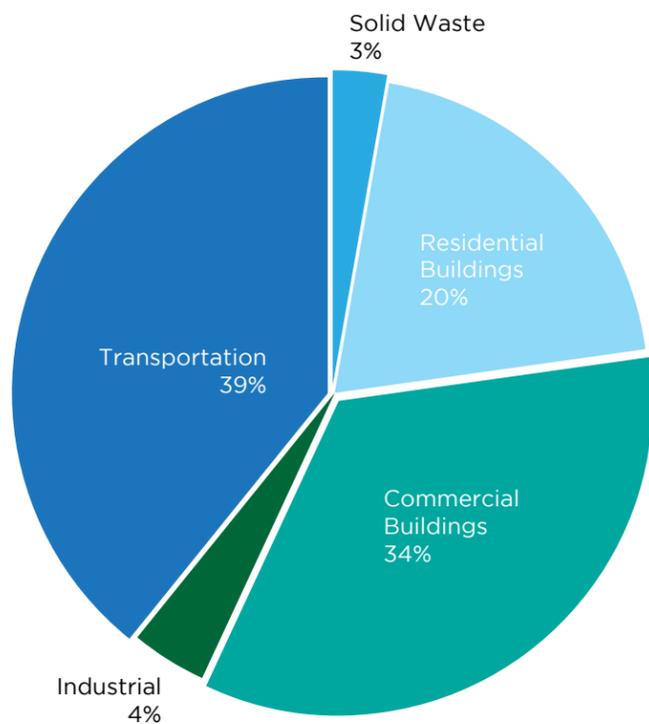


CITYWIDE EMISSIONS

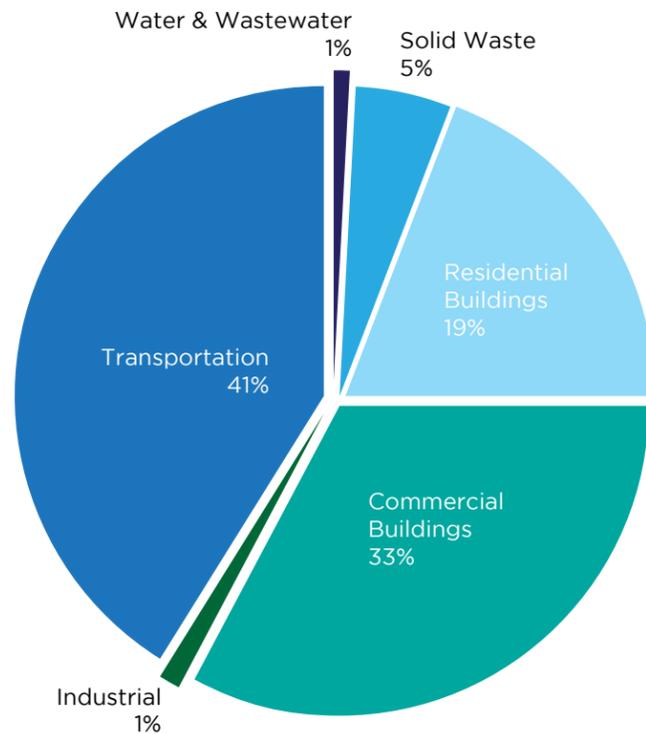
When City of Miami last conducted a Citywide greenhouse gas inventory (2006) the City's population was 404,048 residents and total emissions of carbon dioxide equivalent (CO₂e) was 4,800,000 MT. Population increased by 16.5% between 2006 and 2018 to 470,914 residents, meanwhile emissions dropped 27.29% to 3,490,318 MT CO₂e. This

means that the City of Miami has met the MiPlan goal early to decrease Citywide emissions by 25% below 2006 levels. The MiPlan goal for Citywide emissions is set for 2020 but 2020 may have to be considered an outlier due to the impacts on "business-as-usual" caused by the COVID-19 pandemic.

