

Fairfax County CECAP Implementation Plan

Implementing the Community-Wide Energy and Climate Action Plan (CECAP) to Achieve Community Carbon Neutrality by 2050



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Acronyms

- **BEE:** Buildings and Energy Efficiency (sector)
- **BOS:** Fairfax County Board of Supervisors
- **CECAP:** Community-wide Energy and Climate Action Plan
- **C-PACE:** Commercial Property Assessed Clean Energy
- **DCC:** Department of Code Compliance
- **DCEX:** Deputy County Executive
- **DEI:** Fairfax County Department of Economic Initiatives
- **DHCD:** Fairfax County Department of Housing and Community Development
- **DMB:** Department of Management and Budget
- **DPD:** Fairfax County Department of Planning and Development
- **DPMM:** Fairfax County Department of Procurement and Material Management
- **DPWES:** Fairfax County Department of Public Works and Environmental Services
- **DTA:** Department of Tax Administration
- **DVS:** Fairfax County Department of Vehicle Services
- **Eaas:** Energy-as-a-service
- **EDA:** Economic Development Authority
- **EQAC:** Environmental Quality Advisory Council
- **ES:** Energy Supply (sector)
- **ESCO:** Energy Service Company
- **EV:** Electric vehicle
- **EVCS:** Electric vehicle charging station
- **EVSE:** Electric vehicle supply equipment
- **FCDOT:** Fairfax County Department of Transportation
- **FCHD:** Fairfax County Health Department
- **FCPA:** Fairfax County Park Authority
- **FCRHA:** Fairfax County Redevelopment and Housing Authority
- **FMD:** Fairfax County Facilities Management Department
- **GHG:** Greenhouse gas
- **GMU:** George Mason University
- **IGA:** Investment Grade Audit
- **JET:** Joint Environmental Task Force
- **LDS:** Fairfax County Land Development Services
- **LEAP:** Local Energy Alliance Program
- **LEED:** Leadership in Energy and Environmental Design, a green building certification program
- **MWCOG:** Metropolitan Washington Council of Governments
- **NAIOP:** Commercial Real Estate Development Association
- **NCS:** Fairfax County Neighborhood and Community Services
- **NR:** Natural Resources (sector)
- **NVRC:** Northern Virginia Regional Commission
- **NVSWCD:** Northern Virginia Soil and Water Conservation District
- **NVTA:** Northern Virginia Transportation Authority
- **OCA:** Office of the County Attorney

- **OEEC:** Fairfax County Office of Environmental and Energy Coordination
- **OES:** Operational Energy Strategy
- **PPA/VPPA:** Power purchase agreement/Virtual power purchase agreement
- **RF:** Resilient Fairfax Plan. RF strategy pillars include:
 - **AE:** Adaptive Environments
 - **CRC:** Climate-Ready Communities
 - **IAP:** Integrated Action Planning
 - **RIB:** Resilient Infrastructure and Buildings
- **RGGI:** Regional Greenhouse Gas Initiative
- **R-PACE:** Residential Property Assessed Clean Energy
- **SCC:** State Corporation Commission
- **SCW:** Smart City Works
- **T:** Transportation (sector)
- **TDM:** Transportation Demand Management
- **TPB:** Transportation Planning Board
- **UFMD:** Urban Forest Management Division of DPWES.
- **VCEA:** Virginia Clean Economy Act
- **VDOF:** Virginia Department of Forestry
- **VRE:** Virginia Railway Express
- **W:** Waste (sector)
- **WMATA:** Washington Metropolitan Area Transit Authority

CECAP Implementation Plan

CECAP Background



The Fairfax County [Community-wide Energy and Climate Action Plan](#) (CECAP), was the county's first-ever greenhouse gas (GHG) emissions reduction plan developed by and for the community. The focus of CECAP and associated programs is to reduce GHG emissions locally, to ensure that the Fairfax County community is doing its part in the worldwide effort to combat climate change. As directed by the Board of Supervisors, the CECAP planning process was a **community-led process**,

facilitated by the Fairfax County Office of Environmental and Energy Coordination (OEEC) and consultants. CECAP planning participants included representatives of the Fairfax County community, environmental non-profits and advocacy organizations, businesses, utilities, Boards, Authorities and Commissions, and other key stakeholder groups. This community ownership was deemed critical because 95% of emissions in the county are attributable to the community, rather than county government and school operations. CECAP established a goal of carbon neutrality for the Fairfax County community by 2050, with interim goals of 50% GHG emissions reductions by 2030 and 75% by 2040. These measurements are based on a 2005 base year. CECAP also established a goal that at least 87% of that carbon neutrality should come from GHG emissions reduction, as opposed to "offsets" or carbon sinks. CECAP was accepted by the Board of Supervisors in September 2021. Additional background information on CECAP can be found in the sections below.

A Community Approach to CECAP Implementation

This document, the **CECAP Implementation Plan**, describes how [CECAP](#) will be implemented. The Implementation Plan translates CECAP's 260+ recommended activities into specific, detailed, staff-reviewed implementation actions to be taken by individuals, businesses, organizations, state and federal government, and Fairfax County government. As a county of 1.14 million people, successful reduction of GHG emissions will be achieved through a robust collaborative web of action woven by climate champions, partners and programs, and county operations. Together, we can activate Fairfax County's full potential to achieve carbon neutrality by 2050.

1. Climate Champions



Climate champions are local individuals, businesses, and organizations leading their own meaningful climate action (emissions reduction) initiatives, which may be independent from official county programs. The Fairfax County government has a role in identifying, elevating, and supporting the work of these champions, to accelerate the community's goal of carbon neutrality. While these climate champions act independently of county

programs, the county may be a collaborator where appropriate. Networks of climate champions propel and empower collective action in all sectors, improving the energy efficiency of buildings, expanding renewable energy, supporting alternative and electrified transportation, reducing waste, and protecting and restoring natural resources that absorb greenhouse gases. To support these climate champions, Fairfax County government plans in 2023 to conduct **Climate Champion pilots** for targeted sectors, namely the hospitality industry and the non-profit and faith community. The purpose of these pilot projects is to develop a model

for implementation that may be replicated across the broader community. Additionally, Fairfax County government plans to conduct a **Climate Champions outreach campaign** through Carbon-Free Fairfax, and to release a **Climate Action Checklist** and Resource Guide to help individuals take specific emissions reduction actions in their daily lives.

2. Programs and Partnerships



Fairfax County leads and supports numerous official programs to empower individuals, businesses, and organizations to take climate action throughout the community. For each sector of emissions reduction, there are county-affiliated programs either currently available or actively in development. These programs provide supplies, volunteer training, promotional materials, educational resources, and meaningful opportunities to act.

County-affiliated programs and partnerships nurture, cultivate, and catalyze climate action throughout the community.

Examples of existing programs include: [Carbon-Free Fairfax](#), [Conserve Kits](#), [C-PACE](#), [DPWES Tree Programs](#), [DPWES Waste Programs](#), [FCDOT Programs](#), [FCPA Programs](#), [Green Building Recognition](#), [HomeWise](#), [NVSWCD Programs](#), [Operation Stream Shield](#), the [Pitch and Pilot](#), [Solarize](#), [Solar education](#), [Solar Tax Incentives](#), [Solar Fee Relief](#), [Thermal Camera Loan Program](#), [Tree Preservation and Planting Fund](#), and more.

Examples of programs in development or redevelopment as of 2022 include: [Charge Up Fairfax](#), the [Green Bank](#), [Green Business Partners](#), and the Tree Canopy Program for HOAs.

For a thorough list of these programs and how they are associated with each sector, please see Figure 1. For more information on these programs, please see the factsheets in Appendix A.

3. County Government Operations



The County government also leads by example, working towards carbon neutrality for county government buildings and operations. The Board of Supervisors signed a [Carbon Neutral Counties Declaration](#) to transform government operations with a goal to be energy carbon neutral by 2040. The county continually works to implement the [Operational Energy Strategy](#) and Sustainable Development Policy for Capital Projects,

through LEED Gold Net-Zero Energy renovation and construction, solar installations on county buildings, electrification of transportation buses and fleets, installation of EV chargers, energy use and efficiency improvements, waste management and other operational actions.

How CECAP and the Implementation Plan Relates to Other Environmental Plans

Fairfax County has a long tradition of environmental stewardship. Prior to CECAP, Fairfax County produced several environmental plans, policies, and commitments. CECAP and the CECAP Implementation Plan differ from these previous deliverables because they A. involve a deep dive on emissions reduction strategies specifically, and B. they are focused on community action, rather than county government operations. For more information on how CECAP and the CECAP Implementation Plan fit into the county's climate-related and environmental documents, please see Table 1 below.

Table 1: Fairfax County's Climate-Related Declarations, Plans, and Policies


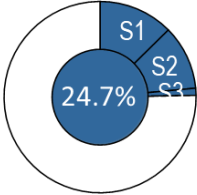

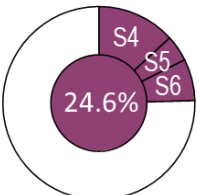
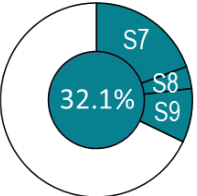

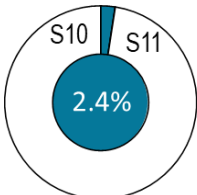
Name	Description	For Government Operations?	For the Community?	Last Updated
Environmental Vision	A broad vision for an environmentally sustainable Fairfax County.	Yes	Yes	2017
Fairfax Green Initiatives Board Matters #1 and #2	Two Board Matters intended to expedite implementation of environmental and energy-related items. Many FGI items have been implemented.	Yes	Yes	2019 (#1) 2020 (#2) 2022 staff update
Joint Environmental Task Force (JET) Final Report	A joint initiative of the BOS and School Board to align sustainability efforts. The JET goals and targets accepted by the BOS were incorporated into the 2021 update of the OES. The JET has disbanded.	Yes	No	2020
Carbon Neutral Counties Declaration	A declaration by the BOS to achieve carbon neutrality for county government operations. This declaration is implemented through the OES and Sustainable Development Policy.	Yes	No	2021
Operational Energy Strategy (OES)	Details how the county will achieve the goals and policies for sustainability of county government operations . Provides aligned targets and specific actions for a range of focus areas.	Yes	No	2021
Countywide Strategic Plan	The first-ever countywide strategic plan serves as a roadmap to help guide the future of Fairfax County in general. There are 10 Community Outcome Areas including Economic Opportunity, Environment, Health, and Mobility and Transportation that have indicators, strategies or metrics that relate to or support climate action initiatives.	Yes	Yes	2021
Resilient Fairfax	A plan and program to help Fairfax County adapt and become more resilient to climate-related hazards such as flooding and heat.	Yes	Yes	2022
CECAP & CECAP Implementation Plan	CECAP (2021) is the plan for reducing greenhouse gas emissions written by and for the community . The CECAP Implementation Plan (2022) (this document) describes how CECAP is implemented.	Yes	Yes	2021 2022


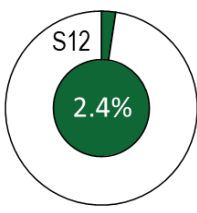

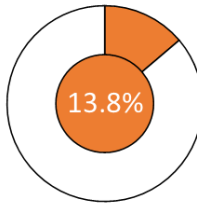
CECAP Goals, Strategies and Recommendations

The final [Community-wide Energy and Climate Action Plan \(CECAP\)](#) included an overall goal for the community to achieve **carbon neutrality by 2050**, based on a 2005 base year. At least 87% of that carbon neutrality is envisioned to come from GHG emissions reductions rather than carbon offsets. To help the community reach this overarching goal, interim goals were set to achieve 50% and 75% emissions reductions by 2030 and 2040, respectively. CECAP also included sector-specific goals and community-

recommended strategies and recommended activities for implementation to achieve emissions reductions. **In total, over 260 Recommended Activities for implementation were included in CECAP.** The CECAP sectors, sector specific goals, strategies and related GHG emission reductions are presented in Table 2.

