

Overview of Fort Lauderdale's Carbon Footprint Achievements

Introduction

In its 2011 Sustainability Action Plan (SAP), the City of Fort Lauderdale committed to reducing its carbon footprint and, therefore, lessening its contributions to the causes of climate change. The SAP set goals of reducing Greenhouse Gas (GHG) emissions by 20% by the year 2020 from a 2010 baseline for both internal operations and citywide. As a result of efforts to date, the City has developed a strong policy foundation for addressing carbon emissions, achieved substantial GHG emissions reductions and has been recognized with numerous national awards.

City's Carbon Reduction Policy Foundation

As indicated by the Strategic Connections listed below, efforts to reduce the City's carbon footprint align with the City's *Press Play 2024 Strategic Plan*. In addition, the City's new *Advance Fort Lauderdale Comprehensive Plan* adds a Climate Change element and includes multiple Goals and Objectives that prioritize achieving longer-term GHG reductions which are essential to reduce the worsening impacts of climate change. In particular, the following items relevant to carbon footprint are among those included in the Comprehensive Plan.

- Reduce GHG emissions from City Operations by 80% by 2050 (EVALUATION MEASURE CC 1.1.1)
- Promote alternative sources of energy with the goal of sourcing 20% of electricity from renewable energy by 2030. (EVALUATION MEASURE CC 1.1.6:)
- Consider greenhouse gas emissions when making decisions related to procurement, capital improvements, operations, programs, events, long-term planning, land-use, and City operations (POLICY CC 1.1.2)
- Reduce City vehicle fossil fuel use by 20% below 2015 levels by 2025 through the replacement of City fleet with low emission vehicles and other fuel efficiency strategies. (EVALUATION MEASURE CC 1.2.5)
- Encourage mixed-use and other land-use policies that will reduce vehicle miles traveled within the City, through its land-use planning. (POLICY CC 1.2.6)
- Ensure multimodal options of transportation exist along key corridors, especially ones to be used as emergency evacuation routes or high priority post-disaster relief corridors. (POLICY CC 1.2.7)

Greenhouse Gas Emissions Tracking

Since release of the SAP, the City has been tracking its GHG emissions using a methodology established therein that focuses on the most significant emissions sources. The City's efforts to date have focused on achieving carbon footprint reductions in City operations. As of the end of calendar year 2019, GHG emissions in City operations had decreased by 19.53% on track for the 2020 goal of 20% reduction. In the community, the availability of reliable City-specific data has made determination of city-wide GHG emissions less accurate. The two leading indicators for community GHG emissions are electricity usage and transportation emissions. GHG emissions associated with electricity usage has shown a 16% per capita decrease due to primarily to reduced usage per capita and lower emissions factors from FPL. However, emissions from the transportation sector appear to be increasing due to increase car usage as shown by a 11.45% increase in vehicle miles traveled in the County over the same period. This increase is similar to the Fort Lauderdale population increase over the same period of 12.51%.

The following sections highlight examples of City programs to reduce its carbon footprint (1) Completed projects; (2) Projects in progress; (3) Potential future activities to accelerate reductions in carbon footprint; and (4) Awards recognizing City's efforts to reducing its carbon footprint. On an absolute level, citywide GHG emissions have only decreased slightly since 2010 (2.5%) but per capita usage has dropped due to the construction and utilization of more efficient buildings, vehicles and appliances.

1. Completed projects to reduce carbon footprint:

- Retrofitted City Hall with LED lighting.
- Completed an energy performance contract project to implement increase energy efficiency improvements at selected City facilities which has reduced overall electricity consumption by an estimated 1.7%.
- Installed 75 programmable thermostats across 41 facilities in the last 3 years which has shown an annual drop of nearly 0.5% in electricity consumption and estimated annual savings of \$30,000 at City Hall.
- Reduced fleet fuel consumption by 8.4% since 2010 due to right sizing vehicles, reducing unnecessary vehicles, increasing use of hybrid and electric vehicles, and introducing a solar-powered charger for four loaner electric vehicles. In addition, use of the GPS tracking system in all City vehicles has helped achieve this through reduced fuel usage and idling which decreased by 20% in 2019. Currently, the fleet includes four electric vehicles and 100 ULEV (ultra-low emissions vehicles).
- Adopted Property Assessed Clean Energy (PACE) programs by the City and support of Broward County solar co-ops have increased opportunities for neighbors to implement energy efficiency improvements and install renewable

energy sources. Changed the City's process for permitting solar installations to expedite it.