2006 Citywide Emissions



2018 Citywide Emissions

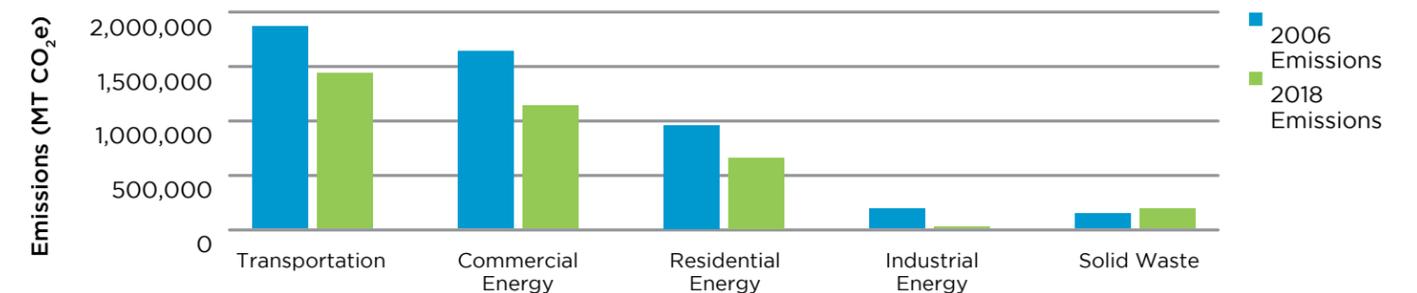


Although there is no record of the exact breakdown of the 2006 Inventory, we can calculate values for the general activities and analyze changes over the past decade to hypothesize factors contributing to emissions decrease

SECTOR	2006 EMISSIONS (MT CO ₂ E)	2018 EMISSIONS (MT CO ₂ E)	EMISSIONS DIFFERENCE (MT CO ₂ E)	% CHANGE	NOTES
TRANSPORTATION	1,872,000	1,426,633	-445,367	-23.79%	Improvements to Corporate Average Fuel Economy (CAFE) standards during the Obama administration and overall average increase of fuel efficiency of vehicles. Increased densification of the urban core leading to decreased transportation emissions.
COMMERCIAL ENERGY	1,632,000	1,145,421	-486,579	-29.81%	Increased use of natural gas in FPL's fuel mix: 50% of their fuel mix in 2006 compared to 73% in 2018. Improved building energy efficiency due to new building codes and more efficient lighting, HVAC and appliance technology. Increased densification of the urban core leading to more efficient building operation.
RESIDENTIAL ENERGY	960,000	663,223	-296,777	-30.91%	
INDUSTRIAL ENERGY	192,000	23,761	-168,239	-87.62%	The transformation of Wynwood into a commercial district may have decreased industrial emissions.
SOLID WASTE	144,000	194,534	+50,534	+35.09%	Result of population increase and decrease of viable recycling markets.
WATER AND WASTEWATER	N/A	31,865	N/A	N/A	Not accounted for in 2006 inventory/MiPlan.
FUGITIVE EMISSIONS	N/A	4,881	N/A	N/A	Not accounted for in 2006 inventory/MiPlan.
Total	4,800,000	3,490,318	1,309,682	-27.29%	

As displayed in the table above, there were emission decreases in every sector except for Solid Waste. The most significant decrease in emissions, proportionally, came from Industrial Energy. On the other hand, Commercial Energy had the biggest decrease in emissions by quantity.

Difference by Sector from 2006 Citywide GHG Inventory to 2018 Citywide GHG Inventory



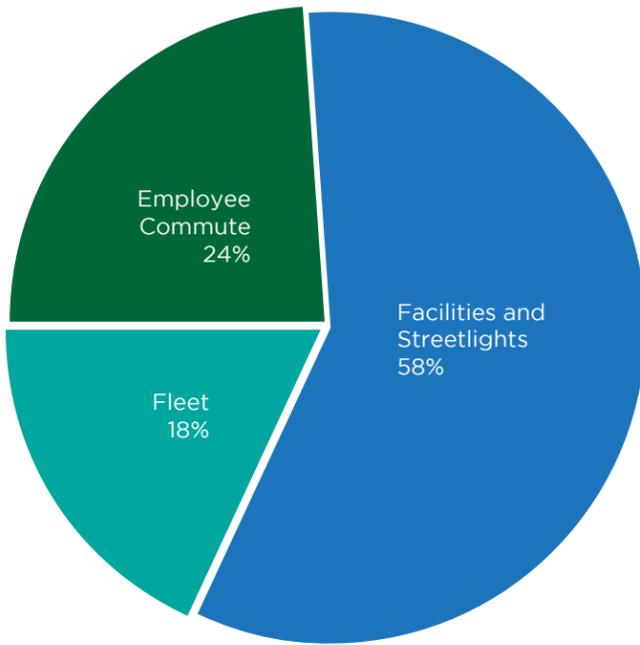
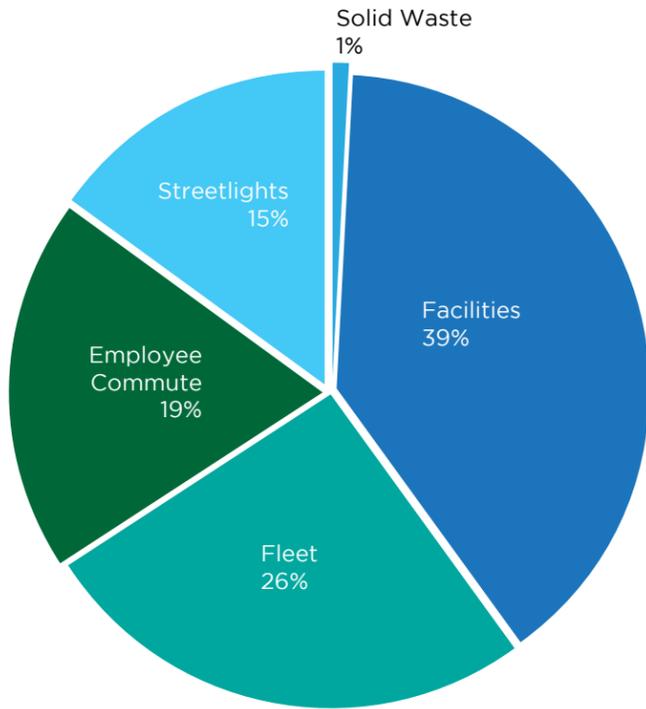
GOVERNMENT OPERATIONS EMISSIONS