Table 2: Summary of CECAP Goals, Strategies, and GHG Emissions Reductions

Sector	Emissions Reduction	Goals and Strategies Developed by the Community
 Buildings and Energy Efficiency		<p><i>Goal: All new, eligible buildings will have a commitment to green building</i></p> <p><i>Goal: Retrofit at least 100,000 housing units with energy efficiency measures by 2030.</i></p> <ul style="list-style-type: none"> • Strategy 1: Increase Energy Efficiency and Conservation in Existing Buildings • Strategy 2: Electrify Existing Buildings • Strategy 3: Implement Green Building Standards for New Buildings
 Energy Supply		<p><i>Goal: The Virginia Clean Economy Act requires Dominion Energy Virginia and American Electric Power to produce their electricity (for the energy grid) from 100% renewable sources by 2045 and 2050. Smaller on-site solar projects also help us achieve carbon neutrality.</i></p> <ul style="list-style-type: none"> • Strategy 4: Increase the Amount of Renewable Energy in the Electric Grid • Strategy 5: Increase Production of Onsite Renewable Energy • Strategy 6: Increase Energy Supply from Resource-Recovered Gas, Hydrogen, and Power-to-Gas
 Transportation		<p><i>Goal: Increase transit & non-motorized commuting to 30% (including telework) by 2030.</i></p> <p><i>Goal: Increase plug-in hybrid vehicles (PHEVs) and battery electric vehicles (BEVs) to least 15% of all light-duty vehicle registrations by 2030 and 42% by 2050.</i></p> <ul style="list-style-type: none"> • Strategy 7: Increase Electric Vehicle (EV) Adoption • Strategy 8: Support Sustainable Land Use, Active Transportation, Public Transportation, and Transportation Demand Management (TDM) to Reduce Vehicle-Miles Traveled • Strategy 9: Increase Fuel Economy and Use of Low-Carbon Fuels for Transportation
 Waste		<p><i>Goal: Achieve zero waste by 2040, defined as at least 90% waste diverted from landfill/incineration, in alignment with the definition of Zero Waste International Alliance.</i></p> <ul style="list-style-type: none"> • Strategy 10: Reduce the Amount of Waste Generated and Divert Waste from Waste-to-Energy Landfills and Facilities • Strategy 11: Responsibly Manage Waste Generated

Sector	Emissions Reduction	Goals and Strategies Developed by the Community
 Natural Resources		<p><i>Goal: Expand the tree canopy to 60% with a minimum of 40% tree canopy coverage in every census block by 2030 and a minimum of 50% tree canopy coverage in every census block by 2050, prioritizing areas of highest socioeconomic need first.</i></p> <ul style="list-style-type: none"> • Strategy 12: Support Preservation, Restoration, and Expansion of Natural Systems, Green Spaces, and Soil Quality
 Emerging Technologies		<p>The CECAP working group recognized that novel technologies continuously emerge that reduce GHG emissions beyond current capabilities. These emerging technologies are actively created through research and development efforts, innovative business practices, and technological improvements. Emerging technologies can help shift the current emissions-intensive energy paradigm to a green growth paradigm and can help “futureproof” long-term plans by overcoming existing economic and technological barriers. To account for emerging technologies, the implementation of CECAP will take an adaptive management approach, allowing for flexibility and accommodation of improvements in technology and practices between now and 2050.</p>

CECAP Implementation Plan Development



The [Community-wide Energy and Climate Action Plan \(CECAP\)](#) included over 260 recommended activities for implementation, written by the community. There was a need to translate these recommendations into specific action items that could be included in county government workplans and budget requests. To facilitate implementation of the community’s recommendations, the Board of Supervisors directed staff to prepare this Implementation Plan. This CECAP Implementation Plan

was developed through interagency coordination facilitated by the Office of Environmental and Energy Coordination (OEEC). Agencies involved included the Department of Planning and Development (DPD), Department of Procurement and Material Management (DPMM), Department of Public Works and Environmental Services (DPWES), Land Development Services (LDS), Neighborhood and Community Services (NCS), One Fairfax, the Fairfax County Department of Transportation (FCDOT), and the Fairfax County Park Authority (FCPA). These interagency team members translated the community’s ideas into actionable items by evaluating, honing, organizing, and prioritizing the CECAP recommendations.

The 260+ recommendations in CECAP were refined and organized for the CECAP Implementation Plan in the following ways:

- | | |
|---------------------------------|--|
| Organization Refinements | <ul style="list-style-type: none"> ✓ Duplicate recommendations across actors were combined for clarity. ✓ Recommendations were organized to align with County agency structures and processes, to enable implementation. Examples include legislative and education and outreach recommended activities. |
|---------------------------------|--|

Substance Refinements	<ul style="list-style-type: none"> ✓ Descriptions of specific existing and planned county programs to implement the recommendations were inserted. ✓ Leads, partners, timeframes, status, and co-benefits were identified for each action. ✓ Recommendations were refined to enable County action within its legal authority.
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Future updates to the Implementation Plan are likely to reflect additional opportunities that arise due to changes in technology, market options, funding opportunities, and applicable legislation and regulation.

Equity

Equity is a crucial component of climate planning. All plans and policies in Fairfax County are built on the foundation of [One Fairfax](#), a joint racial and social equity policy of the Fairfax County Board of Supervisors and School Board. One Fairfax commits the county and schools to consider equity intentionally and thoroughly when making policies or delivering plans, programs, and services.







In the United States, certain populations, such as low-income populations, communities of color, and the disabled, often disproportionately bear the heaviest environmental consequences. These burdens are experienced disproportionately by certain populations due to a history of discriminatory laws and policies that created patterns of land development and underinvestment that remain present today. For example, communities of color are more likely than predominantly white communities to live near highway pollution and/or coal-fired power plants. Additionally, low-income communities often have lower financial capacity to afford and implement certain emissions reduction strategies. For example, low-income households may be less able or unable to afford electric vehicles or renewable energy solutions. Renters may have lower ability than homeowners to improve the energy efficiency or energy sources of the homes in which they live.







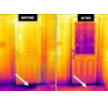

Therefore, it is critical to consider equity at each step of climate planning and implementation. This plan incorporated equity considerations during the planning process by facilitating a community-driven plan, and by using equity considerations during the prioritization of the activities for implementation. Additionally, during the creation of the Implementation Plan, members of the inter-agency coordination team were asked to consider equity during their review and analysis of the recommendations. Further, the CECAP Implementation Plan seeks to promote equity through a number of its actions. While GHG emissions reductions activities include the county as a whole and are not as geographically specific as some of the *effects* of climate change (which are addressed in [Resilient Fairfax](#)), there is a need to consider how the actions of implementation may be targeted to consider equity. Specifically, economically challenged communities may be less able to afford emissions reduction activities such as solar panels, home energy efficiency improvements, or electric vehicles. Therefore, the CECAP Implementation Plan includes new and existing programs such as Charge Up Fairfax, which provides charging options in low and moderate-income residential communities; HomeWise, which provides free weatherization kits to low and moderate-income residents; solar incentive programs which are designed for the entire community; and tree canopy programs that prioritize census blocks in areas of highest socioeconomic need.



What Action is Fairfax County Already Taking?

The good news is that we are already making progress! Fairfax County staff and partners have proactively launched actions to reduce emissions in Fairfax County, recognizing that the pursuit of CECAP's goals could not wait for development of this CECAP Implementation Plan. Examples of this action include but are not limited to the programs listed in Table 3, below. To see how these programs fit into CECAP's emissions reduction goals and sectors, please see the Figure 1. Additional details on these initiatives can be found in the program descriptions in Appendix A.

Table 3: Examples of Existing and Upcoming Climate-Related Programs

Status	Program	Image	Partners	Description
Active	Carbon-Free Fairfax		OEEC	Carbon-Free Fairfax is a public education and outreach initiative to target sectors that contribute most to reducing community-wide GHG emissions. Carbon-Free Fairfax provides timely and accurate information, resources, webinars, and opportunities for action across eight campaigns.
Active	Carbon Neutral Innovation Pitch and Pilot		OEEC DEI GMU SCW	Each year, Fairfax County partners with Smart City Works Innovation Hub on a “pitch and pilot” challenge. The 2022 theme was a Carbon Neutral Innovation Challenge. The winner, Dynamhex, will be partnering with the county on a pilot project to help both county-owned facilities and residents better understand and reduce their carbon footprints.
Active	C-PACE		OEEC	The Fairfax County Commercial Property Assessed Clean Energy and Resiliency (C-PACE) program allows commercial building owners to make sustainability or resiliency improvements to their buildings with little or no up-front costs.
Active	HomeWise		OEEC	HomeWise educates, empowers, and enables residents to make changes that reduce energy use, water use, and associated costs in their homes. Volunteers provide energy and water saving kits and provide demonstrations to residents. Fairfax County libraries also provide energy kits .
Active & in Progress	Electric Vehicles		DVS, FCDOT, OEEC	Fairfax County is converting its government fleet to EVs and installing charging stations. Additionally, Fairfax County is developing a “ Charge Up Fairfax ” program to help HOAs install EV chargers. The County also provides resources and webinars on EVs.
In Progress	Green Bank		OEEC	Fairfax County is pursuing the establishment of a Green Bank and Clearinghouse, envisioned to serve as a one-stop shop for clean energy financing, guidance, and facilitation. A feasibility study was completed in 2022. Staff are drafting an enabling ordinance to be considered in 2023.

Status	Program	Image	Partners	Description
Active	Green Buildings		OEEC DPD DPWES LDS	Fairfax County's own government buildings follow the strong green building standards in the Sustainable Development Policy for Capital Projects. Additionally, the County encourages green building in the private sector through proffered conditions and development review, and green building recognition programs.
Re-launch	<u>Green Business Partners</u>		OEEC DEI EDA	Green Business Partners is an existing Fairfax County program that is being revitalized to encourage and elevate sustainable business in Fairfax County.
Active	<u>Legislative</u>		Many	Many entities participate in and advocate for legislative updates by the Virginia General Assembly, including Fairfax County government, community members, and advocacy organizations. Each year, the County develops a legislative program that includes environmental and climate items.
Active	<u>Operational Energy Strategy (OES)</u>		OEEC DVS DPMM DPWES FCDOT FCPA FMD	Fairfax County committed in its OES to carbon neutral government operations by 2040. The county is making great strides towards this goal through energy efficiency upgrades, green buildings, solar installations, fleet electrification, purchasing, waste management and more.
Active	<u>Solarize</u>		LEAP OEEC	Solarize is a program by the Local Energy Alliance Program to help residents, non-profits and businesses reduce the cost and complexity of obtaining solar energy. More than 540 solar systems have been installed through the Solarize program since 2014.
Active	Solar for County Buildings		OEEC DPWES FCPA FMD HCD	Fairfax County is installing solar on government facilities through PPAs, direct solar installations through ESCOs, and installation of solar during construction of new and renovated county buildings.
Active	<u>Thermal Camera Loan Program</u>		Library	Fairfax County residents can check out thermal imaging cameras from any branch of the Fairfax County Public library. Thermal cameras help residents identify hot and cold spots in the house, which are energy saving opportunities.
Active	<u>Transportation</u>		FCDOT	In addition to DVS' fleet electrification, agencies such as FCDOT and DPD actively work to support the use and improvement of public transportation, bicycle and pedestrian infrastructure, sustainable land use, and Transportation Demand Management.

Status	Program	Image	Partners	Description
Active	Tree Programs		Many	There are many existing tree programs and policies in Fairfax County, including those led by DPWES , UFMD , FCPA , NVSWCD , and VDOF . There are also community programs such as Fairfax ReLeaf , Falls Church Neighborhood Tree Program , McLean Trees Foundation , Plant NOVA Trees , and VCE Master Gardeners , among others.
Active	Waste Programs		DPMM DPWES	DPWES, DPMM, and entities lead waste reduction education programs, clean-up programs (such as Operation Stream Shield) and Zero Waste initiatives.

Monitoring and Tracking Progress

This CECAP Implementation Plan is seen as a living document that will be implemented in partnership with the community using an adaptive management approach to adjust to items like emerging technologies, market drivers and legislative authority. The proposed implementation actions outlined in the next section will be reviewed annually to align with the budget planning process. In addition, the county will evaluate progress to-date in achieving the interim 2030 CECAP goal at a **2030 Milestone Assessment** and determine if additional actions are needed to achieve carbon neutrality by 2050.

The progress of CECAP implementation will be displayed on the Office of Environmental and Energy Coordination (OEEC)'s [Climate Action Dashboard](#) to track and report progress towards the 2050 carbon neutrality goal. The Dashboard is an integrated and multi-faceted site for the public to learn about progress, how to take action and get involved, and access information on climate mitigation and resilience topics. The Dashboard will transform how the county tracks and demonstrates success. The framework for the dashboard has been developed and made available online. The site will evolve over time as programs are launched and data for metrics and key performance indicators becomes available.

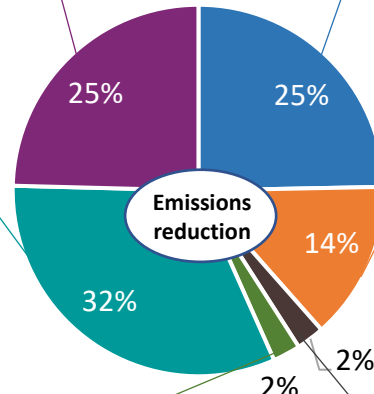
The GHG emissions inventory data included in CECAP was provided by the Metropolitan Washington Council of Governments (MWCOG). CECAP includes the baseline GHG emissions for 2005 and current conditions based on 2018 GHG emissions data that was available at the time of the report. MWCOG is currently updating the GHG inventory that is scheduled to be released by the end of 2022. MWCOG webpages provide additional information on their [greenhouse gas inventories](#) and summary of regional progress on their [Climate and Energy Progress Dashboard](#).

Energy Supply (24.6%)		
County Operations	For Residents	For Businesses
✓ DPWES Capital Facilities Installations	✓ Carbon Free Fairfax	✓ C-PACE
✓ ESCO	☐ Green Bank	✓ Green Building Recognition
✓ Operational Energy Strategy	✓ Green Building Recognition	☐ Green Bank
✓ Pitch and Pilot	✓ Pitch and Pilot	✓ Green Business Partners
✓ Solar PPA and Solar Game Plan	❖ Solarize	✓ Pitch and Pilot
✓ Sustainable Development Policy for Capital Projects	✓ Solar Tax Incentives	✓ Solar Tax Incentives
	✓ Solar Fee Relief	✓ Solar Fee Relief
	❖ Numerous non-profits	

Transportation (32.1%)		
County Operations	For Residents	For Businesses
✓ EVs and fleet electrification	✓ Carbon Free Fairfax	✓ FCDOT Programs
✓ Operational Energy Strategy	☐ Charge Up Fairfax (EVs)	☐ Green Bank
✓ Pitch and Pilot	✓ FCDOT Programs	✓ Green Business Partners
	☐ Green Bank	✓ Pitch and Pilot
	❖ Numerous non-profits	

Natural Resources (2.4%)		
County Operations	For Residents	Businesses
✓ Sustainable Development Policy for Capital Projects	✓ DPWES Programs	✓ Green Building Recognition
✓ TPPF	✓ FCPA programs	✓ Green Business Partners
	❖ NVSWCD programs	
	☐ Tree Canopy Program	
	✓ TPPF	
	❖ Numerous non-profits	

Figure 1: Programs & Operations that Contribute to Fairfax County's Goal of Carbon Neutrality



% = A sector's portion of the total emissions reductions or absorption needed to reach carbon neutrality by 2050, as modeled and described in CECAP.

✓ = Existing county initiative
 ❖ = Existing initiative by county partner
 ☐ = Pending county initiative

Note: In addition to these programs, there are numerous ongoing updates to the county's rules, regulations, plans, and policies to reach the county's climate goals, such as planned updates to the Comprehensive Plan and County Codes.

