

# → City of Falls Church Environmental Sustainability Council Meeting

March 2023

Fiona Wissell, Project Manager

Susan Elliot, Technical Lead



# Agenda

---

- Introduction to ICF
- Project Overview and ICF Role
- Engagement with the ESC
- Plan Contents Concepts
- GHG Inventory
- Regional Sustainability Context
- Plan Framing Questions for the ESC
- Next Steps

# The ICF Team

---



Multi-disciplinary team with extensive experience in energy and climate action planning who bring lessons learned from across Northern Virginia, the DMV area, and the rest of the country.










DBE firm specializing in providing effective communications, including public involvement, media relations, digital and social media, and graphic design.

## Sample National and Local Experience

- MWCOG 2016 Multi-Sectoral Technical GHG Report
- TBP Climate Change Mitigation Study of 2021
- City and County of Frederick, MD Climate Planning
- MWCOG Military Installation Resilience Review Support
- EPA ENERGY STAR and State and Local Clean Energy Support
- Fairfax County CECAP and Implementation
- Arlington County CEP and Implementation
- Montgomery County Building Energy Performance Standard
- City of Alexandria Climate Planning
- Loudoun County Energy Strategy

# Key Staff

Name, Years of Experience	Role, Tasks	Project Examples
 <p>Fiona Wissell, 7</p>	<p>Project Manager</p>	<p>Loudoun County Energy Strategy, 2022 – Present            Inventory of U.S. GHG Emissions and Sinks, 2021 - Present            Pennsylvania 2021 CAP Update, 2020 – 2021            RGGI Program Review, 2016 - 2018, 2021 - Present</p>
 <p>Susan Elliot, 11</p>	<p>Technical Lead</p>	<p>COG/Transportation Planning Board (TPB) Climate Change Mitigation Study, 2021            COG/TPB Long Range Plan Task Force, 2017            COG Multi-Sector Approach to Reducing GHGs, 2015-2016</p>
 <p>Adam Agalloco, 16</p>	<p>Project Advisor</p>	<p>Fairfax County CECAP, 2020-2021            Fairfax County Green Bank, 2021-2022            Loudoun County Energy Strategy, 2022-Present            City of Alexandria Climate Action plan, 2021-Present</p>
 <p>Deb Harris, 14</p>	<p>Project Advisor</p>	<p>Loudoun County Energy Strategy, 2022-Present            Arlington County CEP Support, 2018-Present            City of Alexandria Climate Action plan, 2021-Present</p>
 <p>Stacy Noblet, 19</p>	<p>Project Advisor</p>	<p>EV Charging Station Incentive and Deployment Program, BGE, 2019-Present            ENERGY STAR EV Charger Product Marketing and Stakeholder Engagement, 2016–Present            NREL Alternative Fuel and Advanced Vehicle Technical Assistance and Data Management, 2004–Present</p>
 <p>Traceé Strum-Gilliam, 25</p>	<p>Stakeholder Engagement (PRR)</p>	<p>MWCOG Visualize 2045 Long-Range Transportation Plan Update, 2020-2021            Public Outreach for the MWCOG Long-Range Transportation Plan, 2018            MWCOG Race and Equity Analysis, Education, and Training, Washington, D.C., 2021-2022</p>
 <p>Elisabeth McCollum, 20</p>	<p>Stakeholder Engagement (PRR)</p>	<p>Public Outreach for the MWCOG Long-Range Transportation Plan, 2017-2018            District Department of Energy and Environment Oxon Run Stream and Wetland Restoration, March 2022-present            Maryland Department of Transportation Connected and Automated Vehicles (CAV) Program Training, Communications and Outreach, 2018-2020</p>

