



City of Bowie

# 2022-2025 Implementation Plan

For the 2020-2025 Climate Action Plan



# City of Bowie Climate Action Plan Implementation Plan 2022-2025

## Acknowledgements

### **Bowie City Council**

Timothy J. Adams, Mayor  
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**This approved document serves as a supplement to the Climate Action Plan approved by Bowie City Council via R-47-20.**

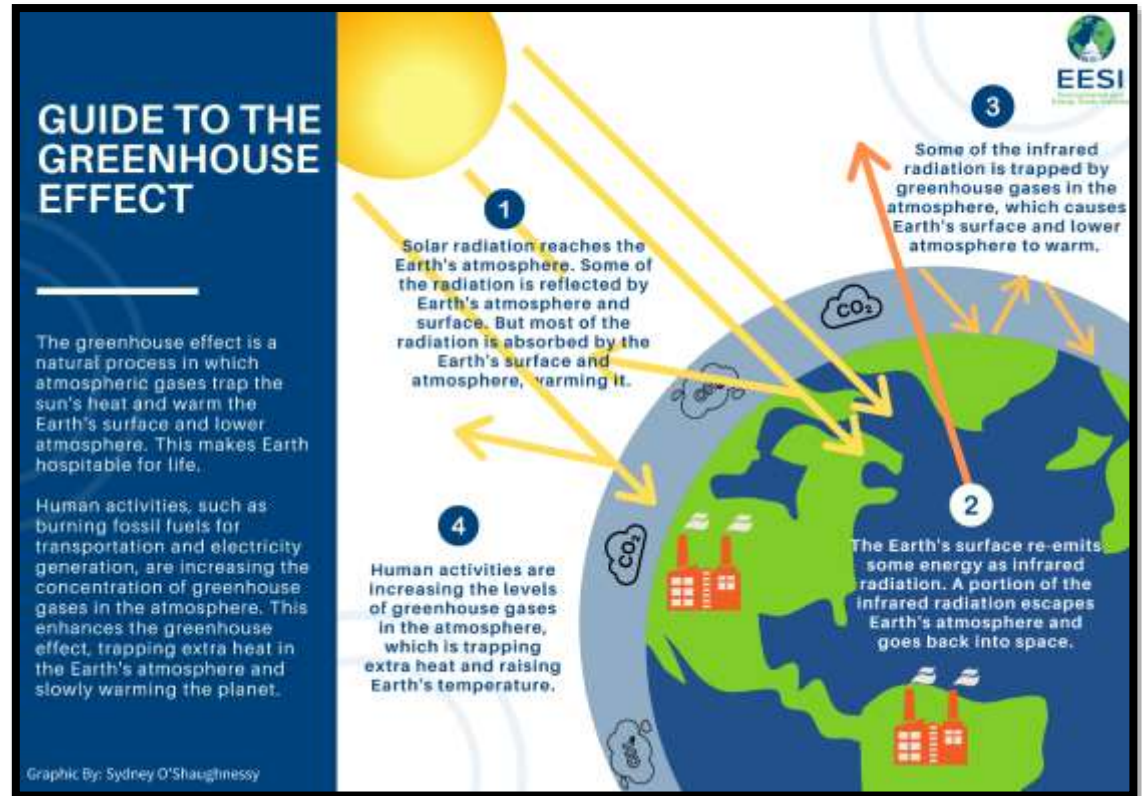
## Introduction:

The City of Bowie adopted its Climate Action Plan (CAP) in 2020, which will guide us through the year 2025 with the overall goal of reducing greenhouse gas emissions by 50% by the year 2030 over 2015 levels, with the eventual goal of reaching net-zero by 2050. These goals are not only specific to the City of Bowie, but they are also in line with regional and national goals and the recommendations of the Intergovernmental Panel on Climate Change (IPCC). Please note the references under each action to its County Climate Action Plan counterpart.

Climate is defined as the long-term average of weather that happens at a given place for a given season, according to the Association of Climate Change Officers. However, certain factors outside of a climate system influence the odds of certain types of weather and overall climate happening more or less likely.

Because greenhouse gas emissions are masterful at clogging up our atmosphere, they trap atmospheric radiation (what we know as heat from the sun), leading to a warming effect within our atmosphere which brings associated warming temperatures, global ice melting, sea-level rise, and ocean acidification (coral reefs dying out, due to increased sea temperatures). There is a positive feedback loop (increased or exacerbated effects) when there is less ice surface area to reflect sun radiation/heat, leading to an accelerated absorption of it by the oceans and atmosphere giving way to increased extreme heat events, more intense weather phenomena and other events (such as habitat destruction, food chain issues) generally related to a global changing climate.

