

City of Wilmington – Clean Energy Advisory Committee

Monday, February 10, 2025

Conference Rm 291, Skyline Center, 929 N Front St, Wilmington, NC 28401

1:00 pm-2:30 pm

We encourage Committee members to arrive/join 5-10 minutes early



A G E N D A

Topic
Call to Order / Roll Call
Approval of January Minutes – Committee Action
Item #1: Updates & Discussion: ○ Resolution on 2025 State & Federal Legislative Agenda ○ C-PACE Resolution of Intent ○ FY25 Greenhouse Gas Emissions Report ○ Fleet EV Transition RFP Vendor Selection ○ Skyline Center Energy Study (Terracon)
Adjourn Meeting

Meeting Info:

The meeting attendance options will be as follows:

- **Preferred:** In-person at the address above
- Accessible virtually on Zoom:
- <https://us02web.zoom.us/j/85862278919?pwd=YWRibmk5QW1EUFRhcmVzeUtXeWJkQT09>
Meeting ID: 858 6227 8919
Passcode: 353664

While the meeting can be viewed live at the link provided above, the City will also record and archive the meeting which can be viewed on the City's website

at: <https://www.wilmingtonnc.gov/departments/public-services/sustainability/clean-energy-task-force>



City of Wilmington
City Council
Agenda Item

102 N. 3rd Street
Wilmington, NC 28402
www.wilmingtonnc.gov

Item #: R6.

Resolution Authorizing and Adopting the City of Wilmington's 2025 State and Federal Legislative Agenda

Department:	City Manager's Office	Meeting Date:	1/21/2025
Contact Name:	Kara Spencer	Public Hearing:	No
Contact Phone:	910-540-2891	Advertising Date/Advertised By:	N/A
Attachments:	Attachment #1: Resolution Attachment #2: 2025 Legislative Agenda		

PURPOSE:

The purpose of this resolution is for City Council to formally adopt and authorize the City of Wilmington's 2025 State and Federal Legislative Agenda.

BACKGROUND:

The Wilmington City Council recognizes the importance of a productive collaboration with our State and Federal delegation in achieving results in the areas that they deem most critical to the community.

As we approach the upcoming 2025 session of the North Carolina General Assembly and year one of the 119th United States Congress, the City might anticipate any number of opportunities to identify and support initiatives that are strategic to the moment and represent an opportunity to improve the quality of life for its citizens and encourage investment in the region. As such, the City will keep its agenda focused on broad areas, but not restrict its ability to react and support objectives that may yield similar outcomes in partnership with others.

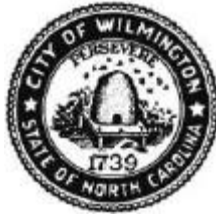
BUDGET IMPACT:

N/A

RECOMMENDATION / ACTION REQUESTED:

Passage of the resolution is recommended.

Resolution



City Council
City of Wilmington
North Carolina

Introduced By: Anthony N. Caudle, City Manager

Date: 1/21/2025

Resolution Authorizing the City of Wilmington’s 2025 State and Federal Legislative Agenda

LEGISLATIVE INTENT/PURPOSE:

WHEREAS, in establishing its strategic focus areas of a diverse and thriving economy, welcoming neighborhoods and public spaces, efficient transportation systems, a safe community, and sustainability and adaptability, the Wilmington City Council (“Council”) has acknowledged the significance of each of these factors in creating and maintaining a positive quality of life for our citizens; and,

WHEREAS, in also identifying civic partnerships as a focus area, Council has emphasized the importance of productive collaboration with our State and Federal delegation in achieving results in the areas that they deem most critical to the community; and,

WHEREAS, as we approach the upcoming 2025 session of the North Carolina General Assembly and year one of the 119th United States Congress, the City anticipates any number of opportunities to identify and support initiatives that are strategic to the moment and represent an opportunity to improve the quality of life for its citizens and encourage investment in the region; and,

WHEREAS, the City will keep its agenda focused on broad areas, but not restrict its ability to react and support objectives that may yield similar outcomes in partnership with others.

THEREFORE, BE IT RESOLVED:

THAT, the Wilmington City Council fully supports and adopts the policy goals contained within its 2025 State and Federal Legislative Agenda, and authorizes City staff to work toward achieving the following:

State Legislative Agenda

- Support transportation and infrastructure funding that is reflective of the growth

and needs of the Wilmington region, including the critically important Southside Wastewater Treatment Plant replacement and expansion project.