# Project Understanding

---

- The ICF Team will support the development of two Energy Action Plans (EAPs) to achieve the climate change mitigation goals of the City of Falls Church. One EAP will focus on Government Operations (GOEAP) and be completed by June 2023, and the other EAP will focus on the broader Community (CEAP) and be completed by September 2023.
- The Energy Action Plans will support the City of Falls Church as leaders in environmental sustainability and help the City develop strategies to meet its goals:
  - The City's 2040 Vision affirms that the City will strive to be a leader in environmental sustainability. The Environment for Everyone chapter of the Comprehensive Plan, adopted in February 2020, set the following goal for Climate, Air and Energy: "Enhance livability, sustainability and resilience. Protect the community from air pollution and the effects of climate change, while reducing pollution and greenhouse gas emissions in the City."
  - In 2017, City Council resolved to adopt the regional goals established by the Metropolitan Washington Council of Governments (MWCOG), to reduce GHG emissions 80% below 2005 levels by 2050. In 2020, it supported the adoption of a regional interim goal by MWCOG to achieve a 50% reduction in regional GHG emissions by 2030.
- Plans will be developed with feedback and input from the ESC, key stakeholders, the general public, City staff, and feedback and approval from the City Council
  - PRR inc. will design and implement an inclusive, on the ground, and collaborative stakeholder and community engagement program that will guide the City of Falls Church in developing an energy action plan to achieve its GHG reduction goals

# Energy Action Plan Development Process

## Engagement

Engagement with key stakeholders, including the City Council and the ESC, as well as with the general public and City staff will occur throughout the EAP development process.

Engagement will inform data collection and projection approaches; strategy and action concepts; and help develop implementation and feasibility considerations for each strategy.

## Data-driven analysis

Using data from the City, MWCOCG, and other public sources and with input from stakeholders and City staff, GHG inventories for Government Operations and the Community will be developed, along with BAU projections.

Modeling will also be completed to quantitatively assess the impact of strategies on energy use and GHG emissions. This will also inform implementation and feasibility considerations (e.g., through cost-effectiveness calculations).

## Implementation considerations

For each strategy and action, clear and actionable next steps will be developed for the City, resulting in modular and implementable Energy Action Plans that have identified potential barriers for each strategy as well as potential costs and funding sources.