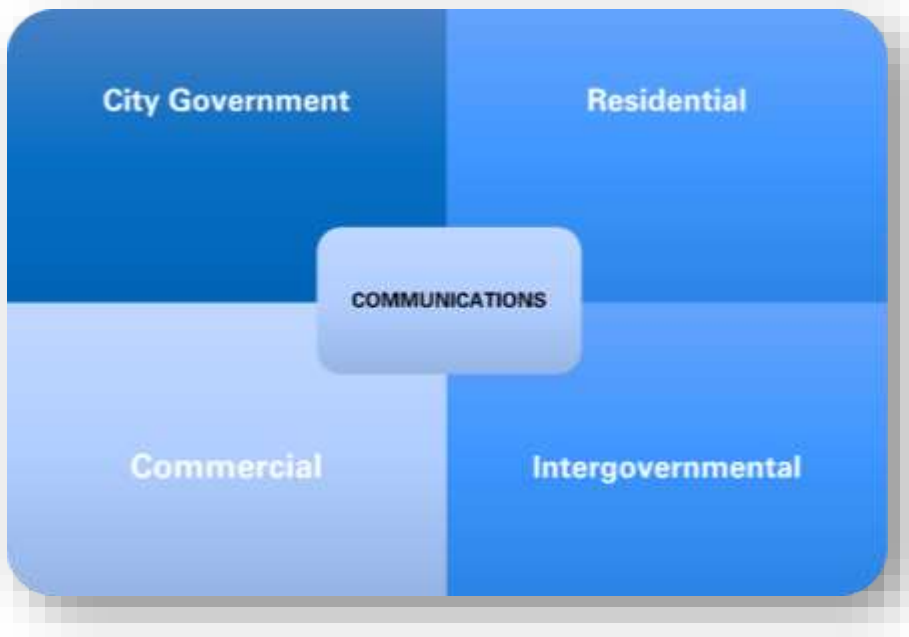
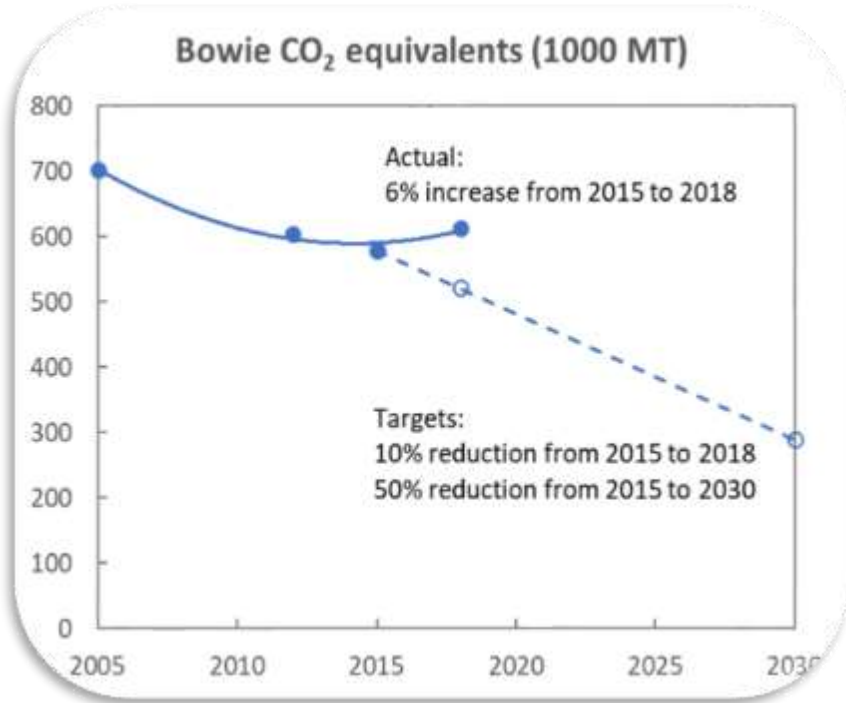
Therefore, reduced energy usage and related greenhouse gas emissions along with proactive and progressive ecological protection policies, including but not limited to, carbon sequestration (trapping) processes, natural or green infrastructure, and habitat creation/protection, are our most vital tools. Please see the graphic on this page from the Environmental and Energy Study Institute for a visual understanding of climate change as a system affecting Earth.