- Support programs for more expedient disaster recovery that have a greater focus on pre-disaster mitigation, building resilience, flood-ready infrastructure, and more.
- Oppose legislation that undermines local government authority and revenue generation; including, but not limited to, municipal elections, sales tax revenue, local storm water policies, and management of assets and property.
- Continue to fund a strong film incentive program and consider public policy that positively impacts film jobs in our state.
- Support a strong and ongoing state response to the discharge of chemicals that may result in the impairment of our waterways, air, and drinking water that ensures that the polluters fund related costs.
- Continue to support revisions of crime laws that provide additional tools to local law enforcement and prosecutors.
- Continue to make positive steps to respond to North Carolina's opioid epidemic that includes investments in mental health treatment and services at the local level.
- Support a consistent funding source for coastal infrastructure and shoreline protection that includes beaches, inlets, and waterways.
- Support state affordable housing program funding and the ability of communities to address local challenges.
- Support a strong historic preservation incentive.
- Oppose modifications to the current Room Occupancy Tax distribution formula.
- Support commitment of necessary state resources to fund the remaining replacement costs of the Cape Fear Memorial Bridge.

Federal Legislative Agenda

- Support additional funding for infrastructure, local transportation priorities, federal transportation grants and programs, and public transportation programs that emphasize resiliency and equity.

- Support continued regulation of discharge of chemicals that may result in the impairment of our waterways, air, and drinking water.
- Support increased federal resources and programs for disaster recovery that have a greater focus on pre-disaster mitigation and flood-ready infrastructure.
- Support continued federal roles in beach, inlet, and waterway infrastructure.
- Support resource allocation to local governments, first responders, and mental health entities as a part of federal opioid epidemic response.
- Support affordable housing and historic preservation funding.

Adopted at a _____ meeting

On _____ 2025

Bill Saffo, Mayor

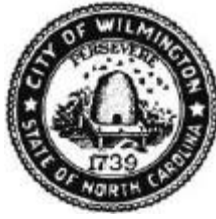
Approved As To Form:

Attest:

Penelope Spicer-Sidbury, City Clerk

City Attorney

Resolution



City Council
City of Wilmington
North Carolina

Introduced By: Anthony N. Caudle, City Manager

Date: 2/4/2025

Resolution Declaring Intent of the City of Wilmington, North Carolina to Participate in the Commercial Property Assessed Capital Expenditure (C-PACE) Program

LEGISLATIVE INTENT/PURPOSE:

WHEREAS, Article 10B of Chapter 160A of the General Statutes of North Carolina, as amended (the “C-PACE Act”), authorizes the establishment of a statewide commercial property assessed capital expenditure (C-PACE) program (the “C-PACE Program”) that local governments may voluntarily join; and,

WHEREAS the C-PACE Act authorizes the North Carolina Department of Commerce (the “Program Sponsor”) to oversee the C-PACE Program and requires the Economic Development Partnership of North Carolina, Inc., a North Carolina nonprofit corporation (the “Statewide Administrator”), to administer the C-PACE Program and, in support thereof, provide certain administrative services described in N.C. Gen. Stat. § 160A-239.14; and,

WHEREAS, the C-PACE Act and C-PACE Program permit willing owners of commercial, industrial, or agricultural real property, or residential real property with five or more dwelling units located in the jurisdictional boundaries of participating local governments (“Qualifying Commercial Property”) to obtain direct financing (“C-PACE Financing”) from a “capital provider” (as further defined in N.C. Gen. Stat. § 160A-239.12(1), “Capital Provider”) for “qualifying improvements” (as further defined in N.C. Gen. Stat. § 160A-239.12(14), “Qualifying Improvements”) approved by the Program Sponsor, including energy efficiency measures, resiliency measures, renewable energy measures, and water conservation measures; and,

WHEREAS, under the C-PACE Act, C-PACE Financing shall be secured by a (a) voluntary assessment imposed on Qualifying Commercial Property by a local government for the total amount of such financing (the “C-PACE Assessment”) and (b) lien on such Qualifying Commercial Property until the financing is paid in full (the “C-PACE Lien”); and,

WHEREAS, the City of Wilmington, North Carolina, acting by and through its City Council, desires to participate in the C-PACE Program and, in support thereof, adopt a resolution setting forth the items required by N.C. Gen. Stat. § 160A-239.15(a).