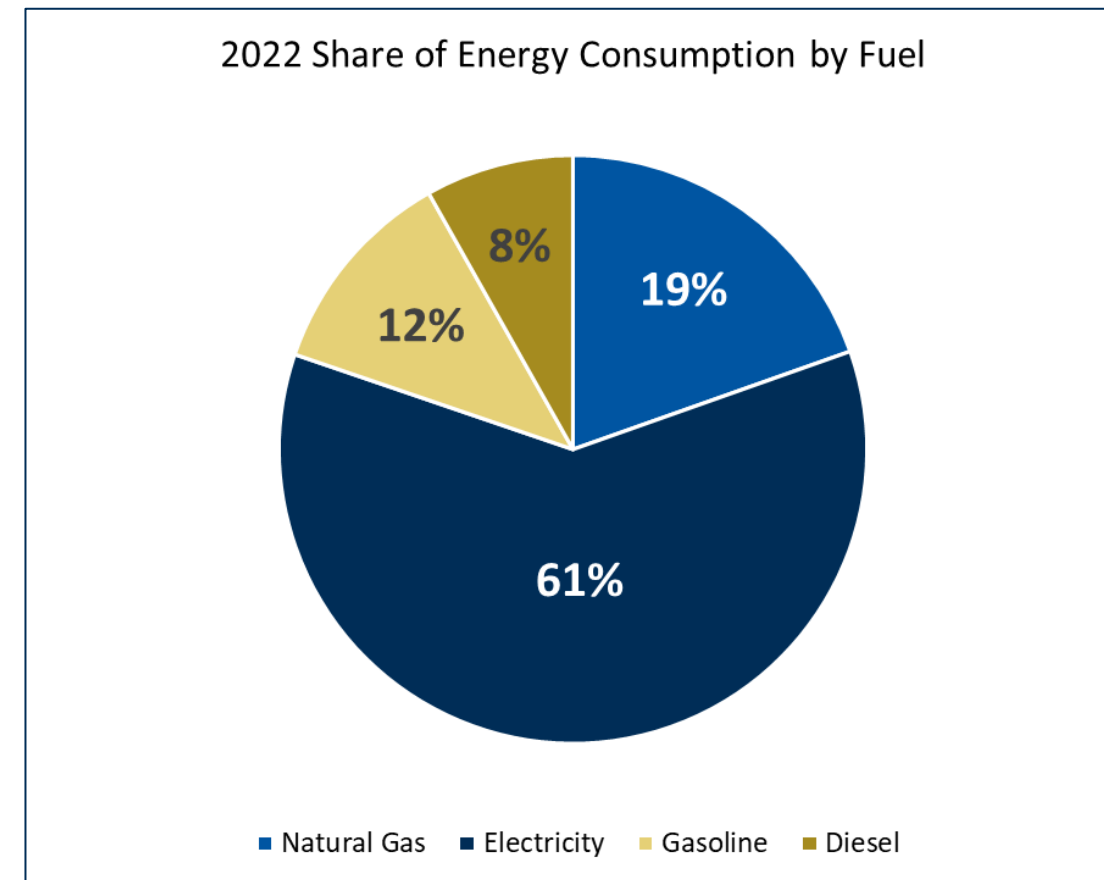
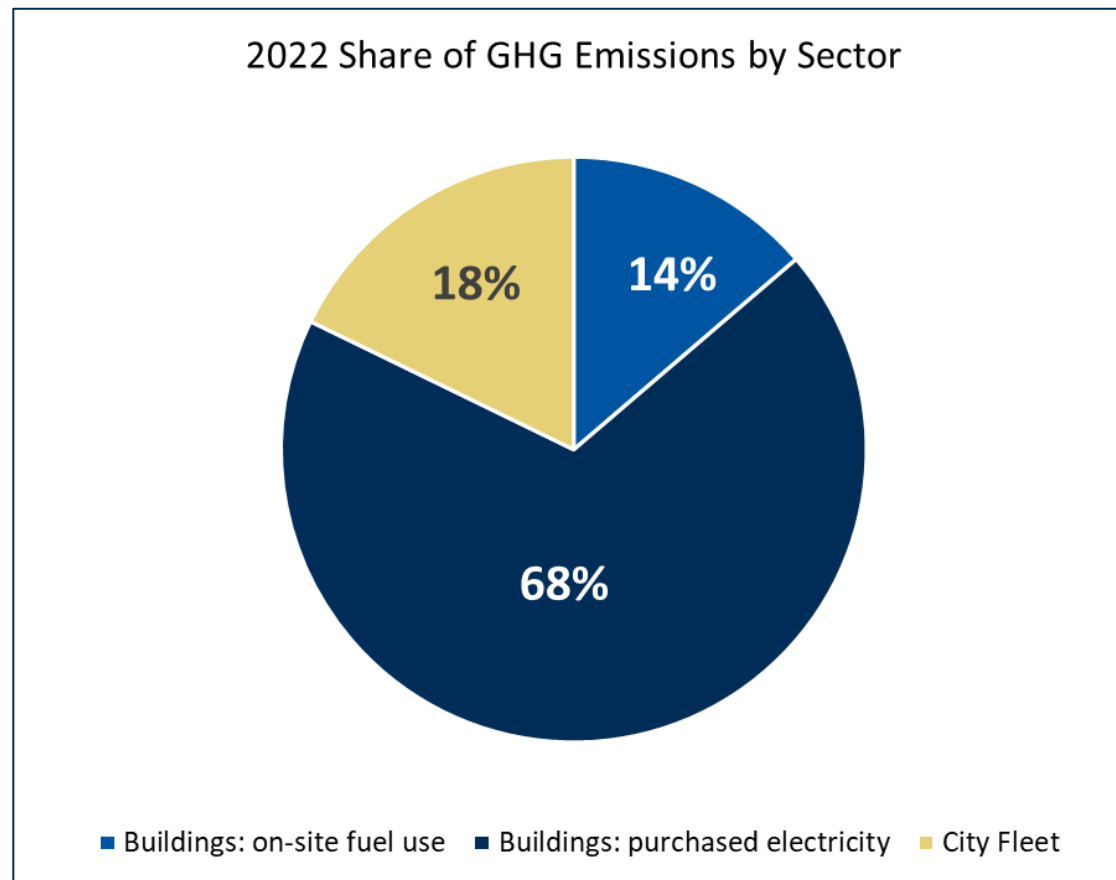
# Overview of Energy Action Plan Content