**Refresher:**

The figure below on the left is where Bowie currently stands regarding emissions of carbon dioxide and how much we need to decrease emissions to reach our ultimate goal.

The image on the right is an overview of the CAP sectors. **Please note that communications efforts transcend all sectors because education and outreach is key to creating change. However, it will not be part of this implementation plan as efforts are ongoing. The City is undergoing a branding process and the outcome will influence how we are able to provide communications services going forward.**



*Emissions data from Metropolitan-Washington Council of Governments (MWCOG or COG) as of 2018*

# IMPLEMENTATION TABLES

**The following pages showcase the implementation tables for each sector. Please note that not every objective will have a corresponding metric and/or next step listed at this time and that some objectives have multiple metrics which may cause them to occasionally not line up.**



# City Government

Action #	Action Area	Action Item	Objectives	Metrics
1	Energy Efficiency & Renewables	Commitment to energy efficiency and renewable energy usage in City operations  <i>PGCAP: CO-4, M-1</i>	1. Prioritize solar & renewable projects in Capital Improvements Plan (CIP) energy projects; ongoing	# of CIP projects with an energy efficiency or renewables focus
			2. Budget for and purchase software for in-house emissions benchmarking of City facilities by 2024	Acquisition of benchmarking software
			3. Evaluate the feasibility of LED light replacements at City facilities and parks annually and on an individual basis as needed.	Completion of LED and/or generator replacement projects
			4. Evaluate the feasibility of generator replacements with renewable sources annually and on an individual basis as needed.	
2	Transportation	Promote EV infrastructure  <i>PGCAP: M-4, M-6</i>	1. Update budget guidance language for vehicle acquisitions to reflect efficiency goals & cost reduction over the lifetime of an electric vehicle (EV) vs. an internal combustion engine (ICE) vehicle by FY24	Completed/update budget guidance language
			2. Adopt a Fuel Reduction Plan by reviewing baseline fuel usage, Miles Per Gallon (MPG) of vehicles, and Vehicle Miles Travelled (VMT) data while incorporating future goals by 2025.	Completion of fuel usage study/ Creation of Fuel Reduction Plan
			3. Promote telework for City employees where possible, noting that this will not be possible for all positions; ongoing.	# of EVs or hybrids acquired for City operation and # of charging stations at City facilities
3	Operations	Green purchasing & zero-waste procurement  <i>PGCAP: M-10</i>	1. Expand upon current green purchase policy and begin tracking items purchased via database/resources	Promotion of green-friendly procurement database & tracking of green procurement
			2. Implement food waste program at City Hall for staff by 2024	Implementation of food waste program at City Hall for staff
			3. Move away from plastic or wasteful giveaways	# of items in machines that are sustainably packaged and/or healthier options
			4. Expand upon healthful and/or less wasteful vending machine options	
4	Carbon Sequestration	Expand Urban Tree Canopy  <i>PGCAP: M-11, A-5</i>	1. Establish a new/updated No Net Loss Policy, combining the 2013 Street Trees Policy with the new Development Review Guidelines by 2023	Completion of updated No Net Loss Policy
			2. Regularly measure tree canopy for assessment towards the adopted 45% goal	Completion of tree canopy assessments as data is provided

Action #	Action Area	Action Item	Objectives	Metrics
			3. Expand tree planting rebate program by 2024	# of Plant One Tree On Us (POTOU) trees given/budgeted for
			4. Convert as much turf to ecological landscaping (incorporating trees and promoting native species), when possible and feasible	Creation of map showing potential areas for conversion to ecological landscaping & sq. feet of non-park properties or public rights-of-way converted to ecological landscaping
			5. Develop a native species promotion policy for internal operations by 12/31/22.	# of park and street trees lost and replanted
			6. Update Public Works Specifications to address native species policy for stormwater management projects	Completion of native species promotion policy for internal operations Discussion and/or completion of update to Public Works Specifications
5	Operations & resilience	<p>Develop a Municipal Resiliency Plan</p> <p>Resilience: the ability to recover after a disaster and developing systems for mitigation.</p> <p><i>PGCAP: M3, A1-A8</i></p>	<p>1. Assess the need for a Smart Cities Task Force and/or Smart Cities workshops by 2023.</p> <p>2. Incorporate Emergency Response Plan into overall Resiliency Plan</p> <p>3. Incorporate a climate equity policy into resilience planning to equitably provide emergency services</p>	<p>Compilation of Smart Cities data and distribution to Directors and appropriate staff</p> <p>Creation of Resiliency Plan, if deemed necessary through analysis</p>