THEREFORE, BE IT RESOLVED:

By the City Council of the City of Wilmington, North Carolina as follows:

Section 1. The City of Wilmington declares its intent to authorize, following a future resolution to formally adopt, (a) the C-PACE Program to operate within its jurisdictional boundaries and (b) the Statewide Administrator to provide the administrative services described in N.C. Gen. Stat. § 160A-239.14.

Section 2. The City of Wilmington declares its intent to (a) authorize C-PACE Financing within the jurisdictional boundaries of the City of Wilmington, (b) authorize the imposition of C-PACE Assessments to secure repayment of C-PACE Financing, (c) assign the C-PACE Lien to Capital Providers providing C-PACE Financing and (d) delegate billing, collection, and enforcement duties for the C-PACE Assessment and C-PACE Lien to Capital Providers.

Section 3. Following future formal adoption of the C-PACE Program, the amount of any C-PACE financing and related C-PACE assessment repayment terms will be pursuant to an agreement by and among City of Wilmington, the Statewide Administrator, a “property owner” (as defined in the C-PACE Act, a “Property Owner”) and Capital Provider (an “Assessment Agreement”) and a financing agreement between a Property Owner and a Capital Provider in which a Property Owner agrees to repay a Capital Provider for the C-PACE Financing provided, including, but not limited to, any finance charges, fees, debt servicing, accrual of interest and penalties, and any terms relating to the treatment of prepayment and partial payment, and the billing, collection, and enforcement of the C-PACE Financing.

Section 4. The Finance Department, following future formal adoption of the C-PACE Program, will upon receipt from the Statewide Administrator of an approved project application for C-PACE financing within the jurisdictional boundaries of the City of Wilmington, execute an Assessment Agreement, a Notice of C-PACE Assessment, and an Assignment of C-PACE Lien.

Section 5. Following future formal adoption of the C-PACE Program, the City of Wilmington shall be reimbursed by the Statewide Administrator for the actual and reasonable costs associated with the performance of the duties described in Section 4 hereof.

Section 6. A public hearing on the formal adoption of the C-PACE Program will be held during the City Council meeting on March 4, 2025, at 6:30 pm.

Section 7. Nothing in this Resolution of Intent to participate in the C-PACE Program shall be interpreted as authorizing the City of Wilmington to pledge, offer, or encumber its full faith and credit, and the City of Wilmington shall not pledge, offer, or encumber its full faith and credit in connection with any C-PACE Financing.

Section 8. Should any provision or provisions of this Resolution of Intent be declared invalid or unenforceable in any respect by final decree of any court of competent jurisdiction, the invalidity or unenforceability of any such provisions shall not affect the remaining provisions of such Resolution.

Section 9. All resolutions or parts thereof in conflict herewith are, to the extent of such conflict, hereby repealed.

Section 10. This Resolution of Intent shall take effect following City Council approval of adoption.

Section 11. A future resolution to formally join and participate in the C-PACE program shall take effect following City Council approval of adoption.