Buildings and Energy Efficiency (24.7%)		
County Operations	For Residents	For Businesses
✓ DPWES Capital Facilities Installations	✓ Carbon Free Fairfax	✓ C-PACE
✓ ESCO	✓ Conserve Kits	☐ Green Bank
✓ Operational Energy Strategy	☐ Green Bank	✓ Green Building Recognition
✓ Pitch and Pilot	✓ Green Building Recognition	✓ Green Business Partners
✓ Sustainable Development Policy for Capital Projects	✓ HomeWise	✓ Pitch and Pilot
	✓ Pitch and Pilot	
	✓ Thermal Cameras	

Emerging Technology (13.8%)		
County Operations	For Residents	For Businesses
✓ DPWES Capital Facilities Installations	☐ Green Bank	✓ C-PACE
✓ ESCO	✓ Green Building Recognition	☐ Green Bank
✓ Operational Energy Strategy	✓ Pitch and Pilot	✓ Green Building Recognition
✓ Pitch and Pilot	❖ Numerous non-profits	✓ Green Business Partners
		✓ Pitch and Pilot

Waste (2.4%)		
County Operations	For Residents	For Businesses
✓ Operational Energy Strategy	✓ DPWES programs	✓ Green Building Recognition
✓ Zero Waste	✓ Operation Stream Shield	✓ Green Business Partners
	☐ Zero Waste for community	
	❖ Numerous non-profits	

CECAP Implementation Plan Actions

The following sections detail the **Implementation Plan Actions**, or the steps we will collectively take to reduce emissions in Fairfax County. These actions include both ongoing, new and future activities. The actions are organized into the same CECAP sectors:



Buildings and Energy Efficiency



Energy Supply



Transportation



Waste



Natural Resources

In addition to the Implementation Plan Actions, there are two important Appendices to the Plan:

- **Appendix A provides easy-to-understand factsheets on key programs and topics.** These factsheets are filled with helpful information and links to resources. They are organized by topic, to help readers find everything they need on one page.
- **Appendix B provides a tracker** to help readers match the original CECAP recommended activities with the actions shown in the CECAP Implementation Plan.

How to Read the Implementation Action Tables

The actions in each of the tables are identified as **Actions that Apply to the Community** or **Actions that Apply to County Government Facilities and Operations**.

Actions that Apply to the Community: Actions that are either initiated or implemented by the community, or actions taken by Fairfax County that impact the community (e.g., public education and outreach campaigns like Carbon-Free Fairfax, incentives through Charge Up Fairfax, changes to building codes, etc.).

Actions that Apply to County Government Facilities and Operations: Actions that apply directly to, or impact county government operations to reduce the five percent of greenhouse gas emissions attributed to the county. Many of these actions relate to the [Operational Energy Strategy](#) or [Fairfax Green Initiatives](#) among other county programs.

2022 Status:

There are three categories to describe the status of each action: ongoing, new, and future.

- **Ongoing** actions include actions implemented prior to the completion of this Implementation Plan. The Board of Supervisors Board Matter on September 14, 2021, directed staff to initiate public outreach and education, build on existing initiatives and programs relevant to CECAP and consider the proposed legislative items. Ongoing actions may also include existing programs, projects, or

initiatives prior to development of CECAP. These ongoing actions will continue implementation in the 2023-2024 timeframe.

- **New** actions identify priority actions that will be initiated in 2023-2024. These actions intend to have a broad-based impact to accelerate the adoption of practices (e.g., solar installation, energy efficiency, EV charging stations) and behaviors that reduce greenhouse gas emissions from the major contributors: buildings and transportation.
- **Future** actions include implementation actions that require additional study or evaluation to determine the best approach for implementation and may require changes in legislation or funding. These actions may be implemented in the 2025-2030 or 2030+ timeframes.

Timeframe for Initiation:

Climate and energy-related actions to reduce greenhouse gas emissions shift regularly due to technological and regulatory changes. As such, in emissions reduction plans, it is wise to enable short- and mid-term action, while also enabling flexibility to accommodate unforeseen changes. This CECAP Implementation Plan is seen as a living document that will be implemented using an adaptive management approach and in partnership with the community. While the CECAP Implementation Plan actions and timeframes will be reviewed annually to align with the budget planning process and track progress, there are key periods for implementation. The **timeframe** for each action refers to when the action may be **initiated** (2023-2024, 2025-2030, 2030+), rather than completed; many actions in the plan are envisioned to be implemented over several years, rather than having a discrete begin-and-end date.






- **2023-2024:** High-priority actions for the upcoming two years include work that has begun and will continue in 2023-2024 and likely in future years, in addition to actions that are planned to be initiated in the 2023-2024 timeframe. For these identified strategies (1-12) and accompanying actions, staff will present to an appropriate Board of Supervisors committee once implementation steps are finalized. If and when resource needs arise for implementation of specific strategies or actions, those requests will be put forward as part of the county's annual and/or quarterly budget processes.
- **2025-2030:** Actions that are planned to be initiated between 2025 and 2030 require preliminary program development or rely on other actions prior to initiation (i.e., state authorizing legislation may be required to enable the county to develop incentives).
- **2030 +:** Actions assigned to this category may be considered for implementation after 2030

Duration:

The Duration provides an estimated time (<5, 5-10, or 10+ years) to complete an action or achieve a goal. Many of the actions identified as having a 10+ year duration are programs that will continue into future years, such as education and outreach, or longer-term capital improvement programs that implement different projects over time.

The county will evaluate progress to-date in achieving the interim 2030 CECAP goal at the **2030 Milestone Assessment** and determine if additional actions are needed to achieve carbon neutrality by 2050. If an action is recommended for implementation, then a more definitive time period for implementation will be provided as a result of the 2030 Milestone Assessment.

Table 4. Status of CECAP Implementation Plan Actions for All Sectors.

Sector		Ongoing (2022-2024)	New (2023-2024)	Future (2025-2030)	Future (2030+)
	Buildings and Energy Efficiency	19	3	3	0
	Energy Supply	10	6	2	1
	Transportation	14	7	1	0
	Waste	12	2	5	0
	Natural Resources	6	6	2	0
Total		61	24	13	1

Buildings and Energy Efficiency



Modeled contribution to emissions reduction: 24.7%

CECAP Strategies in this sector:

1. Increase energy efficiency and conservation in existing buildings: **12.6%**
2. Electrify existing buildings: **10.9%**
3. Implement green building standards for new buildings: **1.2%**

CECAP Sector Goals

- All new, eligible buildings in the county will have a commitment to green building; and
- Retrofit at least 100,000 housing units with energy efficiency measures by 2030.

Implementation Action	CECAP Strategy # (s)	Program Name (s)	Program Description	Leads and Partners	Resil. Ffx	2022 Status	Timeframe Initiated or Continuing	Duration (years)
Actions that Apply to the Community								
BEE.1: Develop and implement a broad-based community outreach and education campaign to reduce greenhouse gas emissions (i.e., take climate action).	1, 2	Carbon-Free Fairfax	See BEE.11, ES.1, T.1, W.3, NR.2. The county launched 8 education and outreach campaigns in 2022 under the umbrella program Carbon-Free Fairfax and include: Audits All Around; Too Hot, Too Cold, Just Right; Small Actions, Big Impact; EVs from Every Angle; It's Electric, Explore Solar Systems; Know Your Numbers; and Anything But Driving. Carbon-Free Fairfax is the public education and outreach component to advance CECAP goals and strategies across all sectors. The initial outreach goal for Carbon-Free Fairfax between February 2022 and June 2023 is to reach 100,000 county residents and other stakeholders with relevant educational materials and engagement opportunities (e.g., web materials, webinars). The county will identify and recognize Individual Climate Champions through the existing Carbon-Free Fairfax campaign in social media campaigns and video testimonials.	OEEC, Board member offices, Faith Alliance for Climate Solutions (FACS), Sierra Club, EQAC and other county organizations	CRC.2 b	Ongoing	2023-2024	10+
		Conserve (Energy) Kit	Fairfax County libraries launched the Conserve kit in 2022 which provides county residents with basic tools and supplies to help address energy efficiency					

Implementation Action	CECAP Strategy #s)	Program Name(s)	Program Description	Leads and Partners	Resil. Ffx	2022 Status	Timeframe Initiated or Continuing	Duration (years)
		Get2Green	<p>in their homes. The libraries also have a loan program for thermal cameras for Android and Apple smartphones, which launched in 2017. The kits and thermal camera loan program will continue in 2023 and 2024.</p> <p>Year-to-date, the Conserve Kits have been checked out 152 times. Since 2017, the thermal cameras have been checked out 2,894 times, including 443 times year-to-date.</p> <p>The Fairfax County Public Schools Get2Green Program (http://get2green.fcps.edu) was formed in 2009 and its website launched in 2016. It is the environmental stewardship program for public schools. There may be an opportunity to leverage other community resources to enhance program operation (e.g., Eco-Schools, Eco-Teams).</p>	<p>Fairfax County Public Library, OEEC</p> <p>Fairfax County Public Schools</p>				
BEE.2: Support and advocate for the strengthening of building energy codes in local development projects.	3	Virginia Uniform Building Code	<p>In the 2023 Legislative Program, the County BOS supports modernization of state building codes by adopting the IgCC and full provisions of the IECC, and <u>the</u> provision of more flexibility for localities to increase energy efficiency and improve resilience to climate change impacts by adopting stronger local standards and implementing energy efficiency and utilization of disclosure/benchmarking. The county (through LDS), as well as FACS and the Sierra Club, will continue their efforts to work with the VA Dept of Housing and Community Development (DHCD) and its Board (BHCD) to obtain their endorsement of the IECC for statewide adoption, which is required prior to the Governor's approval.</p> <p>The county will continue its outreach to partners in the building industry for support of IECC. These include the Northern VA Building Industry Association (NVBIA), the Home Builders Association</p>	LDS, Government Relations, OEEC, FACS, Sierra Club	RIB. 2b	Ongoing	2023-224	10+

Implementation Action	CECAP Strategy #s)	Program Name(s)	Program Description	Leads and Partners	Resil. Ffx	2022 Status	Timeframe Initiated or Continuing	Duration (years)
			<p>of Virginia (HBAV), the Virginia Association of Counties (VACo), and the VA Building and Code Officials Association (VBCOA). Without support from these types of entities, endorsement by the BHCD will be challenging.</p> <p>Lastly, LDS continues to work in partnership with the Responsible Energy Codes Alliance: https://reca-codes.com/ and the Energy Efficient Codes Coalition: https://energyefficientcodes.org/. Both are working for full IECC adoption in VA. They were instrumental in VA's adoption of elements of the IECC, such as minimum insulation requirements and building air leakage reduction.</p>					
BEE.3: Build and retrofit privately-owned buildings to high-efficiency performance standards and strive for carbon-neutrality and net zero emissions.	3	<p>Green Building Recognition Program</p> <p>Entitlement process</p> <p>Policy Updates</p>	<p>See BEE.2 and BEE.20 for county buildings</p> <p>LDS has created a Green Building Priority Plan Review process to incentivize high energy efficient and performing buildings. LDS provides an annual report on the number of green buildings and solar permits issued in the Environmental Outlook report.</p> <p>DPD negotiates with developers during the entitlement process to ensure green building standards are being addressed in accordance with the Policy Plan of the Comprehensive Plan for new development, redevelopment, and adaptive reuse proposals.</p> <p>Consideration of updates to the Environment Element of the Policy Plan will begin in 2023 and will include the review of the Comprehensive Plan sustainable development policies to enhance the existing emphasis on energy efficiency. These Policy Plan updates would apply to development proposals requiring a Comprehensive Plan amendment and/or zoning action, countywide.</p>	LDS, DPD, OEEC	CRC. 3b	Ongoing	2023-2024	10+

Implementation Action	CECAP Strategy #s)	Program Name(s)	Program Description	Leads and Partners	Resil. Ffx	2022 Status	Timeframe Initiated or Continuing	Duration (years)
BEE.4: Encourage adaptive reuse of existing buildings, particularly vacant buildings.	1	Adaptive Reuse Program Economic Incentive Program (EIP) Tracking and Reporting	See BEE.2, BEE.3 and BEE.8 The county's Adaptive Reuse Program (Adaptive Reuse Program Land Development Services (fairfaxcounty.gov)) promotes the reuse of existing buildings (constructed prior to 2000) by providing incentives, guidance, and a reduced review timeframe. LDS will work to further develop the program in the future to incentivize high-performance energy efficiency of building reuse and electrification. The BOS adopted the EIP in 2020 to encourage redevelopment in six designated Economic Incentive Areas (Economic Incentive Program Fairfax County - OCR (fcrevite.org)). The 10-year real estate tax break has resulted in several building renovations and adaptive reuse, i.e., the Skyline office buildings into more energy efficient residential buildings. DPD staff continues to promote the EIP and explore more opportunities for renovation/adaptive reuse of existing buildings. The Economic Development Authority (EDA), CEX, and DCEX monitor the office vacancy rate throughout Fairfax and explore opportunities for adaptive reuse, i.e., residential uses for much needed housing in the county.	LDS, DPD, EDA, CEX, DCEX		Ongoing	2023-2024	10+
BEE.5: Incorporate biophilic and regenerative design principles such as green roofs into the construction or renovation of buildings to improve occupant health and comfort and provide co-benefits including improved air quality, stormwater	1, 3	Stormwater Management and Green Building Policy	This action is partially implemented through the existing stormwater management program and land development process. Green roofs are permitted as an option to meet stormwater management requirements as part of the site development/ redevelopment process. Additionally, the county will continue to work with developers through the entitlement process to adopt green infrastructure as part of development and redevelopment.	DPWES, DPD, LDS, OEEC, DCEX	AE.2a	Ongoing	2023-2024	10+