# City Government Next Steps

Action #	Objective	Next Steps
1	1	Business Operations and Community Services will continue to evaluate and prioritize energy efficiency and renewable based projects for City facilities using the energy efficiency CIP. Typically, one project is executed per year.
	2	Business Operations will request funding for FY23 for emissions tracking software. Update TBD.
	3, 4	Because of the large-scale nature of these objectives, they will need to be assessed on a yearly basis and approached as needed and as is feasible. Community Services plans to replace old vehicles (where possible) with EVs as they are phased out. In the foreseeable future they will be acquiring an electric truck and an SUV and running conduit (EV readiness) as part of an overall security enhancement to the Senior Center bus lot.
2	1	Community Services will update budget guidance to state the intent of focusing on better MPG for City vehicles by September 2022, in time for the next budget cycle.
	2	Staff Sustainability Team or Sustainability Planner will execute fuel usage study to review 2019 as a baseline analysis. The Team will work on fuel reduction plan by 2025. Immediate next steps involve Community Services moving forward with running of conduit and security enhancements for Senior Center bus lot.
3	1	The Staff Sustainability Team, or other appropriate staff, will compile a green database, based off Maryland Department of the Environment resources by 2023. The database will be distributed to directors and associated purchasing staff. Allow for self-reporting via SST, focusing on green purchases from IT and maintenance.
4	1	Planning Department will write up the new resolution by 2023 with SST review.
	2	Watershed Manager will continue using data from Chesapeake Bay Conservancy to analyze the City tree canopy rate when available.
	3	Planning Department will assess the feasibility of a tree program expansion and submit budget requests by FY24.
	4	Meet with Parks and Grounds to discuss ecological landscaping where feasible. Native plants and ground cover are easier to maintain thus maintenance would go down. P & G will continue to replace both street and park trees when losses occur.
	5, 6	Schedule meeting with DPW to discuss internal policy and implementation by 2023.
5	1	Business Operations will assess the need for a Smart Cities Task Force by 2023. A handbook will be compiled and distributed to stakeholders with information on Smart Cities.
	2	Apply for a grant for a resiliency plan next round (2023) through the Maryland Resiliency Fund. The Staff Sustainability Team will discuss feasible projects.



# Residential

Action #	Action Area	Action Item	Objectives	Metrics
6	Energy Efficiency & Renewables	Increase home energy efficiency and energy conservation  <i>PGCAP: M-8</i>	1. Increase communication efforts to get homeowners to optimally improve the efficiency of their homestead	Council Of Governments (COG) tracking of residential kWh and therms
			2. Provide guidance on utility information sources, carbon footprint websites, and home meters for assessing individual energy use	# of home energy audits completed
			3. Develop energy efficiency tips/handouts for Levitt homeowners by 2023	# of yard tool rebates
			4. Expand mower rebate program to include other electric yard tools by 2022	Completion of new energy efficiency documents, videos, online guides, etc. (TBD what final product will be)
7	Energy Efficiency & Renewables	Increase installation of solar on residential homes and encourage use of renewable energy sources  <i>PGCAP: CO-4, M-2</i>	1. Publicize City solar initiatives to lead by example	COG: emissions per kWh and proportion of various energy sources powering the MD utility grid
			2. Consider the creation of a Solar Task Force with members of Green Team (GT) and Environmental Advisory Committee (EAC), IT and other staff and Council- by 2024 pending County outcome	# of public forums convened by Task Force, if created
			3. Expand education and outreach on MD Clean Energy choices as well as different options for residential panels and community solar by 2023	# of permits issued for residential solar panels
			4. Creation of new solar data webpage by 9/30/22	# of residents sourcing renewable energy
				Creation of solar data webpage
8	Transportation	Promote transportation choices that reduce GHG emissions  <i>PGCAP: M-5</i>	1. Increase efforts to publicize and promote electric vehicles (EV) and infrastructure in line with current State goals- ongoing.	COG: VMT and emissions per VMT
			2. Encourage the use of PGC Link, Metro Bus, and MARC train	# of EV registered in Bowie, # of EV charging stations
			3. Execute Trails Master Plan and implement Complete Streets Policy	Completion of updated bike rack inventory