Adopted at a _____ meeting

On _____ 2025

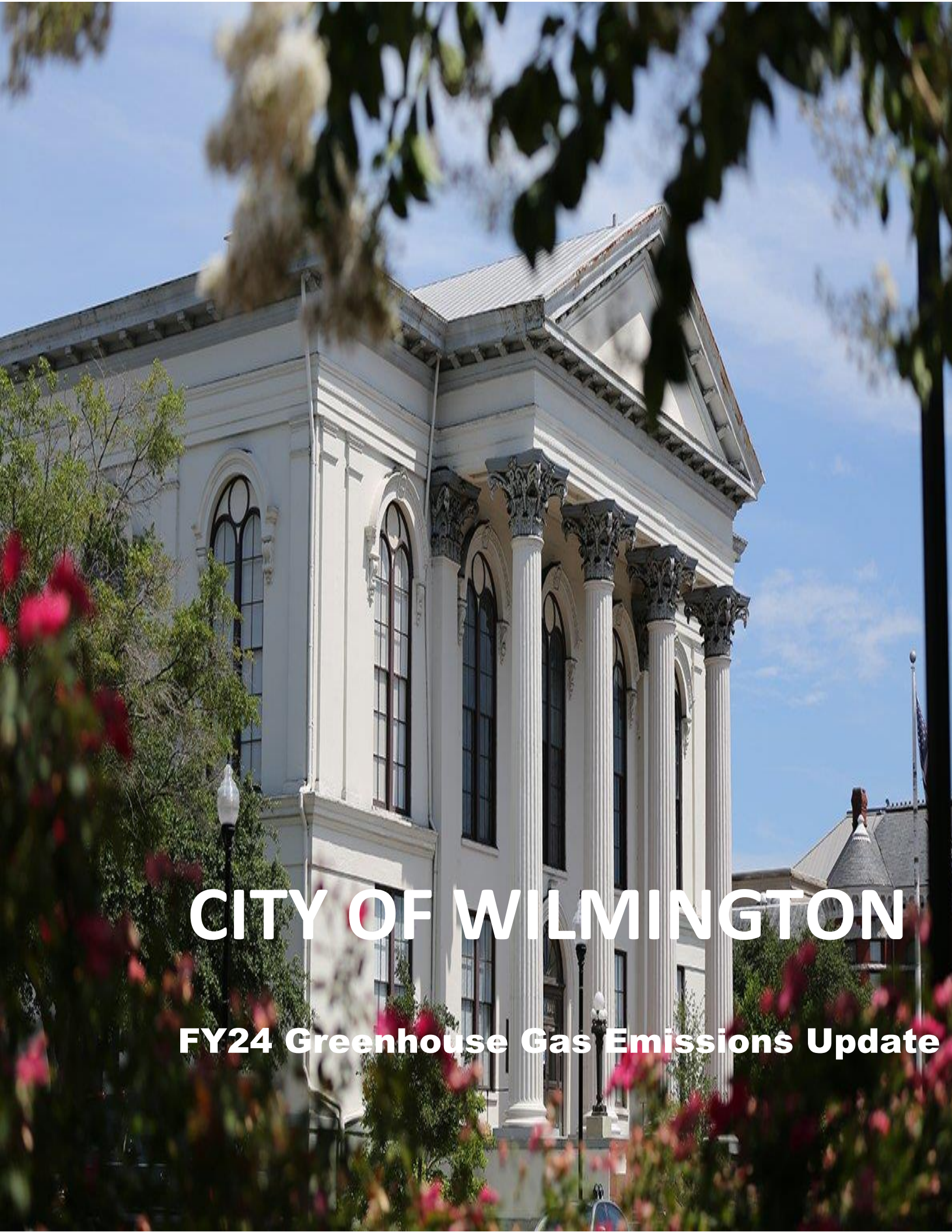
Attest:

Penelope Spicer-Sidbury, City Clerk

Bill Saffo, Mayor

Approved As To Form:

City Attorney



CITY OF WILMINGTON

FY24 Greenhouse Gas Emissions Update

City of Wilmington

FY24 Greenhouse Gas Emissions Update

BACKGROUND

Wilmington has been a longtime leader in addressing the challenge of climate change. In **2006**, Wilmington City Council passed a **Resolution endorsing the US Conference of Mayors Climate Protection Agreement**. In **2009**, Wilmington performed its **first Greenhouse Gas (GHG) emission inventory** which established a GHG emission baseline. The inventory was followed by City Council passing a resolution in October **2009** setting ambitious **GHG emissions reduction goals for municipal operations**.

Wilmington has maintained the commitment to curbing climate change through resolutions supporting GHG emission reductions, including:

- 2017 - Resolution addressing climate change
- 2020 – Resolution establishing the Ad Hoc Clean Energy Policy Task Force
- 2021 – Resolution adopting 2035 and 2050 Clean Energy Goals
- 2021 – Resolution supporting the Mayors for 100% Clean Renewable Energy Pledge
- 2021 – Resolution establishing the Clean Energy Advisory Committee
- 2022 - Resolution to sign Public Comment Letter to NCUC concerning Duke Energy’s Carbon Plan
- 2024 – Resolution adopting a Sustainable Municipal Building Policy

What is the Goal?



Reduce GHG emissions from **municipal operations by 58% by 2050** from a 2007 baseline of 9,704 metric ton of CO₂e.

What are Greenhouse Gas emissions?