---

- Executive Summary
- Context and Background
- Purpose of the Plan, Intended Used, and Development Summary
- Current Energy and Emissions Profile
- Business as Usual Energy and Emissions Projections
- Analysis and Recommendations, by Sector (Quantitative and Qualitative)
  - Strategy and action descriptions
  - Benefits and costs
  - Implementation planning and funding sources
- Next Steps
  - Immediate implementation steps
  - Community involvement
  - Progress tracking and reporting
- Appendices and other content (references, acronyms, glossary, technical approach documentation)

# DRAFT GHG 2022 Inventory: City Operations

- Estimated total GHG emissions in 2022 for the community: 3,773 MTCO<sub>2</sub>e, about **3% of total community GHG emissions**.
- City buildings (municipal and school) comprised 82% of total emissions, with the remaining 18% coming from the City fleet. GHG emissions estimates for 2021 are currently under development.
- Please note these are **draft** GHG inventory estimates; data and assumptions are still being finalized with the City.

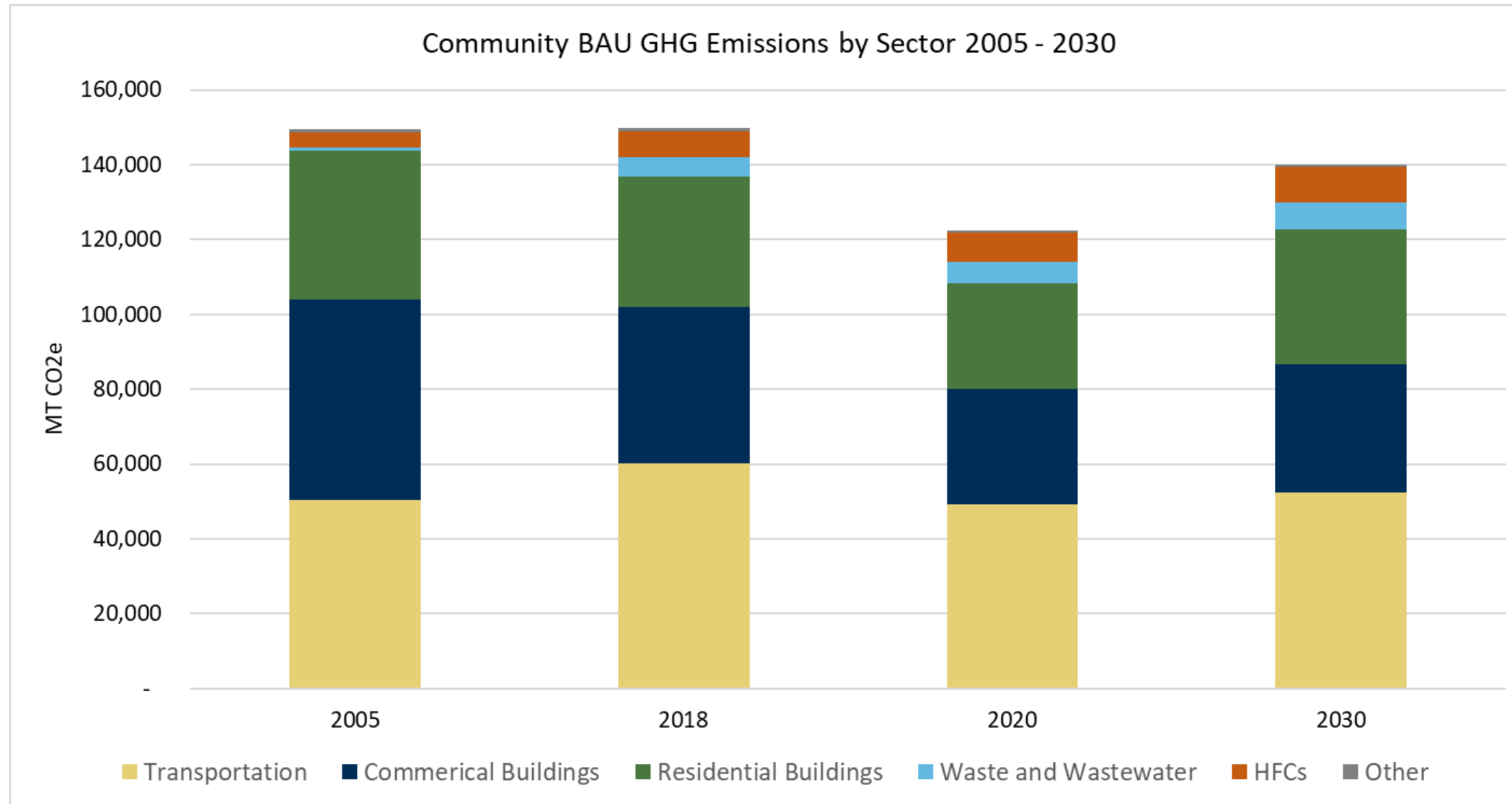


## Assumptions notes

- To calculate emissions from purchased electricity, the 2021 eGRID annual average emissions factor was used, since 2022 data has not been released. This is a regional factor and represents the average annual emissions intensity for the eGRID SRVC subregion. 25% of purchased electricity for municipal buildings (excluding schools) was assumed to be offset by Renewable Energy Credit (REC) purchases through the Dominion Energy Virginia green power program.