Implementation Action	CECAP Strategy #s)	Program Name(s)	Program Description	Leads and Partners	Resil. Ffx	2022 Status	Timeframe Initiated or Continuing	Duration (years)
management, and reductions to heat island effect areas.		Biophilic opportunities	Additional biophilic and regenerative design principles may be considered in future years as updates to the Facilities Design Manual are pursued. The DCEX of Planning and Development reached out to Terreform, a national firm focused on biophilic and regenerative design principles, to explore education opportunities.					
BEE.6: Establish and support a clean-energy financing entity (i.e., Green Bank) to increase access to financial capital for adoption of energy efficiency, renewable energy, and electrification technologies by residents and businesses.	1, 2	Fairfax Green Bank	<p>See ES.7, T.11.</p> <p>In August 2022, a feasibility analysis for the creation of a clean energy financing entity (a “Fairfax Green Bank”) was completed. An interagency staff group is developing the scope of a Green Bank including program options, a budget, and legal organization. An ordinance to establish the Green Bank will be brought to the BOS in Spring 2023, anticipating the organization’s launch in 1Q FY24. The 501(C)(3) organization will be well positioned to leverage federal funds from the Inflation Reduction Act.</p> <p>The goal is for the Green Bank to emerge as a clearinghouse of information on all aspects of clean energy and leverage public and private funds as a catalyst and accelerator for projects throughout the community.</p>	OEEC, DEI, DMB, EDA, OCA, Finance		Ongoing	2023-2024	10+
BEE.7: Support Property Assessed Clean Energy (PACE) financing programs that assist property owners in upgrading their buildings with renewable energy systems in addition to energy efficiency and water management systems.	1,5	C-PACE	<p>See ES.8.</p> <p>The Fairfax County Commercial Property Assessed Clean Energy (C-PACE) program was launched in 2020 following ordinance adoption in 2019 by the BOS. It is administered by the Virginia-PACE Authority and is designed to provide private funding to building owners for energy-saving and water-saving projects. C-PACE will be updated in early 2023 to: 1) opt-in to the revised statewide program, and 2) add in a two-year retroactive clause allowing</p>	OEEC, OCA	CRC. 1d	Ongoing	2023-2024	10+

Implementation Action	CECAP Strategy #s)	Program Name(s)	Program Description	Leads and Partners	Resil. Ffx	2022 Status	Timeframe Initiated or Continuing	Duration (years)
			the financing of eligible projects that were completed up to two years ago.					
BEE.8: Establish incentive programs as permitted by existing authority regarding the construction of high-efficiency buildings and the renovation of existing buildings, including the implementation of energy efficiency and electrification measures.	ALL	Incentives	<p>See BEE.4, BEE.6 and BEE.7</p> <p>Staff will continually monitor and research appropriate places to introduce incentive programs to enhance the construction and renovation of high-efficiency buildings and work to connect building owners, organizations, or associations with existing (C-PACE) or new (Fairfax Green Bank) incentive programs. County staff are actively monitoring incentives that may become available with funding through federal grants such as the Inflation Reduction Act, state enabling legislation or incentive programs in other localities that are proving effective.</p>	OEEC, DTA, LDS, DPD, OCA		Ongoing	2023-2024	10+
BEE.9: Encourage and facilitate the provision of energy efficiency products and services by energy service companies (ESCOs), energy-as-a-service (EaaS) providers, and others to reduce costs to customers.	1, 2	No existing program	<p>See BEE.6 and BEE.7</p> <p>The county has contracted with an ESCO for its energy efficiency and solar PV projects (see BEE-17).</p> <p>OEEC staff will look to expand opportunities for ESCOs and EaaS providers beyond county operations through future partnerships, outreach and education and opportunities provided by the Green Bank.</p>	Pending Future Implementation		Future	2025-2030	10+
BEE.10: Promote and leverage ratepayer-funded utility programs that provide energy efficiency incentives to residents and businesses.	1	Incentives	<p>Staff intends to promote ratepayer-funded utility programs that provide incentives through education and outreach programs like Carbon-Free Fairfax.</p> <p>Example incentive programs offered by Dominion Energy include: Smart Cooling and Control Your Heating & Cooling Virginia Dominion Energy, Office Energy Efficiency Program- Dominion Energy</p>	Energy Utilities, OEEC		Ongoing	2023-2024	10+

Implementation Action	CECAP Strategy #s)	Program Name(s)	Program Description	Leads and Partners	Resil. Ffx	2022 Status	Timeframe Initiated or Continuing	Duration (years)
			<p>domsavings.com) and Virginia Washington Gas (wgsmartsavings.com) by Washington Gas.</p> <p>Additionally, Dominion Energy plans to launch incentive programs for residential and non-residential EV charging stations (Electric Vehicles Virginia Dominion Energy).</p> <p>See T.2 for information about the county's incentives to install EV charging stations.</p>					
BEE.11: Develop and fund energy audit or assessment programs to identify opportunities to reduce energy use and to provide incentives to implement energy efficiency and electrification recommendations.	1, 2	HomeWise; NVSWCD Energy Conservation Assistance program, utility-specific programs	<p>See BEE.1 (Conserve Kit, Thermal Loan Program)</p> <p>There are several existing energy efficiency programs provided both by the county and external entities. The county's HomeWise program helps low and moderate-income residents with small energy and water efficiency improvements. Additionally, the county promotes external energy efficiency opportunities such as the NVSWCD's Energy Conservation Assistance Program, energy efficiency programs from Dominion Energy, Washington Gas and other utilities, and programs through LEAP (Local Energy Alliance Program).</p> <p>The county will work with other organizations seeking opportunities to expand audit and assessment services (e.g., See BEE.16 and BEE.17).</p>	OEEC	CRC. 3b	Ongoing	2023-2024	10+
BEE.12: Encourage building commissioning, recommissioning, and retro-commissioning to ensure that buildings operate as designed and with optimal energy efficiency.	1	No existing program	The county will explore opportunities to educate the non-profit and private sectors to share how we commission, re-commission, and retro-commission our buildings. For example, LDS may publish information in their technical bulletins, while OEEC will include outreach and education in the future through the re-launched 2023 Green Business Partners (GBP) (BEE.14). The GBP provides	Potential future leads and partners: NAIOP, Building Owners, Businesses/		Future	2025-2030	< 5

Implementation Action	CECAP Strategy #s)	Program Name(s)	Program Description	Leads and Partners	Resil. Ffx	2022 Status	Timeframe Initiated or Continuing	Duration (years)
			an opportunity to connect with existing industry organizations. (e.g., Building Owners and Managers Association (BOMA), Apt. and Office Building Association of Metropolitan Washington, NAIOB, etc.).	Industry, OEEC, LDS				
BEE.13: Use demand management practices to reduce demand for electricity or natural gas during peak periods.	1	Various energy utilities' programs	<p>Energy utilities like Dominion Energy or Washington Gas have many programs for demand-side management (DSM) for both residential and commercial customers to reward customers for reducing their energy use (e.g., Smart Thermostat). These include specific energy efficiency programs for income and age qualifying customers. The OEEC website will provide links to the Dominion Energy and Washington Gas energy saving sites to direct residents to these programs.</p> <p>The county provides information to direct residents to utilities' websites to learn more about available programs. The county may also serve as a connection point for non-profit organizations such as LEAP that is a provider of Dominion Energy's Income and Age Quality Home Improvement and EnergyShare weatherization programs.</p>	Energy Utilities, Virginia SCC, OEEC	RIB.2a	Ongoing	2023-2024	10+
BEE.14: Develop and sustain partnerships between the county and its business communities to encourage and facilitate climate-oriented business practices and mentorship.	1, 2	Green Business Partners	<p>See BEE.12, BEE.16, BEE.17</p> <p>The county launched the Green Business Partners (GBP) program in 2015 to encourage and elevate sustainable businesses in the county. With the adoption of CECAP, OEEC will make this a more robust program to help the community meet GHG reduction goals. To that end, the program and webpage is being updated and a Green Business Forum is planned for March 2023. Extensive marketing of the forum is being planned to ensure strong participation. This will include involvement with DEI, EDA, and local Chambers of Commerce with other business-promotion organizations.</p>	OEEC, DEI, EDA, Businesses		New	2023-2024	10+

Implementation Action	CECAP Strategy #s)	Program Name(s)	Program Description	Leads and Partners	Resil. Ffx	2022 Status	Timeframe Initiated or Continuing	Duration (years)
			OEEC is collaborating with the hospitality industry, including Visit Fairfax, to explore opportunities for an industry-specific pilot as part of the Climate Champions (See BEE.17).					
BEE.15: Partner with local educational institutions, such as George Mason University, and neighboring jurisdictions to cultivate and support innovative, incubator or start-up businesses that provide services in the clean energy sector.	1, 3	Fairfax Innovation Challenge Pitch and Pilot	<p>The Fairfax County Innovation Challenge Carbon Neutral Pitch and Pilot occurred in October 2022 with Smart City Works (501(c)(3)). Applicants were urged to propose products or services that either improve energy efficiency, increase the use of renewable electricity, or advance the use of electric vehicles. The winner, a firm providing a web-based estimation of clean energy options for any building identified by an address, is being considered by OEEC for implementation as a pilot project in Fairfax County. If determined suitable, the firm's product may be piloted in 2023.</p> <p>The County also initiated the first electric/autonomous vehicle (AV) for public use in Virginia. The AV Relay launched in October 2020. This was an extensive cooperative effort with other government agencies: Virginia Tech Research Council (VTRC), the Department of Rail and Public Transit (DRPT), and VDOT, as well as private businesses: Dominion Energy and Easy Mile. The pilot AV is still in operation and the county is partnering with other agencies to explore its expansion.</p> <p>DEI and OEEC will continue outreach efforts with local educational institutions (GMU, NOVA, FCPS, etc.) to cultivate and support innovative incubator and start-ups in the clean-energy sector. Examples include reaching out to the GMU Institute for a Sustainable Earth: https://ise.gmu.edu/research-themes/#climate and FCPS's Innovators' Fund,</p>	OEEC, DEI, Smart City Works, George Mason University	CRC.2c	Ongoing	2023-2024	10+

Implementation Action	CECAP Strategy #s)	Program Name(s)	Program Description	Leads and Partners	Resil. Ffx	2022 Status	Timeframe Initiated or Continuing	Duration (years)
			aimed at connecting the business community with student-led innovative ideas.					
BEE.16: Identify and recognize community individual, organization, and business Climate Champions that accelerate implementation of actions to meet CECAP goals.	1, 2	Climate Champions – Orgs. and Businesses	<p>See ES.12, T.21, W.17, NR.11.</p> <p>Guided by community-led actions, the county will identify and celebrate local leaders, individuals, businesses, and organizations who take meaningful climate action and inspire those around them to do the same. The county will initiate structured discussions in roundtable format meetings with community-based environmental groups and/or businesses to identify climate champions to begin to connect with and identify climate champions.</p> <p>Roundtable participants may self-identify climate-actions and behaviors within their sector and how to advance a climate-neutral Fairfax County within the private industry and non-profit organizations. For example, participants may identify actions currently being taken by groups or associations to address CECAP goals and provide recommendations to initiate, expand and expedite organization- or industry-specific programs run by organizations to meet CECAP goals. Recommendations may include a pilot program (see BEE.17), development of program adoption guidance, promotion, or marketing campaigns to facilitate broader adoption of climate actions.</p> <p>The county may catalyze and facilitate implementation where appropriate to further the community and business champion-led efforts.</p>	NGOs, Businesses, OEEC		New	2023-2024	10+
BEE.17: Community-led pilot programs to accelerate implementation of climate action in support of CECAP goals and increase investments in	1,2	Community Pilots	<p>See ES.13, T.20, W.16, NR.12.</p> <p>Organizations in Fairfax County may bring forward community-led pilot programs to accelerate implementation of CECAP goals and ideally support</p>	Industry-related organizations /associations, NGOs		New	2023-2024	10+

Implementation Action	CECAP Strategy #s)	Program Name(s)	Program Description	Leads and Partners	Resil. Ffx	2022 Status	Timeframe Initiated or Continuing	Duration (years)
renewable energy, enhance energy efficiency and reduce greenhouse gas emissions overall.			multiple climate and energy sectors (energy efficiency, energy supply, transportation, waste, and natural resources). The county may collaborate on pilot programs in support of implementation efforts. The county is communicating with the Faith Alliance for Climate Solutions and the hospitality sector for two potential pilots in 2023.					
BEE.18: To expand the skilled workforce needed to provide energy and electrification services locally, support the establishment or strengthening of job training programs through community colleges, non-profit organizations, trade unions, or via apprenticeships.	1, 2	Workforce Development	<p>The county has conducted some initial research on the institutions and organizations that address workforce needs, including in energy-related fields, and explored ways to partner with them.</p> <p>DEI and DFS (Department of Family Services) are spearheading a new Work-Based Learning program, which will explore opportunities for skill-building, potentially in the green economy. The EDA is a partner in this effort. Further, the EDA supports the CECAP Implementation Plan through eNewsletters to the business community, a jobs board site, workinnorthernvirginia.com, providing career opportunities, including renewable energy; find-a-job/renewable-energy/, and by recruiting clean energy related businesses to Fairfax County. Additionally, EDA will identify occupations or parts of the workforce that would be a good target for upskilling/reskilling to green/electrification associated occupations; examine/identify occupations that are not typically categorized as a green job but with upskill training/additional awareness could contribute toward the county's carbon reduction/electrification goals or upward job mobility; identify companies/organizations that may be interested in participating in county decarbonization/electrification efforts, green job upskilling/reskilling collaboratives, roundtables and initiatives; and share information about county decarbonization/electrification/green initiatives and</p>	DEI, EDA, DFS, NGOs, NOVA, OEEC, DCEX	CRC.2c	Ongoing	2023-2024	< 5