GHG's such as carbon dioxide and methane trap heat in the atmosphere, warming the planet and causing cascading impacts on environmental systems. The largest source of GHG emissions from human activity in the US is from burning fossil fuels for electricity, heat, and transportation.

CO₂e, or “carbon dioxide equivalent,” is the standard unit for measuring GHG emissions. The emissions include three categories:

- **Scope 1** – direct emissions from activities under City control including fuel combustion on-site from gas boilers, back-up generators, and fuel usage in fleet vehicles & equipment.
- **Scope 2** – indirect emissions from electricity purchased and used by the City from Duke Energy.
- **Scope 3** – indirect emissions from City activities outside of City control such as off-site fuel purchases.

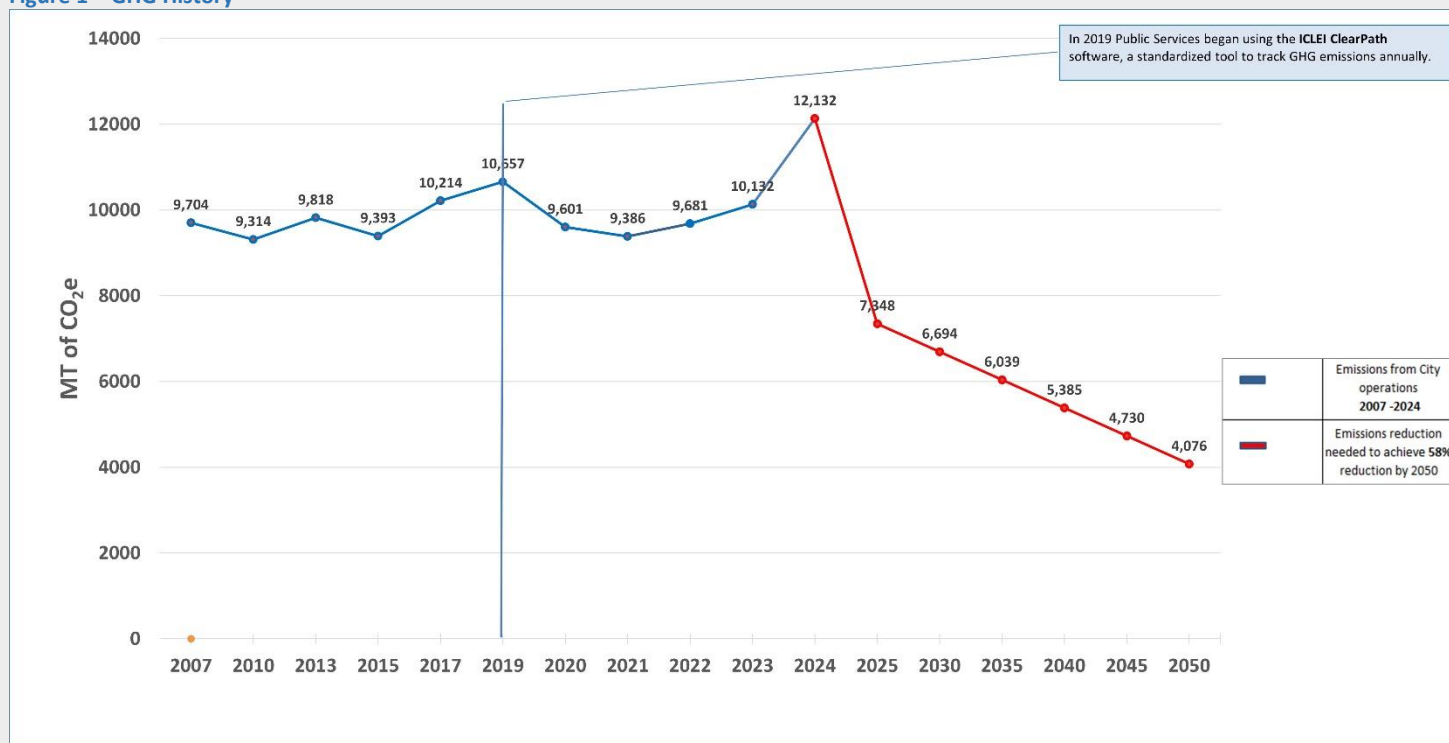
City of Wilmington

FY24 Greenhouse Gas Emissions Update

GHG emissions from the City of Wilmington include emissions from City buildings, fleet & equipment fuel use, streetlights, area lights, and traffic signals.