In 2007, when greenhouse gas emissions for government operations was last calculated, City of Miami government operations totaled 82,414 MT of CO₂e, which is approximately 1.8% of the City's total emissions. In 2018, government operations emitted 60,164 MT of CO₂e,

which is approximately 1.7% of the City's total emissions. Government operations emissions have decreased 27% since 2007, therefore, the City of Miami has exceeded the goal set out in MiPlan to reduce government emissions by 25% by 2015.

2007 Government Operations Emissions

2018 Government Operations Emissions



Although there is no record of the exact breakdown of the 2006 Inventory, we can calculate values for the general activities and analyze changes over the past decade to hypothesize factors contributing to emissions

decrease. We would need to conduct further research with City leadership to determine operational changes that possibly resulted in emissions decreases.

SECTOR	2006 EMISSIONS (MT CO ₂ E)	2018 EMISSIONS (MT CO ₂ E)	EMISSIONS DIFFERENCE (MT CO ₂ E)	% CHANGE	NOTES
FACILITIES AND STREETLIGHTS	44,504	34,945	-9,559	-21.48%	FPL said they could not separate out streetlight emissions for the 2018 data request at this time so their emissions are included with buildings and facilities. Streetlights and buildings emissions combined in 2007 accounted for 54% of emissions whereas streetlights and buildings emissions combined in 2018 accounted for 58% of emissions.
FLEET	21,428	10,620	-10,808	-50.44%	Fleet emissions may have decreased due to increased fuel efficiency of vehicles.
EMPLOYEE COMMUTE	15,659	14,599	-1,060	-6.77%	An employee commute survey was conducted for the 2007 inventory.
SOLID WASTE	824	N/A	N/A	N/A	2018 emissions due to solid waste were not calculated since Department of Solid Waste does not currently track solid waste collected from government facilities separately from overall collections.
Total	82,414	60,164	22,250	-26.99%	

As displayed in the table above, all sectors of government operations had emissions decreases. Fleet had the greatest decrease in emissions proportionally and in quantity.



Difference by Sector from 2007 Government Operations GHG Inventory to 2018 Government Operations GHG Inventory



PROGRESS ON MIPLAN RECOMMENDATIONS

The Climate Action Plan portion of the MiPlan report details a number of Initiatives for the City divided into 5 categories: Buildings, Energy, Transportation, Land Use, and Adaptation. Each category has an emissions reduction goal along with recommended actions the City take to achieve that goal and the City's overall emission reduction goals. While not all actions were implemented over the past decade, many recommendations were realized in some fashion.

The top 5 initiatives in MiPlan are:

- Increase energy efficiency in buildings
- Reduce greenhouse gas emissions from energy generation
- Reduce emissions from transportation
- Implement more efficient land use planning
- Begin adaptation planning

Here are some actions where the City has made notable progress since MiPlan was released in 2008.