Implementation Action	CECAP Strategy #s)	Program Name(s)	Program Description	Leads and Partners	Resil. Ffx	2022 Status	Timeframe Initiated or Continuing	Duration (years)
			<p>programs with companies and organizations FCEDA directly works with.</p> <p>At the District level, the Workforce Innovation and Skills Hub (WISH) opened in the Franconia District in September 2022. The county will continue to engage with Building Momentum (a local non-profit) and see if there are opportunities for green jobs training.</p> <p>In addition, the county will continue to reach out to Northern Virginia Community College (NOVA) and GMU on their efforts to develop a skilled workforce for the green economy.</p> <p>Additional opportunities to address training gaps and how to best address them to expand the workforce to provide energy and electrification services locally will be explored with EDA and other non-profits or trade unions in future years.</p>					
BEE.19: Continue to support Code Training Academy and other training opportunities to ensure staff are up to date on new and upcoming technologies and code compliance pertaining to energy efficiency.	1, 2, 3, 5	Code Training Academy	The county's LDS department has a proactive training program "Code Training Academy," which includes the most up-to-date technologies and code compliance pertaining to energy efficiency. The training will be updated with any building code revisions at the state level.	LDS, Department of Code Compliance (DCC)		Ongoing	2023-2024	10+
Actions that Apply to County Government Facilities and Operations								
BEE.20: With respect to county facilities, meet or exceed the goals and targets set forth in Fairfax County's Operational Energy Strategy, adopted in July	1, 2, 3	OES	In July 2021, the BOS updated the OES adding a goal of carbon neutrality for 2040 for county operations. The OES sets targets and actions in 11 focus areas.	DPD, FMD, DPWES Capital Facilities, Parks,		Ongoing	2023-2024	10+

Implementation Action	CECAP Strategy #s)	Program Name(s)	Program Description	Leads and Partners	Resil. Ffx	2022 Status	Timeframe Initiated or Continuing	Duration (years)
2021 but as may be updated from time to time, particularly the goals and targets pertaining to greenhouse gas emissions reductions, energy use and efficiency, water use and efficiency, and green buildings, and undertake the actions listed in each of those focus areas.			<p>The Board strengthened its sustainable development policy for county facilities by replacing the 2020 update with a Net Zero Energy (NZE) standard for new construction and major renovations and providing for building electrification in the updated 2021 OES.</p> <p>All new construction and major renovations of county (excluding FCPS) buildings and facilities will meet the OES criteria. For example, the county currently builds and retrofits its buildings to high-efficiency performance standards, i.e., LEED Gold. Examples include the recently completed Sully Community Center and Lorton Community Center. In addition, the original Mt. Vernon High School (OMVHS) will be an energy efficient building when its retrofit/renovation is completed. Using ESCOs, the county is increasing the energy efficiency of county facilities.</p> <p>As of fall 2022, IGAs have been completed at 13 county facilities. Additional buildings may be identified for IGAs in 2023-24.</p> <p>For new buildings, HVAC systems are evaluated to achieve NZE and LEED certification goals defined in the OES and sustainable development policy. For existing buildings, the evaluation is done using ESCOs. Those efforts will continue in 2023 and 2024. A ground-source heat pump system is proposed for the Original Mount Vernon High School</p> <p>In addition, the county has set an example in the adaptive reuse of existing buildings and vacant buildings through the efforts of Capital Facilities in DPWES. For example, Mt. Vernon High School, a vacant 1939 historic structure (86,500 square feet) is undergoing an extensive adaptive reuse for a</p>	Housing, OEEC				

Implementation Action	CECAP Strategy #s)	Program Name(s)	Program Description	Leads and Partners	Resil. Ffx	2022 Status	Timeframe Initiated or Continuing	Duration (years)
			<p>multitude of county services. The county is taking advantage of Historic Tax Credits to reduce costs. DPD and DCEX continue to promote use of these credits for both public and private development.</p> <p>Capital Facilities continues to make adaptive reuse of existing buildings a priority for county facility needs.</p>					
BEE.21: Continue the transition of streetlight and outdoor-lighting stock from older technologies, such as high-pressure sodium vapor and metal halide, to LED technologies.	1	Streetlight Conversion	The county has a 5-year LED street light conversion plan. The goal is to convert more than 56,000 existing mercury vapor, high-pressure sodium and metal halide fixtures to LED streetlights. As of June 2022, nearly 50% (27,164) of the streetlights have been converted. The conversion to LED will reduce 32.4M pounds of carbon dioxide emissions annually with additional co-benefits. The program is in its fourth year and will continue in 2023. The FY2022 Carryover Review package includes \$1.82 million of additional funds for this program including funds to convert 126 streetlights on FCPA property.	DPWES, FCPA, OEEC		Ongoing	2023-2024	< 5
BEE.22: Reduce and manage fugitive emissions of hydrofluorocarbons (HFCs), whose global warming potential (GWP) may be hundreds to thousands of times greater than carbon dioxide, by supporting the transition of refrigerants with high GWP to low-GWP alternatives.	1	Green Initiatives	The lead departments (FMD, DPWES, FCPA, FCRHA) are collaborating to assess, determine and report on the process necessary to accomplish this item by 2030. The departments are investigating market options, timelines and resource needs to purchase HVAC equipment with non-HFC refrigerants. However, FCPA notes that replacement options are currently not widely available to the domestic U.S. market. On new construction and major renovation projects, Capital Facilities is investigating options for use of non-HFC refrigerants, their availability, and timelines for phase-out by 2030. The departments will continue to properly dispose of HFC refrigerants under the DPWES-Solid Waste Management program.	FMD, DPWES, FCPA, FCRHA, DMB, DPMM		Ongoing	2023-2024	5-10

Implementation Action	CECAP Strategy #s)	Program Name(s)	Program Description	Leads and Partners	Resil. Ffx	2022 Status	Timeframe Initiated or Continuing	Duration (years)
BEE.23: Consider and, where appropriate, develop and advance legislative proposals to provide Fairfax County with greater authority over building construction, renovations, and operations, particularly regarding energy codes, energy performance standards, and energy use benchmarking and disclosure requirements.	1, 2, 3	Legislative Program	See BEE.2 Staff will continually monitor for appropriate legislative proposals to be introduced through the existing legislative process. Fairfax County and its partners must work with the Board of Supervisor's Legislative Committee each year to request additional delegated authority from the State.	LDS, OEEC, DTA, OCA, Government Relations		Ongoing	2023-2024	10+
BEE.24: Support the use and expansion of state and utility-sponsored programs to implement energy efficiency and conservation projects and improvements, including but not limited to those applicable or available as a result of the Grid Transformation and Security Act of 2018 and the Virginia Clean Economy Act.	1, 2	VCEA	The Virginia Department of Energy tracks progress on implementation of the Virginia Clean Economy Act related to clean energy and workforce development. The county will monitor and support the expansion of state and utility sponsored programs through the legislative process and participation in relevant organizations like the Virginia Energy Purchasing Governmental Association (VEPGA) and the Virginia Association of Counties. https://www.energy.virginia.gov/renewable-energy/RenewableEnergy.shtml	OEEC, Government Relations	RIB.1c	On-going	2023-2024	10+
BEE.25: Evaluate progress on the CECAP GHG reduction goals at the 2030 and 2040 milestone periods and determine the actions needed to achieve the overall goal of carbon neutrality by 2050.	1, 2, 3	Milestone Assessment	See ES.19, T. 22, W.18, NR.13. An adaptive management approach is used for CECAP implementation where the impact of an initial set of key actions are the focus of the first stage of implementation. The 2030 and 2040 interim goals serve as milestone periods to evaluate progress and determine what further action is needed. As the lead, the OEEC, with support from the departments and agencies involved in CECAP implementation, will review progress to date and provide a synthesis on current actions and their impact to reduce GHG emissions. Coordination with MWCOG, which provides the modeling on the	OEEC, DPD, LDS, DPWES, FMD, FCPA, DTA, OCA, Government Relations		Future	2025-2030	5-10

Implementation Action	CECAP Strategy #(s)	Program Name(s)	Program Description	Leads and Partners	Resil. Ffx	2022 Status	Timeframe Initiated or Continuing	Duration (years)
			county's GHG emissions, will be needed. This milestone is separate from more frequent review and reporting on actions through the Climate Action Dashboard.					

Energy Supply



Modeled contribution to emissions reduction: 24.6%

CECAP Strategies in this sector:

1. Increase the amount of renewable energy in the electric grid: **13.2%**
2. Increase production of onsite renewable energy: **4.4%**
3. Increase energy supply from resource-recovered gas, hydrogen, and power-to-gas: **7.0%**

CECAP Sector Goals

There are no sector specific goals for the county. The VCEA establishes 100% clean energy targets for the state's largest utilities by 2050 and by 2045 for most of Fairfax County.

Implementation Action	CECAP Strategy #(s)	Program Name(s)	Program Description	Leads and Partners	Resil. Ffx	2022 Status	Timeframe Initiated or Continuing	Duration (years)
Actions that Apply to the Community								
ES.1: Develop and implement a broad-based community outreach and education campaign to reduce greenhouse gas emissions (i.e., take climate action).	4, 5, 6	Carbon-Free Fairfax	See BEE.1. T.1, W.3, NR.2.	See BEE.20		Ongoing	2023-2024	10+
ES.2: Support accelerated electric grid transformation beyond the renewable energy requirements set forth in the VCEA.	4	VCEA	<p>See ES.7, ES.12 and ES.13</p> <p>The county acts within its authority to support accelerated grid transformation. For example, the implementation of a financing program like the Fairfax Green Bank may facilitate private sector investments in energy efficiency and renewable energy at the local or state level along with Climate Champions and climate-action pilots.</p> <p>The county will pursue funding opportunities provided by the Inflation Reduction Act to support renewable energy installations through incentives, partnerships with NGOs, pilot programs and, or through expanded education and outreach.</p>	OEEC, non-profits	RIB. 2a	Ongoing	2023-2024	10+
ES.3: Explore and support expanded retail and wholesale options as pathways to	4	Virtual PPA	The county plans to issue an RFP in late 2023 for a virtual power purchase agreement (VPPA) for renewable electricity from a large offsite renewable energy project. This procurement may	OEEC	RIB.2a	New	2023-2024	10+

Implementation Action	CECAP Strategy #(s)	Program Name(s)	Program Description	Leads and Partners	Resil. Ffx	2022 Status	Timeframe Initiated or Continuing	Duration (years)
increase renewable energy availability for consumers.			be pursued with other partners, such as other localities or private entities. VPPAs are an increasingly common method of hastening carbon reduction among universities, large corporations, and other institutions.					
ES.4: Encourage and facilitate group purchases of renewable energy systems to home and businesses to reduce the costs of those systems to the customer.	4	Solarize Fairfax	See ES.3 Fairfax County will continue to work with the Local Energy Alliance Program (LEAP) to host an annual Solarize campaign that provides access to pre-approved solar installers who install solar systems at a bulk discount for homes, non-profits or businesses. The county may work with LEAP to evaluate additional opportunities to expand programming e.g., home energy efficiency and charging infrastructure). The establishment of a VPPA in 2023-2024 by the county may further facilitate group purchases of renewable energy.	LEAP, OEEC	RIB.2a	Ongoing	2023-2024	10+
ES.5: Promote the development of community solar projects by revising policies and regulations where necessary or providing financial incentives where appropriate.	5	Community Solar	Dominion operates a 'community solar' program that is expensive and limited in scope. Current, state-enabling legislation (utility regulations) limits other community solar in Virginia (e.g., True Community Solar is currently unavailable in Virginia due to utility regulations). The county will monitor legislative actions to evaluate future feasibility to promote community solar projects.	Energy Utilities, OEEC	RIB.2a	Future	2025-2030	10+
ES.6: Encourage the purchase and use of renewable energy certificates (RECs) as a method to incentivize the installation of renewable electricity-generating systems in the private sector.	4	RECs	RECs play an important role in carbon reduction as a financial instrument representing clean electricity. Voluntary purchases of RECs by individuals, businesses, and institutions stimulate the market for growth in renewable energy investments. OEEC will explain and promote the use of RECs to Green Business Partners in 2023, while also educating the public broadly.	OEEC	RIB.2a	New	2023-2024	10+
ES.7: Establish and support a clean-energy financing entity (i.e., Green Bank) to increase	4, 5	Fairfax Green Bank	See BEE.6, T.11.	See BEE.6		New	2023-2024	10+

Implementation Action	CECAP Strategy #(s)	Program Name(s)	Program Description	Leads and Partners	Resil. Ffx	2022 Status	Timeframe Initiated or Continuing	Duration (years)
access to financial capital for adoption of energy efficiency, renewable energy, and electrification technologies by residents and businesses.								
ES.8: Support Property Assessed Clean Energy (PACE) financing programs that assist property owners in upgrading their buildings with renewable energy systems in addition to energy efficiency and water management systems.	5	C-PACE	See BEE.7	See BEE.7	CRC.1d	Ongoing	2023-2024	10+
ES.9: Support and facilitate the safe adoption of batteries for energy storage for public and private use, which may include amending building codes to accommodate battery storage.	5	Battery Storage	The action requires further study, technological advancement of batteries particularly size for residential use, and adoption of new legislation authorizing the county to amend its building codes. While Dominion Energy has a battery pilot project to support the regional grid and goals of the 2018 Grid Transformation and Security Act, the costs for local battery storage are high along with space needed to accommodate the physical size of the battery. The timeframe for this action may occur earlier depending on revisions to applicable building and energy codes and technological advancements. The county will continue to monitor legislative changes that may facilitate adoption of batteries for energy storage.	Industry, OEEC, OCA	RIB.2a	Future	2030+	10+
ES.10: Support the continuation of federal tax credits for solar installations and support proposed state tax credits.	5	Tax Credits	The county will continue to support state and federal tax credits for solar installations and support proposed state tax credits. In addition, the county is monitoring and participating in information sessions to learn more about the tax credits associated with the federal Inflation Reduction Act of 2022.	OEEC		Ongoing	2023-2024	10+
ES.11: Maintain and extend county practices that reduce costs related to solar installation, such as the permit	4, 5	Regulatory	The county currently waives permit fees for solar installation (Solar Energy Equipment Tax Exemption Tax Administration (fairfaxcounty.gov)). The federal Inflation	LDS, OEEC		Ongoing	2023-2024	10+