Action #	Action Area	Action Item	Objectives	Metrics
			4. Complete an inventory of existing bike racks in the City by 6/30/22.	
			5. Revitalize walking or biking efforts via Green Team and City staff by 12/31/22.	Miles of trails maintained by the City # of walking and biking events held per year
			6. Create new walking and biking tour maps by 2024	Completion of walking/biking tour map
9	Waste Management & Diversion	Modify Community-wide View of Diets & Handling of Food Waste  <i>PGCAP: M-10, A-10</i>	1. Create social media campaign to promote plant-rich diets, which are proven to be the most environmentally friendly relative to land and resources use and composting by 2023. Ongoing education and outreach.	COG: landfill emissions data & creation of social media campaign. Completion of monthly plant-based recipe in Green Bowie e-newsletter
			2. Expand residential curbside pickup of food waste for composting, aspiring to go City-wide by 2025 AND add community drop off point at Public Works or Kenhill Center (pending discussions)	# of houses included in expanded food waste program # of tons diverted from the landfill; \$ saved by diversion from landfill
			3. Make presentation to City Council re: food waste expansion by 12/31/22, if necessary	Completed presentation to Council re: food waste expansion
			4. Conduct City-wide survey about food waste (may be part of a larger sustainability survey) by 6/30/23.	Completion of City-wide survey about food waste and analysis of data received
10	Waste Management & Diversion	Promote Sustainable Consumption & Use of Goods/Services	1. Create social media campaign to increase resident awareness of carbon footprints, recycling requirements/standards, and the perils of plastic	Completion of campaign, # webinars/workshops
			2. Investigate the feasibility of a set quarterly Styrofoam drop-off event by 12/31/22.	# of Styrofoam pickup events OR containers/bags brought to events Host viewing of plastic or environmental films 2x per year

# Residential Next Steps

Action Item	Objective	Next Steps
6	1,2	The Sustainability Planner will continue using social media to expand the messaging on energy efficiency, including hosting webinars like Coffee & Climate and the Sustainability Webinar series.
	3	Formulate a new way to advertise home energy efficiency and energy audits. This may be done through a consultant, a video with Communications, or something else entirely.
	4	After FY23 budget approval, begin the process of expanding the program. The Sustainability Planner will focus on outreach efforts.
7	1	Meet with Communications team to confirm messaging strategies and amplified messaging.
	1	Start Green Bowie Instagram account by July 2022.
	2	Will need to wait and see how the County Solar Task Force materializes. Sustainability Planner and Energy subgroup may be able to team up with them for events and outreach. Consider a member representative from County group.
	3	Continue to focus on outreach regarding clean energy choices, working with communications to assemble a "resources" page for residents interested in solar.
8	1	Meet with Communications and start Green Bowie Instagram account when ready. Research # EVs registered in Bowie (through MVA) and # of chargers in total. Complete and advertise by 2023 and going forward.
	2	Use County materials to advertise PGC Link as well as electronic signs to target drivers specifically. The Sustainability Planner will work with the County to host informational sessions by Fall 2022.
	3	Revitalize walking or biking outreach efforts via Green Team and/or Sustainability Planner and create an updated, interactive map by 2024. Immediate next step- acquisition of transportation planner by summer 2022.
9	1	Green Bowie Instagram creation. Social media campaign to be completed by 2024 and then ongoing.
	2, 3	Dependent on DPW, Council directives, and final FY23 numbers.
	4	The Sustainability Planner will begin putting together an online survey for residents. Discussions about the survey will take place through SST meeting and with the Communications Department.
10	1	Green Bowie Instagram and a possible Coffee & Climate focused on consumerism, life cycles of products, carbon footprints, etc. This should be completed by Fall 2022.
	2	Sustainability Planner/Planning Department will have discussions with DPW about implementing a more set schedule of Styrofoam focused events. Decision by June 2022.