ACTION	UPDATE
INITIATIVE 1: INCREASE ENERGY EFFICIENCY IN BUILDINGS	
ACTION 1-1: FORM AN ALLIANCE TO ADDRESS ENERGY EFFICIENCY IN BUILDINGS.	City of Miami is currently working with Miami-Dade County and Miami Downtown Development Authority to develop and implement an energy benchmarking program, Building Efficiency 305 (BE305). Both public and private sectors have been involved in developing this program.
ACTION 1-2: REDUCE ENERGY CONSUMPTION IN EXISTING GOVERNMENT BUILDINGS.	During the economic recession in 2008, City of Miami received \$4.7 million from the Energy Efficiency and Conservation Block Grant Program (EECBG) to conduct energy efficiency retrofits in City buildings. These retrofits resulted in significant reductions in energy use. In addition, many of the City's outdoor lights have been upgraded to LEDs. The BE305 program will help the City track energy use and continue to reduce energy use.
ACTION 1-4: REDUCE ENERGY CONSUMPTION IN ALL NEW CONSTRUCTION.	Miami21, City of Miami's form based land use code, includes LEED silver requirement for all new construction over 50,000 sq feet as well as expedited permitting and density bonuses for green buildings. It also requires cool roofs on almost all new construction and/or roof replacements.
ACTION 1-5: REDUCE THE HEAT ISLAND EFFECT.	Miami21 requires new construction to install a cool or green roof and cool pavement technologies. The City has an urban forester on staff to promote tree plantings and maintenance of trees Citywide.
ACTION 1-6: EDUCATE THE BUSINESS SECTOR AND THE PUBLIC ON ENERGY EFFICIENCY IN HOMES AND BUSINESSES.	The City renovated a former fire station and opened the Miami Green Lab in October 2012. Previously the site was a venue for environmental education and seminars on green building. Additionally, the City is partnered with Dream in Green on related education initiatives.
EMISSIONS REDUCTION GOAL: REDUCE BUILDINGS EMISSIONS BY 975,000 MT CO₂e FROM 2006 LEVELS BY 2020.	While close, the City had not quite met this goal in 2018. In 2018, emissions from the building sector were 783,356 MT CO ₂ e below 2006 levels.
INITIATIVE 2: REDUCE GREENHOUSE GAS EMISSIONS FROM ENERGY GENERATION	
ACTION 2-2. INCREASE THE USE OF RENEWABLE ENERGY SOURCES.	City of Miami has expedited permitting and waived permit fees for rooftop solar installation. The City promotes financing options for solar via the Solar United Neighbors Solar Co-op and PACE financing. Lastly, the City is pursuing SolSmart gold certification to further increase ease of solar installation for residents.
EMISSIONS REDUCTION GOAL: REDUCE EMISSIONS FROM ENERGY GENERATION BY 429,000 MT CO₂e FROM 2006 LEVELS.	Unable to determine if emissions reduction goal was met due to a lack of baseline data and methodology.

ACTION	UPDATE
INITIATIVE 3: REDUCE EMISSIONS FROM TRANSPORTATION	
ACTION 3-1: FACILITATE AND ENCOURAGE ALTERNATIVE MEANS OF TRANSPORTATION.	City Commission approved the City's Bicycle Master Plan in October 2009. Since then the City has added bike lanes throughout the City including painted, dedicated bike lanes. The City now operates its own free, trolley network with 13 routes and over 5 million rides provided per year. Lastly, the City has partnered with private alternative transit programs including Citibikes and dockless scooters.
ACTION 3-2: INCREASE TELECOMMUTING, COMPRESSED WORKWEEKS AND FLEXIBLE HOURS.	City departments are free to implement flexible scheduling for their employees. The Fire Department actively uses flexible week scheduling for active firefighters. Coronavirus has shown the viability of many more City employees working from home/telecommuting.
EMISSIONS REDUCTION GOAL: REDUCE EMISSIONS FROM TRANSPORTATION BY 565,000 MT CO₂e FROM 2006 LEVELS BY 2020.	While close, the City had not quite met this goal in 2018. In 2018, emissions from the transportation sector were 445,367 MT CO ₂ e below 2006 levels.
INITIATIVE 4: IMPLEMENT MORE EFFICIENT LAND USE PLANNING	
ACTION 4-1: ADOPT LAND USE STRATEGIES WHICH ENCOURAGE SMART GROWTH.	Miami21 became the City's effective zoning code in February 2010. The Miami 21 Zoning Code is a Form-Based Code guided by tenets of New Urbanism and Smart Growth principles.
EMISSIONS REDUCTION GOAL: REDUCE EMISSIONS FROM ENERGY GENERATION BY 429,000 MT CO₂e FROM 2006 LEVELS.	Unable to determine if emissions reduction goal was met due to a lack of baseline data and methodology.
INITIATIVE 5: BEGIN ADAPTATION PLANNING	
ACTION 5-1: BEGIN PROCESS OF PLANNING FOR CLIMATE CHANGE IMPACTS.	Climate change is a major component of Citywide long-term planning. Climate adaptation/resilience is a top pillar of the City's strategic plan and the City has its own climate adaptation plan: Miami Forever Climate Ready.