Implementation Action	CECAP Strategy #(s)	Program Name(s)	Program Description	Leads and Partners	Resil. Ffx	2022 Status	Timeframe Initiated or Continuing	Duration (years)
waiver fee and the solar energy equipment tax exemption.			Reduction Act of 2022 may include many new residential rebates for energy efficient equipment and tax credits for efficiency improvements and solar installations. OEEC will publicize these opportunities to the public in 2023 as they become available.					
ES.12: Identify and recognize community individual, organization and business Climate Champions that accelerate implementation of actions to meet CECAP goals.	4, 5, 6	Climate Champions – Orgs. and Businesses	See BEE.16, T.21, W.17, NR.11.	See BEE.16		New	2023-2024	10+
ES.13: Community-led pilot programs to accelerate implementation of climate action in support of CECAP goals and increase investments in renewable energy, enhance energy efficiency and reduce greenhouse gas emissions overall.	4, 5, 6	Community Pilots	See BEE.17, T.20, W.16, NR.12.	See BEE.17		New	2023-2024	10+
Actions that Apply to Government Facilities and Operations								
ES.14: With respect to county facilities and sites, meet or exceed the goals and targets set forth in Fairfax County's Operational Energy Strategy, adopted in July 2021 but as may be updated from time to time, regarding the goals and targets pertaining to renewables and undertake the actions listed in each of the focus areas.	4, 5	OES	<p>In July 2021, the BOS updated the OES adding a goal of carbon neutrality for 2040 for county operations. The OES sets targets and actions in 11 focus areas.</p> <p>To achieve the OES targets for Energy Use and Efficiency, the county initiated PPAs, ESCOs and capital construction for installations of solar for new and existing county buildings and facilities. The Sully Community Center solar installation was completed in fall 2022, and six additional solar installations will be completed in 2023. There are currently three proposed for 2024. Additional county buildings and facilities will be identified in</p>	OEEC, DPWES, Parks, FMD, DVS, FCDOT		Ongoing	2023-2024	10+

Implementation Action	CECAP Strategy #(s)	Program Name(s)	Program Description	Leads and Partners	Resil. Ffx	2022 Status	Timeframe Initiated or Continuing	Duration (years)
			2023. The county also plans to issue an RFP in late 2023 for a virtual PPA offsite project.					
ES.15: Continue existing county initiatives that use resource-recovered gas (i.e., biogas created from decomposed organic matter) and remain open to new uses of such gas.	6	Energy Resource Recovery	DPWES operates two Municipal Solid Waste landfill facilities, I-66 and I-95, that have landfill gas recovery systems. The gas collected from these systems is used to fuel engines that generate electricity. DPWES is currently renewing the contract to operate and maintain the landfill gas recovery system. In addition, DPWES continues to review methods and emerging technology to improve the gas collection system.	DPWES		Ongoing	2023-2024	5-10
ES.16: Consider and, where appropriate, develop and advance legislative proposals to provide Fairfax County with greater authority with respect to on-site renewable energy production, such as greater flexibility regarding community solar programs and the authority to incentivize renewable energy generation and battery storage projects.	4, 5, 6	Legislative	Staff will continually research and monitor appropriate legislative proposals to be introduced through the existing legislative process to support CECAP and OES goals. Fairfax County and its partners must work with the Board of Supervisor's Legislative Committee each year to request additional delegated authority from the state. A proposal for benchmarking was presented to the Board of Supervisors Environmental Committee for consideration in the 2023 legislative package.	OEEC, OCA, Government Relations		Ongoing	2023-2024	10+
ES.17: Support the use and expansion of state and utility-sponsored programs to increase the amount of renewable energy in the electric grid, including but not limited to those applicable or available as a result of the Regional Greenhouse Gas Initiative (RGGI).	4	RGGI	RGGI is a multi-state regional cap and trade program designed to reduce GHG emissions from the power sector. Fairfax County participates in the Virginia RGGI program, which has been active since 2020. Virginia announced its intent to withdraw from the RGGI in August 2022. The county will monitor efforts by opponents to remove VA from RGGI participation.	OEEC, Government Relations		Ongoing	2023-2024	10+

Implementation Action	CECAP Strategy #(s)	Program Name(s)	Program Description	Leads and Partners	Resil. Ffx	2022 Status	Timeframe Initiated or Continuing	Duration (years)
ES.18: Promote solar PV projects on publicly managed brownfields (e.g., closed quarries, landfills) to optimize their use and provide sites for renewable energy production.	5		In September 2022, the county signed a lease and power purchase agreement with a firm to install a 5 MW solar facility on the I-95 Landfill. In 2023, the vendor will complete final due diligence on the site and negotiate an interconnection agreement with Dominion. An interagency team led by DPWES Solid Waste is working to finalize the details of this arrangement between the county, Dominion Energy, and the vendor, Sun Tribe Solar. If these final terms are satisfactory, construction could begin in 2024 with operation soon thereafter.	OEEC, DPWES, OCA, Dominion Energy		New	2023-2024	10+
ES.19: Evaluate progress on the CECAP GHG reduction goals at the 2030 and 2040 milestone periods and determine the actions needed to achieve the overall goal of carbon neutrality by 2050.	4, 5, 6	Milestone Assessment	See BEE.25, T.22, W.18, NR.13.	OEEC, LDS, DPWES, OCA, Government Relations		Future	2025-2030	5-10

Transportation



Modeled contribution to emissions reduction: 32.1%

CECAP Strategies:

7. Increase Electric Vehicle (EV) adoption: **19.4%**
8. Support sustainable land use, active transportation, public transportation, and Transportation Demand Management (TDM) to reduce Vehicle-Miles Traveled: **3.7%**
9. Increase fuel economy and use of low-carbon fuels for transportation: **9.0%**

CECAP Sector Goals:

- Goal: Increase transit & non-motorized commuting to 30% (including telework) by 2030.
- Goal: Increase plug-in hybrid vehicles (PHEVs) and battery electric vehicles (BEVs) to least 15% of all light-duty vehicle registrations by 2030 and 42% by 2050.

Implementation Action	CECAP Strategy #s)	Program Name(s)	Program Description	Leads and Partners	Resil. Ffx	2022 Status	Timeframe Initiated or Continuing	Duration (years)
Actions that Apply to the Community								
T.1: Continue and expand public outreach and engagement regarding transportation topics, including federal and state tax incentives regarding EVs and EVSE, public transit and commuter options and services, and biking, walking, and micromobility options.	7, 8, 9	Education: Transportation and Carbon-Free Fairfax	<p>See BEE.1, ES.1, W.3, NR.2.</p> <p>Fairfax County Department of Transportation (FCDOT) provides numerous education and outreach activities to promote public transportation and alternative commuting options. FCDOT also engages the community in developing plans and implementing programs.</p> <p>FCDOT is leading the ActiveFairfax Plan, focused on improving and expanding the pedestrian and bike networks throughout the county. Extensive public outreach is a major component of this planning effort.</p> <p>OEEC's Carbon-Free Fairfax program promotes alternative and public transportation through educational campaigns like the Anything But Driving campaign. In addition, it provides resources and campaigns promoting EV adoption including information on incentives.</p>	FCDOT, OEEC		Ongoing	2023-2024	10+

Implementation Action	CECAP Strategy #s)	Program Name(s)	Program Description	Leads and Partners	Resil. Ffx	2022 Status	Timeframe Initiated or Continuing	Duration (years)
T.2: Encourage EV adoption by partnering with homeowner and condominium associations to facilitate and provide incentives for the installation of shared EV charging stations.	7	Charge Up Fairfax	Charge Up Fairfax aims to facilitate EV charging by residents of multifamily residential communities (common-interest communities), particularly homeowner associations and condominium associations. OEEC is monitoring federal grant funding under the Discretionary Grant Program for Charging and Fueling Infrastructure to help support the program.	OEEC		New	2023-2024	5-10
T.3: Streamline existing permitting and inspection processes for EV infrastructure and consider fee reductions or waivers.	7	Policies & Regulations	In September 2022, the Board of Supervisors adopted a policy to temporarily waive the fees associated with installation of an electric vehicle charging stations (EVCS). The updated policy and additional information on installing EVCS are available on the LDS EVCS permits website .	LDS		Ongoing	2023-2024	<5
T.4: Evaluate Comprehensive Plan, zoning, and land development ordinances to support, incentivize or require the installation of EV-ready charging infrastructure in new buildings and in the right-of-way (on-street parking).	7	Policy Update, Parking Reimagined	See BEE.3., T.18, T.19, NR.10. The Zoning Ordinance was updated in 2021 to include revisions to further support the installation of EVCS. Staff will begin reviewing the Comprehensive Plan policies and related ordinances in 2023 to determine how best to integrate CECAP and Resilient Fairfax recommendations. All amendments to County Codes, policies, and plans require Board of Supervisors authorization. The Parking Reimagined effort is underway, which is proposed to include requirements for EVCS in private and public developments. This Zoning Ordinance amendment is expected to be considered by the Board of Supervisors in mid-2023.	DPD, FCDOT, LDS, OCA, OEEC		New	2023-2024	<5

Implementation Action	CECAP Strategy #(s)	Program Name(s)	Program Description	Leads and Partners	Resil. Ffx	2022 Status	Timeframe Initiated or Continuing	Duration (years)
T.5: Implement equity requirements for EV parking design, including those regarding accessibility.	7	Policy & Regulatory, Parking Reimagined, One Fairfax	Accessibility is required by the county's current parking design standards and regulations related to the Americans with Disabilities Act. Additional requirements to support EV charging are being considered as part of the ongoing Parking Reimagined initiative.	LDS, DPD, FCDOT		Ongoing	2023-2024	<5
T.6: Continue to support Clean Car standards and to pursue opportunities for better fuel economy.	7, 9	Legislative	The Virginia Department of Environmental Quality (DEQ) implements the Clean Cars Virginia Bill (HB1965) of 2021 that aims to reduce tailpipe pollution through the sale of EVs and other clean vehicle technologies. The legislation directs DEQ to develop and the State Air Pollution Control Board to adopt a low emissions vehicle (LEV) and zero emissions vehicle (ZEV) program for motor vehicles beginning with model year 2025; the board adopted an implementing regulation on December 2, 2021, which will go into effect shortly after January 1, 2024. The county will continue to track progress and explore more opportunities to continuously improve fuel economy.	OEEC, DVS		Ongoing	2023-2024	<5
T.11: Establish and support a clean-energy financing entity (i.e., Green Bank) to increase access to financial capital for adoption of EVs, EVSE, and other low- and zero-emissions transportation technology by residents and businesses.	7, 9	Fairfax Green Bank	See BEE.6, ES.7.	OEEC, DEI, DMB, EDA, OCA, Finance		Ongoing	2023-2024	10+

Implementation Action	CECAP Strategy #s)	Program Name(s)	Program Description	Leads and Partners	Resil. Ffx	2022 Status	Timeframe Initiated or Continuing	Duration (years)
T.12 Explore and take advantage of available grant funding opportunities to lower the cost of EV purchases and the purchase and installation of EV supply equipment (EVSE).	7	Grant tracking	The county is tracking numerous federal and state funding programs that support adoption of low- and zero-emission vehicles for both the county fleet and community programs. Examples include the National Electric Vehicle Infrastructure (NEVI) Formula Program , specifically the Virginia Electric Vehicle Infrastructure Deployment (VDOT), Discretionary Grant Program for Charging and Fueling Infrastructure (USDOT), and the Clean School Bus Program (EPA). In November 2022, the OEEC applied for grant funding to support Charge Up Fairfax through the DOE's Vehicle Technologies Office Program Wide Funding Opportunity Announcement .	OEEC, DVS, FCDOT, FCPS		New	2023-2024	<5
T.13: Consider and, where appropriate, develop and advance legislative proposals to provide Fairfax County with greater authority to address transportation and vehicle electrification matters, including the authority to establish incentives or requirements regarding EV adoption.	7, 9	Legislative, Incentives	Staff will continually monitor and research appropriate places to introduce legislative proposals through the existing legislative process. For example, it appears that Virginia law prevents the sale of electricity for EV charging unless the electricity originates from a public utility. Removing that restriction will allow more EV charging directly from solar installations. Fairfax County and its partners work through the Board of Supervisor's Legislative Committee each year to request additional delegated authority from the state.	OEEC, OCA		Ongoing	2023-2024	10+
T.14: Work with state and regional partners to invest in public transit improvements to increase access through the expansion of current and the creation of new public transit routes.	8	FCDOT Transit Division	FCDOT works regularly with state and regional partners including VDOT, MWCOG, DRPT, NVRC, NVTA, WMATA and others to ensure a well-connected multi-modal transportation system. FCDOT's website provides additional information on their programs and projects.	FCDOT, VDOT, NVTA, TPB, WMATA, VRE		Ongoing	2023-2024	10+

Implementation Action	CECAP Strategy #s)	Program Name(s)	Program Description	Leads and Partners	Resil. Ffx	2022 Status	Timeframe Initiated or Continuing	Duration (years)
T.15: Create reduced or no-fare programs for disadvantaged categories (e.g., low-income, seniors, and students) as well as 3-, 5- or 12-month transit passes at discounted prices to incentivize public transit ridership.	8	Incentives	<p>The Fairfax Connector transit system provides discounts to seniors, people with disabilities, and free service to high school and middle school students. Information on Fairfax Connector current fares and policies are available on their website.</p> <p>The Connector is working to implement a pilot Transit Ridership Incentive Program (TRIP) to provide half-fare discount for economically disadvantaged residents.</p> <p>FCOT staff presented to the Board's Transportation Committee in September 2022 in regard to free bus fares for all riders. The Board will continue to study this issue and determine what may be appropriate for the county.</p>	FCDOT, WMATA, VRE		Ongoing	2023-2024	<5
T.16: Work with state and regional partners to further develop and implement programs to expand, improve, maintain and promote active transportation infrastructure and options like walking and biking.	8, 9	FCDOT Active Transportation Division, ActiveFairfax, Safe Streets for All Program	<p>Fairfax County is updating and combining the Bicycle Master Plan and the Countywide Trails Plan into the ActiveFairfax Transportation Plan.</p> <p>Active transportation means self-propelled, mostly human-powered travel including walking, biking, rolling (scooter, wheelchair, stroller), hiking, running, and riding for transportation and recreational purposes. The plan, scheduled to be completed by the fall of 2023, will establish a vision and a roadmap for implementation of safe, convenient, and enjoyable streets and trails in Fairfax County. The Safe Streets for All Program, adopted by the Board on May 10, 2022, also supports active transportation. This program is a comprehensive initiative to address systemic transportation safety issues for people walking, biking and using other forms of active transportation. The program recommendations propose a framework of education, policy, planning, and programmatic and design strategies that facilitate collaboration between</p>	FCDOT, DPD, LDS, VDOT, TPB, NVTA		Ongoing	2023-2024	5-10


