

CECAP Discussion Starter – Transportation/Development Subgroup

December 2020

Background

ICF and the Metropolitan Washington Council of Governments (COG) are supporting Fairfax County's development of a Community-wide Energy and Climate Action Plan (CECAP). At Fairfax County's September Task Force meeting, community representatives continued to make progress toward development of the CECAP by establishing greenhouse gas (GHG) reduction goals including a long-term target goal and an two interim year goals, one of which was defined during the meeting. The goals established during the meeting include:

Long-term goal: Carbon neutrality by 2050, with at least 87% coming from emissions reductions from a 2005 base year

Interim goal: 50% reduction by 2030 from a 2005 base year

Purpose of this Document

The purpose of this document is to provide background information and a starting list of sector-specific strategies to guide and inform CECAP Working Group sector-specific discussions. Below, ICF has outlined sector specific ideas based on ICF's prior plans and feedback received through CECAP stakeholder engagement and public outreach. CECAP stakeholders have been split into two groups with the goal of facilitating discussions. The two group are:

- An energy group focusing on efficiency, renewables, generation and supply. This group will be tightly focused on energy issues with minor consideration of external variables.
- A transportation, land use policy, solid waste and wastewater group. This group will have a more diverse focus.

Setting the Stage

As a next step, sector-specific subgroups of the CECAP Working Group will meet to determine and prioritize the strategies that Fairfax County will use to reach emission reduction goals. ICF has provided an initial set of possible strategies, however this list is not comprehensive. It is intended to support discussion and to help guide and inform stakeholder priorities. In the December meetings, members will use this document to guide conversations and refine specific strategies, actions, and implementation measures for inclusion in the plan.

Throughout the document, ICF has used the terms Sectors, Strategies, Actions, and Implementation in the ways defined below:

Sector: An area of emissions focus or an economic sector which generates carbon emissions from its energy use or economic activity.

Strategy: A broader set of actions or set of sub-sector work that can be modeled to understand emissions reductions.

Action: A project or specific technology that impacts greenhouse gas emissions within a strategy or sector.

Implementation: Programs or policies that support realization of actions.

Within the Implementation section of each strategy, we've categorized specific implementation methods to indicate where the ability to impact change might exist. Within each strategy, implementation items are divided based on the following categories.

Category 1: Implementation programs and policies currently available to County:

Measures and voluntary programs that the county can do right now.

Category 2: Implementation programs and policies that might become available to the County in the future: Programs and policies that the county might someday be able to do with state enabling legislation. Items in this section is work that the county and its stakeholders can advocate for at the state level.

Category 3: Implementation programs and policies that need Regional, State or Federal

Action: State and Federal measures and programs that the county will likely not have the authority to do on its own. Items in this section is work that the county and its stakeholders can advocate for the state, regional or federal to do to support county goals.

Connecting to Fairfax Values

Based on the sector subgroup meetings, ICF will update this list of strategies and actions and develop recommendations for sector level goals that support Fairfax County's long-term and interim goals. Additionally, ICF will work to connect strategies and actions to Fairfax County values. [One Fairfax](#) is a framework—or "lens"—that will be used to consider equity in decision-making and in the development and delivery of future policies, programs and services. In this planning process, it will help county to look intentionally, comprehensively, and systematically at barriers that may be creating gaps in opportunity. Through the CECAP process, opportunities exist to ensure that ICF will work to create a plan that incorporates social and racial equity, economic opportunities, and health and environmental justice impacts. In the December meetings we will continue this discussion.

Social and Racial Equity: Strategies shall have connections to social and racial equity in alignment with the One Fairfax policy.

Economic Opportunity: Strategies shall contain an economic screen to understand the affordability of the measures and how they might create economic opportunities for the county. Costs and/or savings will be provided for each strategy later in the CECAP process.

Health and Environmental Justice: Strategies will also reflect health and environmental justice issues relevant to county residents and businesses. Pollutant reductions will be provided for each strategy later in the CECAP process.