COMPARISONS TO OTHER JURISDICTIONS

An effective way of comparing emissions across jurisdictions of different sizes is to evaluate differences in per capita emissions. It is important for the City to know where it stands in comparison to other cities to evaluate how much work it

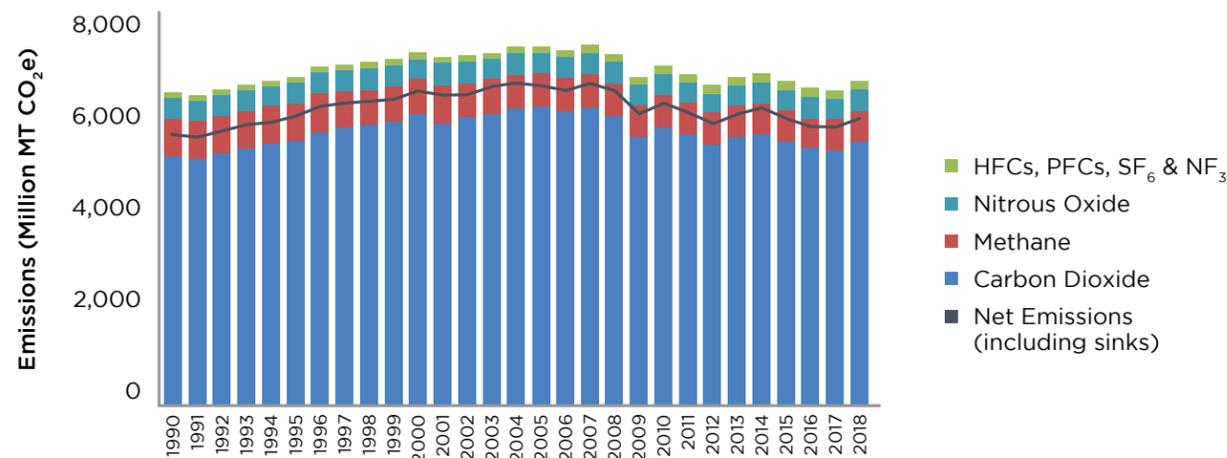
will take to reach carbon neutrality by 2050 and determine what strategies are best to achieve this goal. In 2006, City of Miami emissions per capita were 11.57 MT CO₂e and in 2018 they had decreased to 7.41 MT CO₂e.

UNITED STATES & STATE OF FLORIDA

Similarly to City of Miami, national greenhouse gas emissions have been on a decline since the Aughts. As of 2018, net emissions (accounting for carbon sinks) decreased by -10%

nationally since 2005. The expansion of natural gas and renewable energy production has largely contributed to this national decrease in emissions.

Total US Greenhouse Emissions by Gas

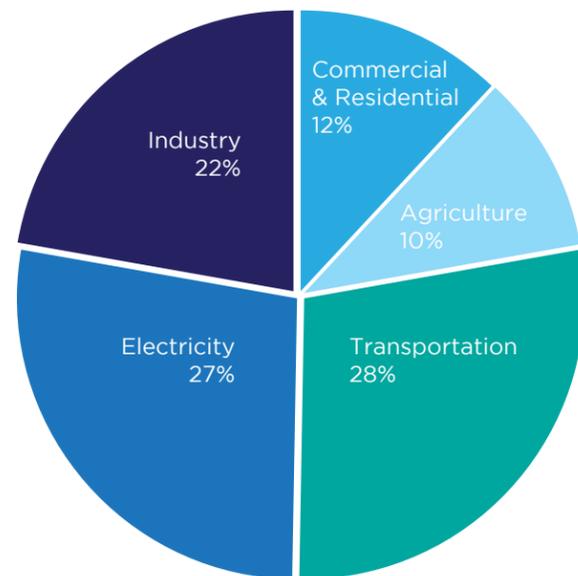


However, national per capita emissions were significantly higher than City of Miami - as of 2018, United States per capita emissions were 18.05 MT CO₂e. This disparity is likely due to City of Miami's relative lack of carbon intense activities and fuel sources, as well as its population density.

23.5% of U.S. energy is produced from coal which is more carbon intensive than natural gas, the leading component of Florida Power and Light's fuel mix. In addition, HVAC needs are different in other parts of the Country; many cities are more reliant on heating than cooling and heating is more energy intensive than cooling. City of Miami also does not have commercial agriculture, commercial energy production, or large industry in the City limits, all of which have significant greenhouse gas emissions. The United States has ~92 people living per square mile whereas the City of Miami has ~13,500.

Florida's emissions per capita are much closer to City of Miami's, due to its energy fuel mix statewide and comparatively lower HVAC emissions. In addition, Florida is among the top 10 most densely populated states in the Country, equating to lower per capita emissions. In 2017, Florida's per capita emissions were 10.86 MT CO₂e.