Implementation Action	CECAP Strategy #(s)	Program Name(s)	Program Description	Leads and Partners	Resil. Ffx	2022 Status	Timeframe Initiated or Continuing	Duration (years)
			government and community stakeholders to improve active transportation safety and comfort.					
T.17: Promote bicycle usage by installing more bike racks and bike sharing facilities in commercial areas and transit stations.	8	Transportation Planning, ActiveFairfax Capital Bikeshare	<p>The county promotes, requires, and includes bicycle parking for commercial areas and transit stations. FCDOT has an interactive map of bike rack locations in Fairfax County. Secure bike rooms are also available at several Metrorail Stations and park & ride locations. The county is currently offering a 50% discount on a membership to use a secure bike room. See FCDOT's bicycle parking facilities website for more information.</p> <p>FCDOT has implemented Capital Bikeshare throughout the county with 55 stations currently in Merrifield, Reston and Tysons. Dozens of additional stations are proposed to be installed throughout the county in 2023.</p>	FCDOT, DPWES, DPD, LDS		Ongoing	2023-2024	<5
T.18: Update the Comprehensive Plan, Zoning Ordinance and associated codes and policies in regard to energy efficiency/green buildings, transportation including EVSE, sustainable development and land use, and natural resources, to be in alignment with CECAP and RF climate goals and strategies.	8	Policy	<p>See BEE.3, T.4, T.19, NR.10.</p> <p>The county has implemented numerous Comprehensive Plan amendments, Zoning Ordinance amendments, and associated codes and policies in regard to energy efficiency and transportation. As stated previously, the ActiveFairfax Plan and Parking Reimagined are good examples of efforts underway to update the Comprehensive Plan and/or related ordinances.</p> <p>Staff will review existing Comprehensive Plan policies, the Zoning Ordinance, and all county policies related to development that reference these documents in these areas:</p> <ul style="list-style-type: none"> • Energy efficiency and green buildings • Electric vehicles and public transportation 	OEEC, DPD, LDS, FCPA, FCDOT, DPWES		New	2023-2024	5-10

Implementation Action	CECAP Strategy #s)	Program Name(s)	Program Description	Leads and Partners	Resil. Ffx	2022 Status	Timeframe Initiated or Continuing	Duration (years)
			<ul style="list-style-type: none"> Sustainable development and land use Natural resources, including trees, streams, green spaces, soil <p>Once this review is completed, if there are areas where the policies can be strengthened or improved or where climate change can be integrated, staff will seek Board authorization to update the policies and/or Zoning Ordinance.</p>					
T.19: Leverage and strengthen, as needed, the Comprehensive Plan environmental policies and related ordinances to minimize the impact of transportation projects on native trees and natural areas (EQCs, RPAs, Occoquan Watershed).	8	Policy	<p>See BEE.3, T.4, T.18, NR.10.</p> <p>Staff will begin reviewing the Comprehensive Plan policies and related ordinances later this year to determine how best to integrate CECAP and Resilient Fairfax recommendations. All amendments to County Codes, policies, and plans require Board of Supervisors authorization.</p>	DPD, FCDOT, LDS, OEEC		New	2023-2024	<5
T.20: Community-led pilot programs to accelerate implementation of climate action in support of CECAP goals and increase investments in renewable energy, enhance energy efficiency and reduce greenhouse gas emissions overall.	1,2	Community Pilots	See BEE.17, ES.13, W.16, NR.12.	Industry-related organizations/associations, NGOs		New	2023-2024	10+
T.21: Identify and recognize community individual, organization, and business Climate Champions that accelerate implementation of actions to meet CECAP goals.	1, 2	Climate Champions – Organizations and Businesses	See BEE.16, ES.12, W.17, NR.11.	NGOs, Businesses, OEEC		New	2023-2024	10+
Actions that Apply to County Government Facilities and Operations								

Implementation Action	CECAP Strategy #s)	Program Name(s)	Program Description	Leads and Partners	Resil. Ffx	2022 Status	Timeframe Initiated or Continuing	Duration (years)
T.7: Continue adding EVs to the existing county fleet of passenger vehicles	7	OES: Fleet Electrification	The conversion of the county's fleet to zero- and low- emission vehicles is part of the OES fleet electrification goals and targets. The adopted OES goal is for county fleet vehicles to be electric or a non-carbon emitting alternative by 2035. As plug-in hybrid and electric vehicle models continue to come to market, DVS will procure them in place of traditional gasoline-powered vehicles, as appropriate. The county fleet currently includes 174 hybrids and 24 all-electric vehicles.	DVS, DPWES, FCPA		Ongoing	2023-2024	10+
T.8: When feasible, consider electrifying medium- and heavy-duty fleet vehicles (e.g., trash haulers, shuttles, street sweepers, transit, school buses) and off-road equipment (e.g., mowers, forklifts).	7, 9	OES: Fleet Electrification	The conversion of the county's medium- and heavy-duty fleet vehicles to zero- and low-emission vehicles is part of the OES fleet electrification goals and targets. For non-bus fleet vehicles that may not have non-carbon emitting alternatives, the county is developing a plan to mitigate emissions. Both FCDOT and DVS strive for economically responsible environmental stewardship by working increased fuel efficiency and reduced emissions and petroleum consumption characteristics into vehicle specifications. Specifications for new, heavy-duty trucks favor the cleanest diesel engines by utilizing the latest emissions control technologies and right-sizing engine displacement. DVS was recently awarded a grant for an EV box truck.	DVS, DPWES, FCDOT, FCPA		Ongoing	2023-2024	10+
T.9: Evaluate ways to accelerate and continue to transition the county's transit bus fleet from diesel to electric or other zero-emission vehicles.	7	OES: Fleet Electrification	The county's OES sets ambitious goals and targets to transition the county buses and fleet vehicles to electric or a non-carbon emitting alternative by 2035. The county is systematically retiring the oldest buses each year and has an ongoing mid-life rehabilitation program for the bus fleet to ensure optimal performance. FCDOT is working to identify alternative financing including grant opportunities to purchase zero	FCDOT, DVS		Ongoing	2023-2024	10+

Implementation Action	CECAP Strategy #s)	Program Name(s)	Program Description	Leads and Partners	Resil. Ffx	2022 Status	Timeframe Initiated or Continuing	Duration (years)
			emission buses. FCDOT staff is preparing a Transition Plan to chart the path from diesel to zero emissions. Phase I of the Zero Emission Bus (ZEB) pilot program includes eight electric buses that are scheduled to be delivered by the end of 2022 and will begin operating in the first quarter of 2023.					
T.10: Continue installing EV supply equipment (EVSE) at county buildings, facilities, and parking lots for use by both the public and employees.	7	OES: Fleet Electrification	In support of the county's OES targets, an electric vehicle charging stations program was initiated to fund the installation of EVSE at county government facilities. In addition to helping the county fulfill its own fleet electrification goals the proliferation of EVSE at county facilities is intended to increase charger availability for community members and promote the widespread adoption of EVs. Starting in 2021, county staff began installing ChargePoint Level 2 EVSE at county government locations pursuant to a multi-year plan. Level 2 EVSE can fully charge most EVs in four to eight hours. Currently, over 45 Level 2 charging stations have been installed at county facilities and are eligible for activation, with more scheduled for installation in the remainder of CY 2022 and beyond. An additional \$2 million has been requested in the FY2022 carryover budget to further support this program. Board adoption of retail fees to allow the public and employees to charge electric vehicles at county-owned charging stations became effective August 3, 2022.	DVS, OEEC, FMD, DVS, DPWES, FCPA		Ongoing	2023-2024	5-10
T.22: Evaluate progress on the CECAP GHG reduction goals at the 2030 and 2040 milestone periods and determine the actions needed to achieve the	1, 2, 3	Milestone Assessment	See BEE.25, ES.19, W.18, NR.13.	OEEC, DPD, LDS, DPWES, FCDOT, FMD, FCPA,		Future	2025-2030	5-10

Implementation Action	CECAP Strategy #(s)	Program Name(s)	Program Description	Leads and Partners	Resil. Ffx	2022 Status	Timeframe Initiated or Continuing	Duration (years)
overall goal of carbon neutrality by 2050.				DTA, OCA, Gov. Relations				

Waste 	Modeled contribution to emissions reduction: 2.4% CECAP Strategies: 10. Reduce the amount of waste generated and divert waste from Waste-to-Energy facilities and landfills: 2.4% 11. Responsibly manage waste generated: 0.04% CECAP Sector Goal: <ul style="list-style-type: none"> Achieve zero waste by 2040, defined as at least 90% waste diverted from landfill/incineration, in alignment with the definition of Zero Waste International Alliance.
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Implementation Action	CECAP Strategy #s)	Program Name(s)	Program Description	Leads and Partners	Resil. Ffx	2022 Status	Timeframe Initiated or Continuing	Duration (years)
Actions that Apply to the Community								
W.1: Prioritize source reduction and reuse, followed by recycling and composting.	10	Many different programs in the county.	This is an overarching goal for the sector, encouraging the continuation of existing county programs, while looking for new ways to engage the community, businesses, and waste haulers.	DPWES, OEEC		Ongoing	2023-2024	10+
W.2: Continue the development and delivery of community outreach and education for 5Rs (Refuse, Reduce, Reuse, Repurpose, Recycle), as well as potential avenues for county support of individual actions regarding 5Rs, including targeted languages.	10	DPWES Outreach	DPWES staff will continue their waste reduction education and outreach activities with an emphasis on messaging that is consistent with CECAP implementation and will evaluate opportunities to expand education in target languages.	DPWES		Ongoing	2023-2024	10+
W.3: Continue and expand a broad-based community outreach and education campaign to reduce greenhouse gas emissions (i.e., take climate action).	10, 11	Carbon-Free Fairfax	See BEE.1, ES.1, T.1, NR.2.	OEEC	CRC.2b	Ongoing	2023-2024	10+


Implementation Action	CECAP Strategy #s)	Program Name(s)	Program Description	Leads and Partners	Resil. Ffx	2022 Status	Timeframe Initiated or Continuing	Duration (years)
W.4: Divert food and yard waste by establishing and expanding different types of composting programs.	11	Solid Waste - Diversion Program	<p>There are two permanent composting/ food waste drop off sites (the I-66 Transfer Station and I-95 Landfill Complex), and five pilot sites. DPWES will be updating the county's Solid Waste Management Plan starting in early 2023 which will include food scraps as a focal topic for planning and discussions with the community. DPWES is also working on piloting a small, onsite food scraps composting operation at the I-66 Transfer Station called the "Compost Outpost" which is anticipated to be constructed in 2023.</p> <p>Yard waste collection and recycling is required by code for single-family homes and townhouses.</p>	DPWES		Ongoing	2023-2024	5-10
W.5: Use lessons learned from the government-focused Zero Waste program to work with community members to create community-focused Zero Waste programs.	10	Zero Waste Plan; Solid Waste Management Plan	The Board approved the Zero Waste Plan for county and school operations in November 2021. Since then, a multi-departmental team has been working on its implementation. As part of that implementation, staff will look for opportunities to expand lessons learned from internal operations to community-focused efforts. In addition, DPWES will be undergoing a review of the Solid Waste Management Plan in the next few years and as part of this process will be engaging the public to discuss Zero Waste, among other strategies.	DPWES, DPMM, FCPA, FMD, OEEC,		Ongoing	2023-2024	5-10
W.6: Continue providing information on climate impacts from waste-to-energy (WTE) facilities in Fairfax County, consider possible expansion.	10,11		The VA DEQ regulates the permits for the WTE facility in Fairfax. All permit data is publicly available from DEQ, and Covanta Fairfax's website has air quality performance data. The reuse/reclaimed water system and its expansion is evaluated as part of planning. Additionally, the Solid Waste Management Program commissioned a waste study (2019) comparing impacts from WTE and landfills. The results were presented to the	DPWES		Ongoing	2023-2024	10+

Implementation Action	CECAP Strategy #(s)	Program Name(s)	Program Description	Leads and Partners	Resil. Ffx	2022 Status	Timeframe Initiated or Continuing	Duration (years)
			Environmental Quality Advisory Council (EQAC) and the report is available upon request.					
W.7: Improve existing curbside waste pick-up models, including the potential for county action to coordinate pick-ups with county and private haulers and ways to optimize pickup frequency.	11		Staff will research potential options to improve curbside pick-up. The Solid Waste Management Plan will be reviewed in the next several years and will address these types of questions. Program details will be included in a future implementation program.	DPWES		Future	2025-2030	<5
W.8: Encourage the use of electric trash and recycling trucks to reduce emissions and local air pollution and explore a possible county role in establishing emissions reduction standards for trash and recycling trucks.	11	Permit fee waived; Piloting EV vehicles	In 2021 the vehicle permit fee was waived for non-diesel (including EV) vehicles. In addition, DPWES is currently piloting two EV collection vehicles, and will be able to share lessons learned to make a determination on future expansion of EV collection vehicles. The county lacks the statutory authority to impose its own vehicle emission standards. This is a state (DEQ) function.	DPWES, OCA		Ongoing	2023-2024	10+
W.9: Explore ways to ensure that waste contracts align with best practices and best available technology for reducing emissions.	11		Staff will examine potential options to improve waste contracts. The Solid Waste Management Plan will be reviewed in the next several years and will include these types of questions. Program details will be addressed in a future implementation program.	DPWES		Future	2025-2030	<5
W.10: Continue monetary penalties for recycling violations, consider potential expansion.	11	Enforcement	Current enforcement processes include monetary penalties, but prosecution and due process are labor-intensive and limited to civil penalties by Virginia statute. Stricter and more expansive enforcement will need further study to determine resource requirements.	DPWES		Ongoing	2023-2024	10+
W.11: Continue successful county waste management activities, including the reuse of treated wastewater for	11	The Purple Pipe Club	The Purple Pipe Club, the county's water reuse system, was constructed in 2010 by a combination of federal and state grants and county funds. On average, approximately 1 million gallons per day of	DPWES		Ongoing	2023-2024	10+