What's Wilmington's GHG Emissions History?

Figure 1 – GHG History



FY24 Key Points:

- In FY24 GHG emissions were **12,132 MT CO₂e** as shown in Figure 1 above.
 - This was a significant increase (20%) from FY23 GHG emissions of **10,132 MT CO₂e**, an increase of **2,000 MT CO₂e**.
 - The increase in GHG emissions can be attributed to several factors, including:
 - Overall electricity usage increased **38%** from 15,289,841 kWh to 21,041,878 kWh, which accounted for **1,634 MT CO₂e** of the increase
 - Note that the Skyline Center added **5,377,757 kWh** of electricity usage, which accounted for **93%** of the electricity increase and **1,527 MT CO₂e**
 - Natural gas usage increased **14%** from 122,987 therms to 139,897 therms, which accounted for **90 MT CO₂e** of the increase
 - Propane usage increased **5%** from 25,290 gallons to 26,449 gallons, which represents an **8 MT CO₂e** increase
 - Fleet fuel usage increased by **1%** from 561,363 gallons to 565,132 gallons which represented a **348 MT CO₂e** increase

City of Wilmington

FY24 Greenhouse Gas Emissions Update

GHG Emissions by Sector

Figure 2 – Historical Emissions by Sector

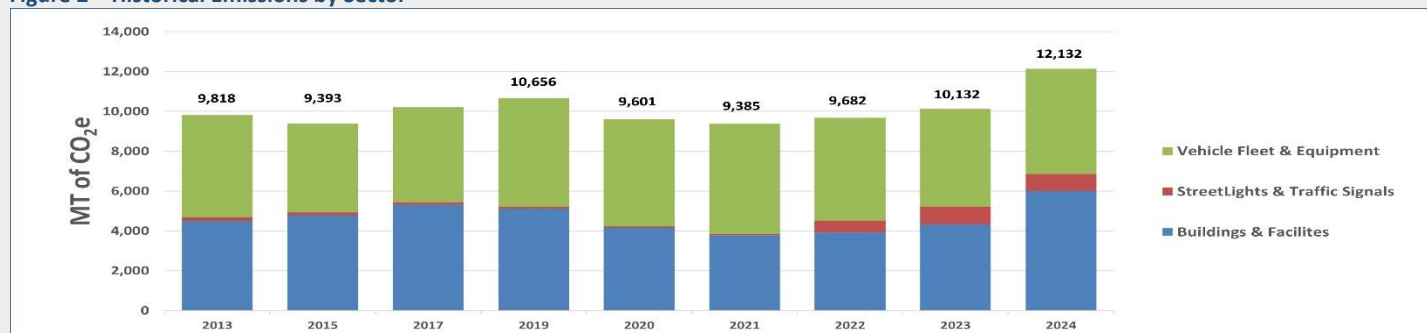


Table 1 – Historical Emissions by Sector

	MT CO ₂ e								
	2013	2015	2017	2019	2020	2021	2022	2023	2024
Buildings & Facilities	4,503	4,776	5,312	5,121	4,160	3,782	3,926	4,334	5,998
Streetlights, Area Lights & Traffic Signals	182	157	133	95	74	69	589	880	868
Vehicle Fleet & Equipment	5,133	4,460	4,768	5,440	5,367	5,534	5,167	4,918	5,266
Total	9,818	9,393	10,213	10,656	9,601	9,385	9,682	10,132	12,132

Key Points:

- **Vehicles & Equipment:** In FY24, the GHG emissions from fuel usage in vehicles & equipment was **5,266 MT CO₂e** (see Table 1) and composed **43%** of the City's GHG emissions as illustrated in Figure 2 above.
 - Fuel usage increased by 3,769 gallons (1%) from FY23.
 - **Good news in this sector:**
 - The continued purchase of new more fuel-efficient models and hybrid vehicles continues to improve the overall fleet fuel efficiency and reduce costs:
 - The average MPG across the entire fleet increased from 16 to 17 MPG
 - The cost savings from the use of hybrid passenger vehicles is **47%** lower than conventional passenger vehicles
 - Hybrid Passenger vehicles = \$0.07 cost per mile (CPM)
 - Conventional Passenger vehicle = \$0.15 CPM
 - As the City transitions towards zero-emission vehicles (ZEV's) the GHG emissions and fuel costs will decrease significantly.
- **Buildings & Facilities:** In FY24 the emissions from Buildings & Facilities were **5,998 MT CO₂e** (see Table 1). This represented **49%** of the City's GHG emissions as illustrated in Figure 2 above. The FY24 Buildings & Facilities emissions were a **38%** increase (MT CO₂e) from the FY23 emissions of 4,334 MT CO₂e.