December Meeting Discussion Framework for Sectors and Strategies

Buildings and Energy Efficiency

Strategy #1: Increase energy efficiency and conservation in existing buildings

Strategy #2: Pursue beneficial electrification in existing buildings

Strategy #3: Implement green building standards for new buildings

Energy Supply

Strategy #4: Increase renewable energy in grid mix

Strategy #5: Increase production of onsite renewable energy

Strategy #6: Increase energy supply from renewable natural gas (RNG), hydrogen, and power-to-gas

Transportation

Strategy #7: Increase electric vehicle (EV) adoption

Strategy #8: Support efficient 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

Strategy #10: Reduce the amount of waste generated and divert waste from landfills and incinerators

Strategy #11: Responsibly manage all waste streams

Forestry

Strategy #12: Support preservation and expansion of quality natural resources

Transportation

Strategy #7: Increase electric vehicle (EV) adoption

Actions:

- **Action 7a:** Leverage county assets to expand EV use across on-road vehicles and off-road equipment
- **Action 7b:** Encourage EV adoption by consumers and private fleets
- **Emerging Technologies** (To be determined)

Implementation:

- **Category 1:**
 - Electrify the county fleet; review and update the [County Operational Energy Strategy](#).
 - Pursue light-duty EVs in the near term and medium- and heavy-duty EVs in later years
 - Potential funding source is the [CMAQ Vehicle Fuel Conversion Incentive Program](#) through Virginia Clean Cities and the [Volkswagen Mitigation Trust Fund](#) through the Dept. of Environmental Protection
 - Explore the creation of local incentive programs similar to [DriveCleanChicago](#)
 - Invest in EV charging infrastructure at county facilities and public locations
 - Potential funding source is the Volkswagen Mitigation Trust Fund
 - Streamline existing municipal permitting and inspection processes for EV infrastructure
 - Work with local financial institutions to create equitable opportunities for EV adoption through innovative mechanisms such as [low interest EV loans](#)
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- **Category 2:**
 - Support ability to require increased percentage of EV infrastructure in new single-family homes and multi-unit dwellings by establishing EV-ready requirements in the municipal land use and zoning code
 - Support policies that engage workplaces and private commercial businesses (including car share locations) to incentivize EV charging infrastructure
 - Support policies that engage with transportation network companies (TNCs) and online delivery services to explore funding mechanisms to increase EV use across platforms and expand EV charging infrastructure in underserved areas
- **Category 3:**
 - Encourage state participation in the Multi-State Zero Emission Vehicles [\(ZEV\) Taskforce](#)
 - Support state continued active participation in the multi-state Transportation & Climate Initiative [\(TCI\)](#)
 - Support new and existing utility initiatives (e.g., Dominion Energy [EVSE rebate](#)) to implement demand-response programs (time-of-use charging rate plans; vehicle-to-grid integration)
 - Support and expand High Occupancy Vehicle (HOV) lane exemptions for EVs to major travel corridors in Fairfax County (e.g., the [I-395 express lane](#) and the [I-66](#) outside the beltway)

Transportation

Strategy #8: Support efficient land use, active transportation, public transportation and transportation demand management (TDM) to reduce vehicle miles traveled

Actions:

- **Action 8a:** Improve bicycle and pedestrian infrastructure
- **Action 8b:** Promote public transportation and commuter services
- **Action 8c:** Implement [Smart-Growth](#), [placemaking](#), and transportation demand management (TDM) strategies
- **Emerging Technologies:** Electric bikes, scooters

Implementation:

- **Category 1:**
 - Continue implementation of smart-growth and transportation demand management strategies as outlined in the county's comprehensive plan
 - Support focused zoning and land use planning (through TOD, parking minimums, zoning restrictions, etc.)
 - Continue implementation of Fairfax trail planning work as part of the county Comprehensive Plan
 - Encourage and support public transit
 - Promote carshares, carpooling, and telework through incentive programs and outreach (e.g., advertise Fairfax County park & ride existing infrastructure)
 - Consider an anti-idling ordinance or rulemaking
- **Category 2:**
 - Support policies that allow for local congestion fees and zero/low emission zones
- **Category 3:**
 - Support state and federal funding efforts that prioritize non-motorized transportation
 - Support state efforts to reduce vehicle miles traveled by implementing a Mileage-Based User Fee (MBUF) program or through the multistate Transportation and Climate Initiative