- Data was collected from multiple City departments providing fleet population, activity, and fuel usage data and facilities fuel usage data from Energy STAR Portfolio Manager. Supplemental information on REC purchases was provided by City staff. ICF uses a range of additional sources to compile emission factors for each fuel to calculate emissions estimates based on activity and fuel usage data.



# DRAFT GHG BAU Scenario: Community



**GHG emissions remained relatively flat from 2005-2018**, despite population increasing by 30%. While total emissions remained steady, sectoral emissions shifted in response to the growth in population, with **transportation emissions increasing 20%**. These increases were offset by efficiency improvements in buildings, driving an **18% reduction in building emissions**.

**From 2018-2020, total GHG emissions fell 18%** due to the impacts of the COVID-19 pandemic, which primarily affected the transportation and commercial sectors by reducing energy use as residents drove less and worked remotely.

**BAU emissions are expected to increase 15% from 2020-2030**, primarily driven by an expected 23% increase in population.

## Assumptions Notes

- To calculate emissions from purchased electricity, the 2021 eGRID annual average emissions factor was used, since 2022 data has not been released. This is a regional factor and represents the average annual emissions intensity for the SRVC eGRID subregion. The 2021 emissions factor was held constant through 2030. Policies impacting clean energy supply for the region (VCEA) will be included in the strategy modeling.
- Preliminary projections are largely based on MWCOG data for expected changes in population and square footage for residential and commercial buildings.