Implementation Action	CECAP Strategy #(s)	Program Name(s)	Program Description	Leads and Partners	Resil. Ffx	2022 Status	Timeframe Initiated or Continuing	Duration (years)
irrigation and wastewater process cooling, and the “Purple Can Club.”		The Purple Can Club	<p>treated wastewater is reused for irrigation and cooling water purposes. This improves the water quality in receiving streams by preventing the discharge of associated nitrogen and phosphorous to the Gunston Cove and ultimately the Chesapeake Bay. In addition, it saves our drinking water resources by avoiding using potable water for cooling and irrigation purposes.</p> <p>As part of the ongoing Wastewater Utility Management Plan, the county is exploring other potential uses of the reuse water.</p> <p>The Purple Can Club for glass recycling began in October 2019 when glass was no longer accepted with curbside recycling. Glass recycling containers are located throughout the county as well as the I-66 Transfer Station and the I-95 Landfill Complex. The program may be expanded in the future.</p>					
W.12: Follow up on the concrete recycling pilot program at the I-95 Landfill by seeking additional opportunities to recycle construction and/or demolition debris.	11	Concrete recycling pilot	Staff will evaluate potential options for recycling concrete and other types of construction debris. Program details will be addressed in a future implementation program.	DPWES		Future	2025-2030	<5
W.13: Evaluate legal, operational and equity issues associated with a “pay as you throw” disposal model, which is a variable pricing model in which customers pay a rate that reflects the amount of service they use.	10		Staff will examine potential options for “pay as you throw” disposal. The Solid Waste Management Plan will be reviewed in the next several years and will include these types of questions. Program details will be addressed in a future implementation program.	DPWES		Future	2025-2030	5-10
Actions that Apply to Government Facilities and Operations								

Implementation Action	CECAP Strategy #(s)	Program Name(s)	Program Description	Leads and Partners	Resil. Ffx	2022 Status	Timeframe Initiated or Continuing	Duration (years)
W.14: Implement the Zero Waste Plan and litter reduction efforts, inclusive of all OES recommendations in the Waste Management and Recycling Focus Area of OES.	OES	Zero Waste Plan	Staff will continue implementation of the Zero Waste Plan which began in 2022, following adoption of the Zero Waste Plan on November 9, 2021. This plan has two zero waste goals for Fairfax County Government and Fairfax County Public Schools operations: diverting 90% of waste away from landfills or incinerators and decreasing the total amount of waste generated by 25%.	DPMM, DPWES, FCPA, FMD FCPS,		Ongoing	2023-2024	10+
W.15: With respect to county operations, pursue the goals and targets set forth in Fairfax County's Operational Energy Strategy, adopted in July 2021 but as may be updated from time to time, regarding waste management and recycling and procurement (i.e., goods and services) and undertake the actions listed in these focus areas.	OES	Sustainable Procurement Program, Zero Waste Plan	Staff will continue to implement the Sustainable Procurement Program. In 2019, DPMM launched the Supply Chain Corporate Social Responsibility (CSR) Program to monitor the sustainability performance (including climate action) of our mission critical suppliers. See progress here . In addition, DPMM continues to manage a robust surplus equipment program that includes reusing, reselling, or recycling e-waste and other hard-to-recycle items. Staff will also continue to implement the Zero Waste Plan (see Action W.4) with a focus on reduction and reuse. Pilots were launched in 2022 to reduce single-use/problematic products and packaging and improve waste sorting in county operations.	DPMM, DPWES, FCPA, FMD		Ongoing	2023-2024	10+
W.16: Support community-led pilot programs to accelerate implementation of climate action in support of CECAP goals and increase investments in zero waste and waste reduction and management activities.	10, 11	Community Pilots	See BEE.17, ES.13, T.20. NR.12.	Industry-related orgs. / assns., NGOs		New	2023-2024	10+
W.17: Identify and recognize individual, organization and business Climate Champions that accelerate implementation of actions to meet CECAP goals.	10, 11	Climate Champions – Orgs, and Businesses	See BEE.16, ES.12, T.21, NR.11.	NGOs, Businesses		New	2023-2024	10+

Implementation Action	CECAP Strategy #(s)	Program Name(s)	Program Description	Leads and Partners	Resil. Ffx	2022 Status	Timeframe Initiated or Continuing	Duration (years)
W.18: Evaluate progress on GHG reduction goals at 2030 and 2040 milestone periods and determine the actions needed to achieve the overall goal of carbon neutrality by 2050.	10, 11	Milestone Assessment	See BEE.25, ES.19, T.22, NR.13.	OEEC, DPD, LDS, DPWES, FMD, FCPA, DTA, OCA, Legislative Affairs		Future	2025-2030	10+
W.19: Consider and, where appropriate, develop and advance legislative proposals to provide Fairfax County with greater authority to address waste matters, such as more extensive oversight of private haulers, the authority to establish recycling incentives or requirements, and the authority to regulate or ban single-use plastics and other items that contribute to waste and pollution.	10, 11	County Legislative Program	Staff will monitor and advocate for legislative authority at the local level, as well as monitor and support state and federal legislation to improve waste reduction and management.	DPWES		Ongoing	2023-2024	10+

Natural Resources 	Modeled contribution to emissions reduction: 2.4% CECAP Strategies: 12. Support preservation, restoration, and expansion of natural systems, green spaces, and soil quality: 2.4% CECAP Sector Goal: <ul style="list-style-type: none"> Expand the tree canopy to 60% with a minimum of 40% tree canopy coverage in every census block by 2030 and a minimum of 50% tree canopy coverage in every census block by 2050, prioritizing areas of highest socioeconomic need first.
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Implementation Action	CECAP Strategy #(s)	Program Name(s)	Program Description	Leads and Partners	Resil. Ffx	2022 Status	Timeframe Initiated or Continuing	Duration (years)
Actions that Apply to the Community								
NR.1: Continue development and delivery of public outreach/ education campaign on the benefits of green spaces and trees ("NR 101"), expanding program to more advanced topics.	12	Numerous education programs: NVSWCD, Urban Forestry	The many education programs from NVSWCD and Urban Forestry will continue. Other possibilities include Park Authority's ParkTakes, Nature Center programs, and other community outreach programs.	NVSWCD, FCPA, DPWES-UFMD	CRC. 2b	Ongoing	2023-2024	10+
NR.2: Continue and expand a broad-based community outreach and education campaign to reduce greenhouse gas emissions (i.e., take climate action).	12	Carbon-Free Fairfax	See BEE.1, ES.1, T.1, W.3.	OEEC	CRC.2b	Ongoing	2023-2024	10+
NR.3: Promote and coordinate tree planting events on public and private properties, including financial assistance.	12	Tree Planting and Preservation Fund	The Tree Preservation and Planting Fund (TPPF) supports efforts to preserve, manage, and plant new trees. The fund can be used by governmental and non-profit entities for urban forestry projects	DPWES-UFMD	CRC. 1c	Ongoing	2023-2024	10+

Implementation Action	CECAP Strategy #(s)	Program Name(s)	Program Description	Leads and Partners	Resil. Ffx	2022 Status	Timeframe Initiated or Continuing	Duration (years)
			on public properties or commonly owned open space.		AE. 2c			
NR.4: Create new program to partner with HOAs and nonprofits organizations to promote tree planting and native plants.	12	Fairfax County Tree Canopy Program	There are several existing programs that promote tree planting in the county. To fill the gaps in these programs and meet the tree canopy goals and targets, the Fairfax County Tree Canopy Program is being developed following a successful Urban Forest Management Division (UFMD) pilot project to plant trees along the Route 1 corridor. Implementation of this new tree planting program is planned during the planting season beginning in 2023 and will include residential tree plantings, tree plantings on school property, and tree plantings in HOA common areas and on nonprofit properties.	DPWES-UFMD, OEEC, FCPS, HOAs, FACS, County Residents, nonprofit orgs.	CRC. 1c AE. 2c	New	2023-2024	10+
NR.5: Create a cross-disciplinary Policy Evaluation county staff team to analyze existing programs and policies regarding natural resources and climate change to create a comprehensive climate approach.	12	Policy Update and Regulatory Review	Fairfax County has many natural resources-related policies and programs but has not yet undertaken a review of these initiatives to align these efforts with a climate focus. In the first half of 2023, OEEC will work with other lead agencies to determine a scope for this Policy Evaluation staff team, determine members of the team, and set a meeting schedule and deliverables. As part of this recommendation, specific policies for tree canopy and site development will be evaluated, in addition to other natural resources-related policies. The specific policies noted for review include such items as the Comprehensive Plan, the Zoning Ordinance, the Tree Ordinance, the Public Facilities Manual, and other transportation and natural resources plans. Specific recommendations on plan or policy updates (e.g., Comprehensive Plan amendments) will result from this review. While this specific cross-disciplinary team identified is new, the county currently has many ongoing initiatives involving cross-disciplinary teams that are working to	OEEC, DPD, FCPA, FCDOT, DPWES, NVSWCD, LDS	AE. 1a	New	2023-2024	5-10 years

Implementation Action	CECAP Strategy #(s)	Program Name(s)	Program Description	Leads and Partners	Resil. Ffx	2022 Status	Timeframe Initiated or Continuing	Duration (years)
			address these items, such as stormwater planning efforts, street tree incentives as part of Urban Design Guidelines, changes to the landscaping and screening zoning requirements, and other similar projects. The upcoming review of the Environment Element of the Policy Plan will focus on this topic area and recommended updates to the Policy Plan.					
NR.6: Develop and deliver competitions for preservation of green space.	12	None	Staff will explore options to develop and deliver competitions for green space preservation.	OEEC, UFMD, DPD, LDS	AE.1b and AE.2a	Future	2025-2030	10+
NR.7: Continue monitoring, measuring, and tracking changes in tree canopy over time.	12	UFMD Tracking	UFMD tracks tree canopy and forest quality through industry standards (see 2015 Tree Canopy and 2018 iTree Report for examples). This work will continue, and expansion opportunities will be evaluated as they arise.	DPWES-UFMD	All AE	Ongoing	2023-2024	10+
NR.8: Promote green infrastructure in development projects.	12	Part of NR-5 policy review	Staff will, as part of the Policy Evaluation Team noted in NR.5, evaluate how best to promote green infrastructure in development projects.	DPD, DPWES, LDS, FCPA	AE. 1a	New	2023-2024	10+
NR.9: Monitor and evaluate progress on county natural resources sector programs.	12	Various Programs	There are numerous natural resources sector reporting mechanisms. There is an ongoing effort to consolidate monitoring and tracking of ongoing NR efforts for reporting on the dashboard that will be coordinated by OEEC with data provided by the relevant departments. Workplan updates will be evaluated as implementation efforts get underway and metrics will be developed as data becomes available in the next year.	DPWES, FCPA, OEEC	IAP. 2a	Ongoing	2023-2024	10+
NR.10: Update the Comprehensive Plan, Zoning Ordinance and associated codes and policies in regards to energy efficiency/green buildings, transportation including EVSE, sustainable development and	12	None	See BEE.3, T.4, T.18, T.19. Staff will review existing Comprehensive Plan policies, the Zoning Ordinance, and all county policies related to development that reference these documents in these areas: <ul style="list-style-type: none"> Energy efficiency and green buildings 	OEEC, DPD, LDS, FCPA, FCDOT, DPWES		New	2023-2024	5-10

Implementation Action	CECAP Strategy #(s)	Program Name(s)	Program Description	Leads and Partners	Resil. Ffx	2022 Status	Timeframe Initiated or Continuing	Duration (years)
land use, and natural resources, to be in alignment with CECAP and RF climate goals.			<ul style="list-style-type: none"> Electric vehicles and public transportation Sustainable development and land use Natural resources, including trees, streams, green spaces, soil <p>Once this review is completed, if there are areas where the policies can be strengthened or improved or where climate change can be integrated, staff will seek Board authorization to update the policies and/or Zoning Ordinance.</p>					
NR.11: Identify and recognize community individual, organization and business Climate Champions that accelerate implementation of actions to meet CECAP goals.	12	Climate Champions – Orgs. and Businesses	See BEE.16, ES.12, T.21, W.17.	NGOs, Businesses		New	2023-2024	10+
NR.12: Support community-led pilot programs to accelerate implementation of climate action in support of CECAP goals and increase investments for natural resource protection and management activities.	12	Community Pilots	See BEE.17, ES.13, T.20, W.16.	Industry-related organizations/associations, NGO		New	2023-2024	10+

Actions that Apply to Government Facilities and Operations								
NR.13: Evaluate progress on GHG reduction goals at 2030 and 2040 milestone periods and determine the actions needed to achieve the overall goal of carbon neutrality by 2050.	12	Milestone Assessment	See BEE.25, ES.19, T.22, W.18.	OEEC, DPD, LDS, DPWES, FMD, FCPA, DTA, OCA, Government Relations		Future	2025-2030	5-10
NR.14: Consider and, where appropriate, develop and	12	None	Staff will monitor and advocate for legislative authority at the local level, as well as monitor	UFMD, DPD, LDS, FCPA,	AE.1	Ongoing	2023-2024	10+

advance legislative proposals to provide Fairfax County with greater authority to protect green spaces and trees.			and support state and federal legislation to protect and enhance natural resources.	OEEC, Government Relations				
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