Transportation

Strategy #9: Increase fuel economy and use of low carbon fuels for transportation

Actions:

- **Action 9a:** Improve fuel economy by implementing a Low Carbon Fuels Program
- **Action 9b:** Support Corporate Average Fuel Economy (CAFE) or similar enhancement of fuel economy standards
- **Emerging Technologies** (To be determined)

Implementation:

- **Category 1:**
 - Encourage pilot and demonstration projects that accelerate development of low carbon fuels (e.g., electricity, renewable diesel, renewable natural gas) in the county fleet and more broadly
- **Category 3:**
 - Support state and federal efforts to implement a Low Carbon Fuels Standard, increase fuel efficiency of vehicles, and provide a zero emission vehicles (ZEV) or low emissions vehicle (LEV) sales mandate (see [California's Zero-Emission Vehicle Program](#))

Waste

Strategy #10: Reduce the amount of waste generated and divert waste from landfills and incinerators

Actions:

- **Action 10a:** Reduce overall waste generation
- **Action 10b:** Increase waste diverted from landfills and waste-to-energy by growing recycling and composting
- **Emerging Technologies** (To be determined)

Implementation:

- **Category 1:**
 - Develop and implement a recycling program for construction/demolition debris (CDD), including public outreach and education to promote CDD source reduction and reuse
 - Expand county composting operations to address organic waste
 - Promote and expand “refuse, reduce, reuse, repurpose and recycle” initiatives that encourage source reduction of consumer waste and recycling
 - Explore a [Zero Waste](#) plan, goals or framework for the county.
- **Category 3:**
 - Support state and federal policies that reduce waste generation (single use plastics measures, chemical additive regulations, etc.)
 - Support state and federal policies to better manage construction demolition debris waste.

Waste

Strategy #11: Responsibly manage all waste streams

Actions:

- **Action 11a:** Capture and use energy generated at all landfills and waste to energy facilities
- **Emerging Technologies** (To be determined)

Implementation:

- **Category 1:**
 - Explore ways to ensure county waste contracts align with best practices and best available technology for reducing GHGs.
 - Reduce emissions from wastewater treatment by reclaiming treated wastewater and sewage sludge
 - Use reclaimed wastewater for process cooling and irrigation.
 - Use sewage sludge for fertilizer application.
- **Category 3:**
 - Support state and federal policies that reduce waste emissions from landfills by capturing landfilled gas and converting it to usable energy
 - Convert captured landfill gas into natural gas and electricity for county use or sale.
 - Capture gas generated by closed landfills.
 - Support state and federal policies that encourage energy generation from waste:
 - Support waste-to-energy initiatives.
 - Support energy production using bio-solids combustion.

Forestry

Strategy #12: Support preservation and expansion of quality natural resources

Actions:

Action 12a: Conserve existing trees to improve air and water quality

Action 12b: Increase tree coverage

Emerging Technologies (To be determined)

Implementation:

- **Category 1:**
 - In alignment with the Fairfax County Tree Action Plan, develop programs that conserve existing young and mature trees to help improve soils, filter groundwater, and remove air pollutants. Plant trees, when possible, in clusters with understory plant species and groundcover to encourage a healthy and complete ecosystem.
 - Use the [Tree Preservation and Planting Fund](#) to help cover costs of planting and preserving trees on public properties and common open spaces.
 - Conduct county-wide and site-specific inventories in advance of proposed development to minimizing impacts to and loss of high-quality trees and natural vegetative communities.
 - Monitor tree cover changes using satellite imagery urban tree canopy analyses to assess current conditions and determine how forests and urban tree ecosystems are changing over time.