# Community GHG Emission: MWCOCG Drivers of Change

Since 2005, the following factors have led to

**increases in emissions:**

- Population growth
- Growth in commercial space
- Hydrofluorocarbons (HFCs)

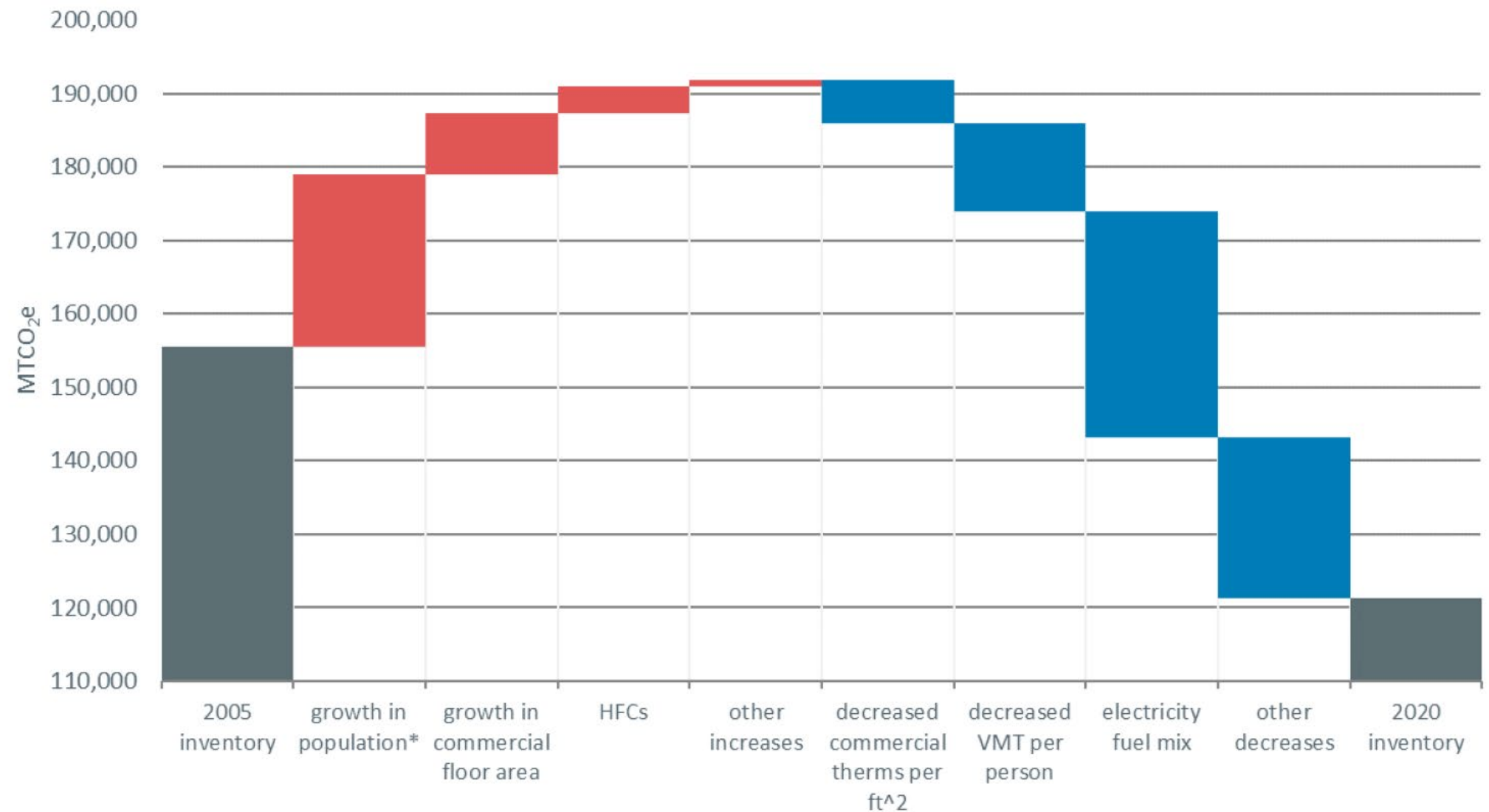
While the following factors have led to **decreases in emissions:**

- Cleaner electricity
- Reduced vehicle miles traveled (VMT) per person
- Decreased energy intensity of commercial natural gas use (increased energy efficiency)

## Regional Comparison

- For the MWCOCG region, GHG emissions have declined 24% from 2005 to 2020, despite a 20% growth in population.
- Neighboring Arlington and Fairfax Counties reduced emissions 37% and 30%, respectively.