US Sources of Greenhouse Gas Emissions in 2018

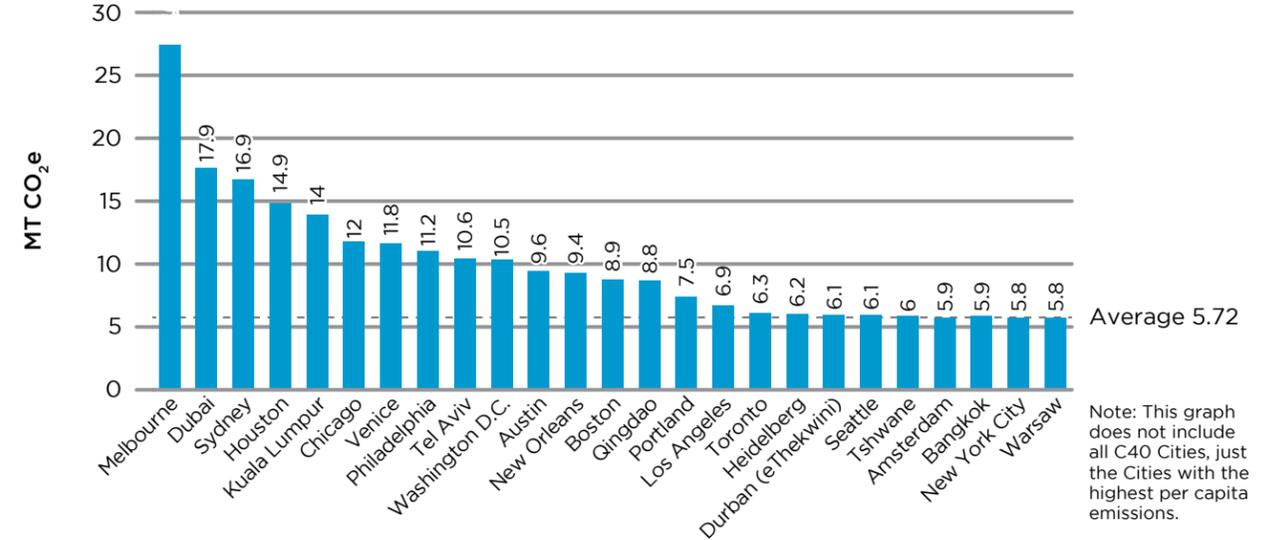


C40 CITIES

C40 Cities is a network of 96 cities worldwide, representing a collective 700+ million citizens and a quarter of the world's

economy. Among C40 Cities worldwide in 2019, average per capita emissions were 5.72 MT CO₂e.

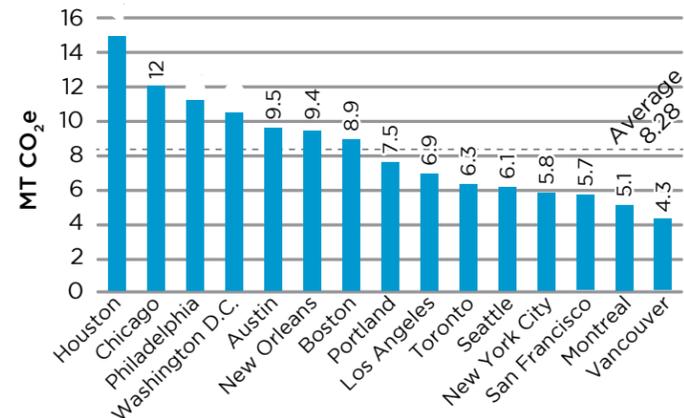
C40 Cities Comparison: Emissions per capita



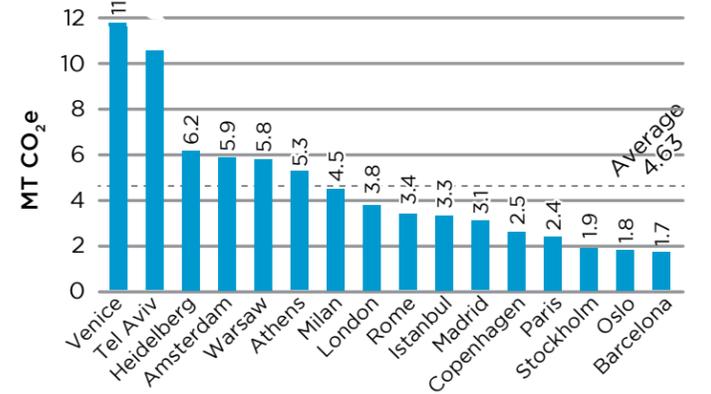
However, the North American region has a higher average of 8.28 MT CO₂e per capita. Unsurprisingly, the European region's average per capita emissions were quite low - half of

the North American region - at 4.63 MT CO₂e. North America is below on the left and Europe is below on the right.