- Increased multimodal transportation options and increased infrastructure for alternatively fueled vehicles reducing usage of fossil fuel burning vehicle. Over the last four years, the City has added over 47 miles of multimodal infrastructure. Four of the City's five parking garages now have electric vehicle charging stations.
- Continued efforts to address heat island impacts by increasing tree canopy through tree planting and distribution and by generating an urban heat island map in 2019.
- Retrofitted motors at G.T. Lohmeyer Wastewater Treatment Plant to reduce electrical use in support of the utility's Environmental and Sustainability Management System ISO 14001 certification.
- Added a Climate Change Element to the *Advance Fort Lauderdale Comprehensive Plan*.
- Developed a *Design and Construction Manual* to guide choices for infrastructure improvements in the public realm.

2. Projects in progress

- Identifying funding opportunities for additional energy efficiency and renewable energy projects at City facilities through energy bill auditing and reinvesting savings from previous projects into the Sustainability Investment Fund.
- Including sustainability and resiliency as objectives in the management program for Parks Master Plan bond projects to ensure that energy efficiency and renewable strategies are incorporated in new and upgraded facilities.
- Creating an updated Sustainability Action Plan to set new goals and action items to increase carbon footprint reductions and resilience.
- Installing solar parking meters and EV charging infrastructure in City parking lots.
- Continuing Fleet purchasing of additional Ultra Low Emission vehicles (ULEV) and electric vehicles for appropriate application and expanding the EV charging network at City facilities.
- Revising the City's Landscaping and Tree ordinance to increase tree protection, preserving canopy and shade to reduce associated heat island impacts.
- Increasing multimodal transportation options in the City by improving access and safety for pedestrians, bicycles, and public transportation.

3. Potential future action to accelerate reductions in carbon footprint

- Adopt scientifically based long-term goals for carbon reduction, renewable energy, and alternative fuels. Examples include pledges to become carbon neutral or commit to 100% renewable energy.
 - a. [Carbon Neutral Cities](#) - none in Florida
 - b. [Ready for 100 Pledge](#) - eight Florida cities
 - c. [Broward County pledge for Zero Emission Fleet by 2030](#)

- Implement the GHG related Policies and Objectives of the *Advance Fort Lauderdale Comprehensive Plan*. This would likely include multiple recommended Unified Land Development Regulation (ULDR) changes to reduce carbon footprint and increase green building. Examples of such programs could include:
 - a. Requiring green building certification for construction over a certain threshold
 - i. [Miami Beach](#)
 - ii. [City of Miami](#)
 - b. Requiring energy disclosure and/or benchmarking
 - i. [Orlando Building Energy & Water Efficiency Strategy](#)
 - ii. [Miami Dade County Building Efficiency 305](#) (proposed ordinance)
 - c. Requiring cool roofs and hardscapes in new construction
 - i. [Miami Beach](#)
 - ii. [City of Miami](#)
 - d. Require solar installations
 - i. [South Miami](#)
- Increasing energy efficiency and the renewable energy generation by City facilities through continued and increased investment.
- Improving greenhouse gas tracking procedures to more accurately determine and integrating greenhouse gas emissions consideration in City planning and decision-making processes.
- Fund, develop, and implement an Urban Forestry Master Plan to ensure protection and growth of the tree canopy.
- Continue to encourage smart growth and mixed-use development which among its benefits reduces energy use per capita and vehicle miles traveled.

4. Awards recognizing the City's efforts to address GHG reductions

- Better Building Challenge Award Winner (2020) - The U.S. Department of Energy recognized the City of Fort Lauderdale for reducing greenhouse gas emissions by 20% across 35 key targeted facilities.
- SolSmart Gold Designation (2019) The U.S. Department of Energy recognized the City's efforts to reduce policy and permitting barriers to solar energy in the City.
- Green Local Government Gold Level Certification (2019) - Florida Green Building Coalition recognizing the City's outstanding environmental stewardship including reducing energy usage and greenhouse gas emissions.
- 100 Best Green Fleets in North America (2020) ranking #36
- Tree City USA Award for 41st year in 2019

Conclusion

To make substantial progress in reducing Fort Lauderdale's carbon footprint will require a commitment to not only adopt scientifically-based long-term GHG reduction goals and regulations to support community emission reductions, but also to fund the incremental costs of building greener facilities and continue to invest in building retrofit and cleaner emission vehicles. Achieving these goals requires a shift to more carbon-neutral design and an organizational dedication to the mission of a carbon-free future in our operations and in our community. Reducing emissions is essential to lessen the climate change impacts the City of Fort Lauderdale is already experiencing.