Change in Falls Church GHG Emissions from 2005 to 2020



Note: \* Includes effects of population on residential energy, VMT, and waste generation.

# Plan Framing Questions for the ESC

---

## **Contents of the Plan**

Based on the core components of the EAPs outlined by ICF, can the ESC provide feedback on any gaps or additional information that should be considered for inclusion at a high level of planning?

## **Strategy Prioritization**

From your perspective, what are the three most important strategies or areas of focus that need to be addressed in the two Energy Actions Plans (GOEAP and CEAP)?

## **Existing Work Plans**

Are there current work plans that relate to the goals of the EAP? For example, topics related to the energy transition, clean energy procurement, community education and outreach, sustainable development, etc.

## **Public Engagement**

Within the scope of work, ICF has planned for two public meetings. The first is planned for April 20, 2023, as an in-person town hall. The second will be held in July to seek feedback on the draft strategies. We are interested in hearing any recommendations you have based on your experience with public engagement and welcome your assistance in promoting the public sessions.

We are planning a series of pop-up events to advertise the public meeting; please reach out if you are interested in staffing any of those pop-ups or if you have any recommendations on where they should be held.

## **Stakeholder Engagement**

Can the ESC recommend specific stakeholders that the City and ICF should consider engaging with to support the development of this plan? (See next slide)

# Overview of Energy Action Plan Stakeholder Engagement Timeline

---

## Community EAP

March 16: ESC Meeting  
April 20: Public Town Hall (in person) with follow-up survey  
May TBD: Stakeholder Meetings\*  
May TBD: ESC Meeting  
May-June TBD: City Departments  
July TBD: Public Town Hall (virtual)  
September TBD: City Council final presentation of CEAP

## Government Operations EAP

March 13: All City employees meeting with follow-up survey  
April TBD: 3 small group meetings focused on topics (e.g., fleet, facilities)  
May TBD: ESC Meeting (draft strategies presentation)  
June TBD: City leadership meeting (draft EAP presentation)  
July TBD: City Council final presentation of GOEAP

\*Key stakeholders include:

- Economic Development Authority
- Chamber of Commerce
- Planning Commission
- Citizens Advisory Committee on Transportation
- Meridian High School Environmental Club
- Others based on ESC feedback: Village Improvement Society, Bike Falls Church, Tinner Hill Heritage Foundation, Fairfax County Master Gardeners

# Public Town Hall Draft Promotion Plan

---

## Promotional Activities

- Meeting flyer to be attached to virtual communications and distributed at pop up events
- Social media and email blasts
- Proposed locations for pop ups:
  - Farmers Market, City Hall Parking Lot
  - Eden Center
  - The Fields apartment complex outreach

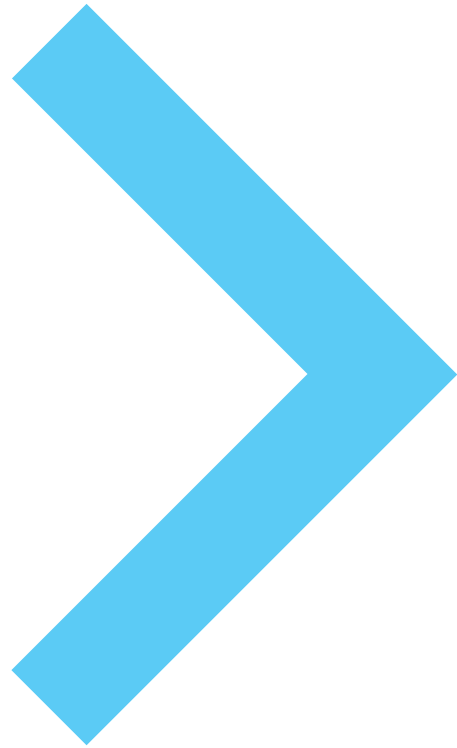
## Timeline

- Materials Development (content for flyers, social media, etc.) completed by March 17<sup>th</sup> with translations completed by March 31<sup>st</sup>
- Email blasts and social media posts the first 2 weeks of April
- Pop Ups
  - Farmers Market: March 18<sup>th</sup> or 25<sup>th</sup>
  - Eden Center: weekend option (April 1<sup>st</sup>), weekday option during week of April 3<sup>rd</sup>