C40 Cities North America Comparison: Emissions per Capita

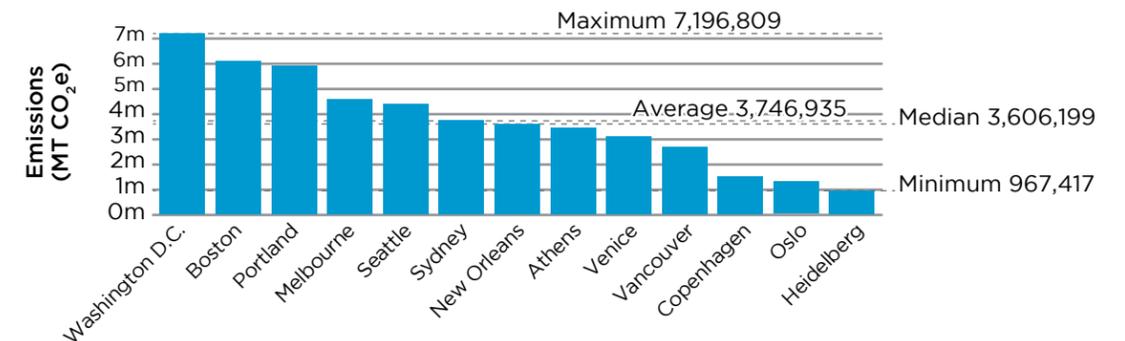


C40 Cities Europe Comparison: Emissions per Capita



Among C40 Cities with similar populations (116,431 to 812,550), our total emissions were slightly below (3.49 million MT CO₂e) the average: 3.75 million MT CO₂e. These cities, which may be good to analyze in future comparisons, include: Washington DC, Boston, Portland, Melbourne,

Seattle, New Orleans, Athens, Venice, Vancouver, Copenhagen, Oslo, and Heidelberg. The graph below shows total annual emissions in MT CO₂e for each of these cities in the year they most recently reported their greenhouse gas inventories. This snapshot was taken in early 2020.



SOUTHEAST FLORIDA

More locally, City of Miami's emissions decline follows a trend seen regionally. Between 2005 and 2015, emissions in the four counties that make up the Southeast Florida

Regional Climate Compact decreased 18%. City of Miami's change in per capita emissions closely follows that of the Compact as well.

Per Capita Emissions Changes Over Time



NEXT STEPS

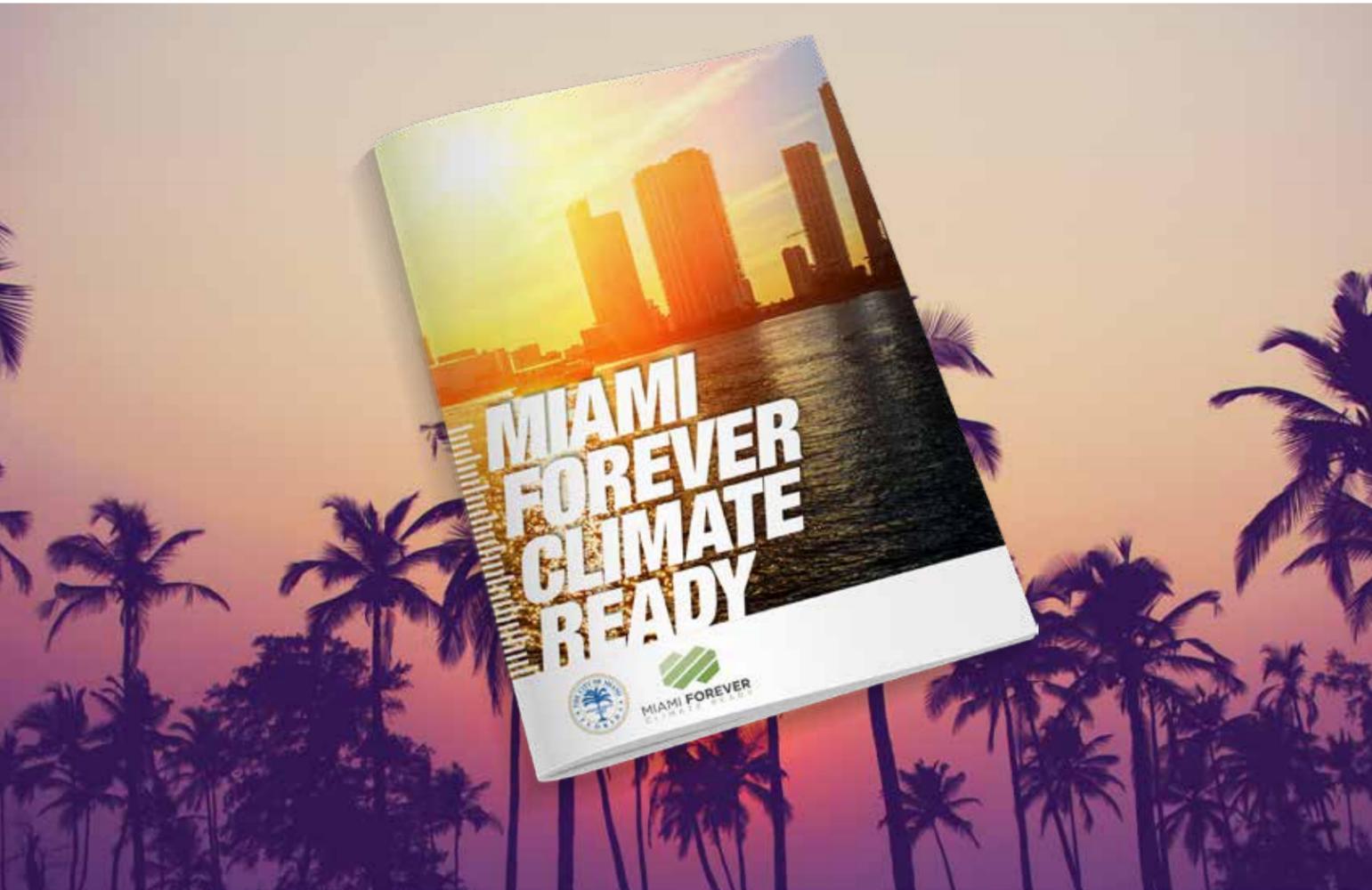
The Office of Resilience and Sustainability is in the process of hiring a consultant to help create a data-driven, quantitatively measurable climate action plan that will help deliver on Mayor Suarez's goal of being a carbon neutral City by 2050. This goal is impossible without ambitious, courageous climate action championed by the highest levels of City leadership. In addition, the strategies and actions must deliver multiple benefits including supporting the City's priorities of COVID-19 recovery, fostering a more