City of Wilmington

FY24 Greenhouse Gas Emissions Update

- The addition of Skyline Center was the primary driver for the increased electricity usage and emissions, as well as continued electricity usage from buildings identified as surplus and tenant occupied properties, including:
 - 115 N 3rd St – Harrelson Building
 - 305 Chestnut St – Municipal Office Building
 - IT Server Building
 - 302 Willard St – Parks & Rec Facility
 - Medical Clinic
 - Wellington Ave Engineering Building
 - Police SE Command
 - Thalian/City Hall
- **Good news in this sector:** In FY25 the emissions will decline significantly as many of the surplus properties either have been sold, demolished or are on the market to be sold. Current status of the properties is:
 - Harrelson Building – currently on the market for sale (**252 MT CO²e** in FY24)
 - 305 Chestnut St – Vacated Apr 2024, demolished Dec 2024 (**150 MT CO²e** in FY24)
 - IT Server Building – Fiber removed Jan 2025, demolition in FY24 (**32 MT CO²e** in FY24)
 - 302 Willard St – Vacated Oct 2023, sold February 2024 (**12 MT CO²e** in FY23)
 - Medical Clinic – Lease terminated Oct 2023 (**4 MT CO²e** in FY23)
 - Wellington Ave – Vacated Oct 2023, sold July 2024 (**7 MT CO²e** in FY24)
 - Police SE Command – currently on the market for sale (**22 MT CO²e** in FY24)
 - Thalian/City Hall – transitioned to tenant (**563 MT CO²e** in FY24)
 - *Note that Thalian/City Hall will still be owned by the City, however all utilities are being transitioned to Thalian Hall Center for the Performing Arts in Jan 2025.*

The total emissions reduction once all these surplus and tenant properties are no longer part of the City's portfolio is approximately **1,042 MT CO²e**.

- **Streetlights, Area Lights & Traffic Signals:** In FY24, the emissions from this sector, **868 MT CO²e**, represented **7%** of the City's GHG emissions. The FY24 emissions were a 1% decrease from FY23 emissions of 880 MT CO²e.
 - **Good news in this sector** is the continued effort to reduce GHG emission in this sector by converting any remaining high-pressure sodium vapor (HPSV) area lighting to energy efficient LED. Completed projects in FY24 converted 122 area lights in several park and facility locations to LED.
- **eGrid Factor:** The Emissions & Generation Resource Integrated Database (eGRID) is an EPA data source that is used to calculate GHG emissions. Each region has a different eGRID factor that is determined by how the electricity provider generates electricity (e.g primarily from coal, natural gas, nuclear, hydro, biomass, wind, and solar). For Wilmington GHG emission calculations the Virginia/Carolina (SRVC)

City of Wilmington

FY24 Greenhouse Gas Emissions Update

region is used. The most recent data ([eGRID 2022](#)) was released in January of 2024 and the SRVC region had and **3% decrease** in the emission rate compared to the previous year (see Table 3 below). Note that 3% difference in our regional eGrid factor represents approximately **365 MT CO₂e**.

- **Good news in this sector** - In Wilmington's region, the electricity provided by Duke Energy Progress has increasingly been generated from cleaner sources. This change has resulted in the eGRID factor decreasing significantly over time as noted in Table 3 and is a **significant factor in lowering Wilmington's GHG emissions**.