# Commercial

Action #	Action Area	Action Item	Objectives	Metrics
11	Energy Efficiency & Renewables	Reduce Commercial Energy Consumption <i>PGCAP: M-8</i>	1. Promote energy efficiency in commercial buildings and the use of smart meters to monitor and control energy use.	COG: commercial kWh and therms
			2. Implement Sustainability Grants for Businesses program	# of workshops held to promote grant program
				# of advertisements for commercial grant program
12	Energy Efficiency & Renewables	Increase use of renewable energy sources <i>PGCAP: CO-4, M-2</i>	1. Encourage incorporation of solar panels (any renewable) on commercial property	COG: emissions per kWh
			2. Implement Sustainability Grants for Businesses program in FY23	# of workshops held on the grant program
				# of grants awarded (or dollar amount) that focus on increasing renewables
13	Transportation	Sustainable Transportation Options <i>PGCAP: M-5</i>	1. Encourage businesses to acquire EV fleet vehicles	COG: vehicle miles travelled (VMT) and emissions per VMT
			2. Encourage installation of EV infrastructure	# of EV charging stations on commercial property
			3. Complete a study to assess pedestrian and bike friendly accessibility to commercial properties by 10/31/22	# of advertisements promoting sustainable transportation options
			4. Implement Sustainability Grants for Businesses program in FY23	Completion of commercial center accessibility study
				# of businesses using EVs for local deliveries
14	Waste Management & Diversion	Move Toward Green Purchasing and Zero Waste Policies <i>PGCAP: M-10</i>	1. Encourage local business to recycle materials and compost food waste	tons of material diverted from the landfill by recycling and composting
			2. Implement Sustainability Grants for Businesses program in FY23	# of grants awarded focusing on zero waste

Action #	Action Area	Action Item	Objectives	Metrics
15	Operations	Create Partnerships to Promote Green Businesses	1. Hold forums for local businesses and the Greater Bowie Chamber of Commerce (GBCC) to explore strategies for GHG reduction	# of green forums held
			2. Promote the City as a center for green commercial ventures and startups	# of green Bowie businesses
				# of marketing promotions of the City as a center for green business

## Commercial Next Steps

Action Item	Objective	Next Steps
11	1,2	Implement and promote Sustainability Grants for businesses. Plan workshops and events to promote the program.
12	1, 2	Implement and promote Sustainability Grants for businesses. Plan workshops and events for promotion.
13	1, 2	Explore option of City-offered rebates and promote State and Federal rebates. MAPS subgroup and/or Sustainability & Transportation Planners will interview management to get a picture of struggles/opportunities for businesses to switch to greener fleets. Have transportation specialist work with MAPS subgroup of Green Team on bike rack inventory for shopping centers.
	3	Acquire transportation specialist. Complete study assessing pedestrian and bike friendly accessibility to commercial properties by 10/31/22
14	1	Consider ways with the schools and the County on waste reduction in schools (schools are lumped into commercial data via COG reporting) specifically regarding.
15	1,2	The sustainability planner will create a video via City Communications and work with the Greater Bowie Chamber of Commerce to hold 1-2 workshops to educate the business community about green programs. Bring this program and climate change awareness/opportunities to the Economic Development Committee.

## Intergovernmental

Action #	Action Area	Action Item	Objectives	Metrics
16	Transportation	Promote Development of Mass Transit Options within the County & Region	1. Implement PGC Link micro-transit service in the City	# of micro transit trips in Bowie per day
			2. Continue to advocate for more frequent service and expanded transit options	# of position statements/letters sent per year advocating for improved transit service
17	All	Develop/Support a Comprehensive Master Plan  <i>PGCAP: CO-5, M-7</i>	1. Participate in development of a comprehensive Bowie and Vicinity Area Master Plan for sustainable growth and development	# of development proposals that conform to or deviate from adopted plans
			2. Advocate for County and City officials to follow adopted land use plans	# of projects from plan completed
			3. Implement Master Plan recommendations	# of recommendations completed
18	Energy Efficiency/ Transportation	Promote Development Guidelines that enhance energy efficiency of building & transportation infrastructure  <i>PGCAP: M-9, A-9</i>	1. Advocate for development guidelines and building codes that optimize energy efficiency	# of development proposals that conform to or deviate from current guidelines and codes
			2. Advocate for building codes to require EV ready infrastructure for new or renovated parking spaces for non-residential buildings	# of external communications
				# of meetings attended
				# of green features on new developments

## Intergovernmental Next Steps

Action Item	Objective	Next Steps
16	1	The Planning Department and Communications will work with County DPW&T to advertise the launch of the PG Link in April of 2022.
	2	The City will continue promoting alternative transportation connections through COG transportation group, and through continued discussions with County Park & Planning.
17	2	Continue to advocate for legislation for sustainable growth in the County and State. Designate a point person to continually review bills. Continue engagement and involvement for the County Master Plan of Transportation.
18	1, 2	Continue advocating to the County and to COG for building efficiency codes, development guidelines, and EV infrastructure.