resilient and inclusive economy and/or existing climate adaptation work (outlined in Miami Forever Climate Ready). It is recommended that the City of Miami complete a citywide greenhouse gas inventory every two years to monitor progress on climate actions and goals. There are a number of policy and protocol changes that could make future inventories easier and more robust. These will also be recommended as part of the Climate Action Plan.

KEY MESSAGES

- City of Miami has met the Government Operations goal set out in MiPlan. Government operations emissions were 27% below 2007 levels in 2018.
- City of Miami has met the Citywide goal of 25% by 2020 set out in MiPlan. Citywide emissions were 27% below 2006 levels in 2018.
- Since MiPlan was released in 2008, a few major initiatives helped paved the way for emissions reductions and a more sustainable City:
 - Miami21 became effective in early 2010 leading to development around transportation hubs and increased densification in the urban core.
 - Sustainability requirements and incentives were integrated into Miami21 such as the LEED Silver requirement for new large construction and waived permit fees for rooftop solar. In addition, Florida Building Code improved its energy efficiency standards for new construction.
 - Creation of and support of low-carbon transit alternatives including scooters, trolleys, and bikes.
- City of Miami will use this inventory to inform a greenhouse gas reduction plan aimed at moving the city towards carbon neutrality by 2050.

- This greenhouse gas reduction plan will complement the City's climate adaptation plan, Miami Forever Climate Ready. With these two plans, the City will have strategies to address both sides of the climate change challenge.
- The plan will also prioritize strategies and actions that promote opportunities for local businesses and job growth.
- City of Miami is already working on two programs that will help residents and business owners use energy more efficiently and help lower Citywide emissions:
 - The Building Efficiency 305 (BE305) energy benchmarking program will require large buildings in the City of Miami to publicly report their energy use and drive efficiency through open-market competition.
 - The Keep Safe Miami program will provide energy efficiency and weatherization audits for affordable multi-family housing buildings and assist with funding for renovations for 2-3 properties.



ACKNOWLEDGEMENTS

Developing this inventory was an interdepartmental, interjurisdictional effort. A sincere **THANK YOU** to the following departments and entities for providing us with the data and insight necessary to complete this project:

- **City of Miami GSA**
- **City of Miami Human Resources**
- **City of Miami Resilience and Public Works**
- **City of Miami Solid Waste**
- **Miami-Dade County Office of Resilience**
- **Miami-Dade County Department of Solid Waste Management**
- **Miami-Dade County Water & Sewer Department**
- **Florida Department of Transportation**
- **Florida Highway Safety and Motor Vehicles**
- **Florida Power & Light**
- **TECO Energy**
- **Florida City Gas**

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