Table 3- eGRID Historical Data

	VIRGINIA/CAROLINAS REGION eGRID EMISSION RATES			
	CO ₂ (lb/MWh)	CH ₄ (lb/MWh)	N ₂ O (lb/MWh)	CO ₂ e (lb/MWh)
eGrid 2014	856.6	0.096	0.138	856.8
eGrid 2016	805.3	0.067	0.011	805.4
eGrid 2018	743.3	0.067	0.009	747.5
eGrid 2019	675.4	0.058	0.008	679.1
eGrid 2020	623.1	0.050	0.007	626.3
eGrid 2021	639.7	0.052	0.007	642.9
eGrid 2022	623.0	0.047	0.007	625.9
2022 change since 2014	-27%	-51%	-95%	-27%
2022 change from 2021	-3%	-10%	0%	-3%
https://www.epa.gov/energy/emissions-generation-resource-integrated-database-egrid				

- **Solar Energy Production:** The production of solar energy at municipal facilities provides a significant offset to the electricity usage of municipal operations. The City's current solar photovoltaic (PV) systems consist of:
 - 74 kW array on the Fleet Services building
 - 27 kW array on the Engineering Department building
 - A 40 kW array on the 1110 S 17th Street Facility
 - A 10 kW array at Miracle Field in Olsen Park

In FY24 these PV systems produced **8,073 kWh** of electricity. Note that production is down from FY23 levels as the solar inverters of the Fleet and Engineering arrays are undergoing repairs.



City of Wilmington

FY24 Greenhouse Gas Emissions Update

Strategies Going Forward

#1: Fleet & Equipment – As Wilmington’s municipal fleet accounts for **43%** of the GHG emissions, actions to significantly reduce emissions from this sector will have the greatest impact. Strategies to reduce emissions will include:



- The upcoming **Fleet EV Transition Strategy** using Energy Efficiency and Conservation Block Grant funding, will begin in early 2025 and will include the following components:
 - Fleet evaluation / right-sizing analysis
 - Transition schedule
 - EV charging infrastructure planning
 - Sustainable Fleet policy recommendation
 - Fleet Transition Plan final report
- Continue to purchase hybrid and EV vehicles to reduce fuel consumption and costs.
- Align actions with the City’s Strategic Plan FY25-FY30 including participating in Focus Area workgroups (i.e Develop an efficient, accessible, and sustainable multi-model transportation network and city infrastructure)
- Conduct a pilot project of the use of electric mowers, leaf blowers, landscaping equipment, and golf carts
- Pursue federal / state grant opportunities to support the purchase of EV’s and EV charging infrastructure.

#2: Buildings & Facilities – As our buildings & facilities currently represent the largest sector of our GHG emissions at **49%**, sustainable design, construction, and operation will have significant impact on emissions for the life of the buildings. In addition, driving down the energy usage of our existing buildings will continue to be a priority. Strategies to reduce emissions will include:



- Prioritize sustainable design, energy efficiency, and installation of renewable energy systems for all **new construction**. *Note that the **Sustainable Municipal Building Policy** was presented to City Council and adopted at the December 3, 2024 City Council meeting.*
- Continue to implement energy efficiency projects of **existing buildings & facilities**.
- Purchase energy efficient computers, laptops, and appliances that achieve the ENERGY STAR rating.
- Provide funding or pursue grant opportunities to install solar PV systems on existing city-owned facilities to offset grid-produced electricity.
- Reduce the portfolio of city facilities that are surplus properties including:
 - 115 N 3rd St – currently on the market for sale
 - 305 Chestnut St - demo’ d December 2024
 - IT Server Building – scheduled for demo in 2025
 - Police SE Command – going on the market in 2025

City of Wilmington

FY24 Greenhouse Gas Emissions Update

#3: Policy & Legislation – To support achieving Wilmington’s 2050 GHG emission reduction goal, the City will stay informed of opportunities to advocate for legislation, policy, and programs that will have a significant impact, including:



- Supporting actions to achieve [North Carolina HB 951](#) which seeks to reduce carbon emissions by 70% by 2030 and achieve carbon neutrality by 2050.
- Supporting actions that will reduce GHG emissions as part of the City’s yearly State and Federal Legislative Agenda
- Supporting the North Carolina Utilities Commission and Duke Energy’s efforts to generate increasing amounts of electricity from clean and renewable sources.
- Providing constructive feedback and comments on future [Duke Energy Carbon / Integrated Resource Plans](#) to the NC Utilities Commission
- Continued support of recommendations from the City’s Clean Energy Advisory Committee.

THANK YOU

for more information contact

City of Wilmington

Public Works Department – Sustainability Office

David Ingram – Sustainability Manager

David.ingram@wilmingtonnc.gov

910-341-1602

www.wilmingtonnc.gov/sustainability