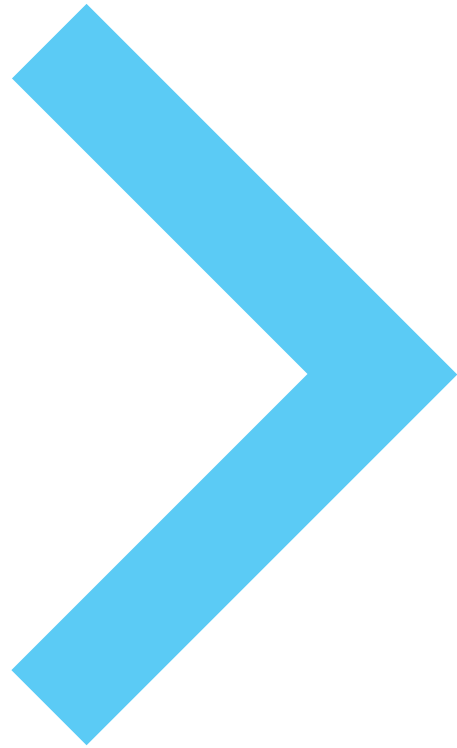
# Next Steps

---

- ESC to consider framing questions; any feedback in addition to the discussion today should be sent to Andy Young no later than Friday, March 24<sup>th</sup>.
- ESC member feedback and input will be considered by the City and ICF throughout the process.
- All correspondence and interactions with/for ICF should go through Andy Young, City of Falls Church Environmental Sustainability Coordinator.
- City and ICF to continue project work, including:
  - Data collection
  - Business as usual analysis
  - Stakeholder engagement
  - Strategy list development
  - Plan outline development



**QUESTIONS?**



## **Additional Resources**



# Regional efforts that may support the City in EAP implementation

---

## **Solarize NOVA**

Reduces the cost and complexity of installing solar [Solarize NOVA - Solar in Northern Virginia](#)

## **Green Bank**

Fairfax County has plans to implement a green bank for the NOVA area [Fairfax Green Initiatives](#)

## **Virginia C-PACE**

Clean energy financing tool [Virginia PACE | Virginia PACE Authority - Clean Energy Financing](#)

## **Virginia LEAP**

Community-based energy efficiency organization [Energy Efficiency - Solar Solutions \(leap-va.org\)](#)

## **Arlington Energy Masters**

Program that conserves energy and water [Energy Masters \(ecoactionarlington.org\)](#)

## **Federal Funding (Inflation Reduction Act and Infrastructure Investment and Jobs Act)**

The City can collaborate with the state to pursue IRA funding, and the City can also assist residents and local businesses to leverage IRA clean energy tax credits

# Example Plans from the Region

---

## **Arlington County**

Climate Plan: 2019- [Arlington Community Energy Plan](#)

Implementation Plan: 2022- [Community Energy Plan Roadmap](#)

Goals: carbon neutral community by 2050

## **Fairfax County**

Climate Plan: 2021- [Fairfax County Community-wide Energy and Climate Action Plan](#)

Implementation Plan: 2022- [Fairfax County CECAP Implementation Plan](#)

Resiliency Plan: 2022- [Resilient Fairfax Draft](#)

Goals: carbon neutrality by 2050

## **City of Alexandria**

Climate Plan: 2023 [Energy and Climate Change Action Plan Draft](#)

Goals: reducing community-wide greenhouse gas emissions by 50% by 2030 and 80-100% by 2050

## **Loudoun County**

Climate Plan: to be released in 2023