

GHG Reduction Strategies

C/CAG Board of Directors Annual Forum
April 8, 2021

Agenda



1. GHG and VMT Overview

- Legislation and Regulation
- Reducing VMT and GHG
- C/CAG Current Programs and Projects
- Efforts of other Regional Agencies
- Market "Drivers"

2. Potential Opportunities for C/CAG

3. Discussion – Feedback – Polling (20 minutes)





Greenhouse Gas Emissions (GHG)

We are experiencing climate change crisis in unprecedented ways and it is negatively affecting the health and safety of the communities we serve.

The negative manifestations of the climate change include:

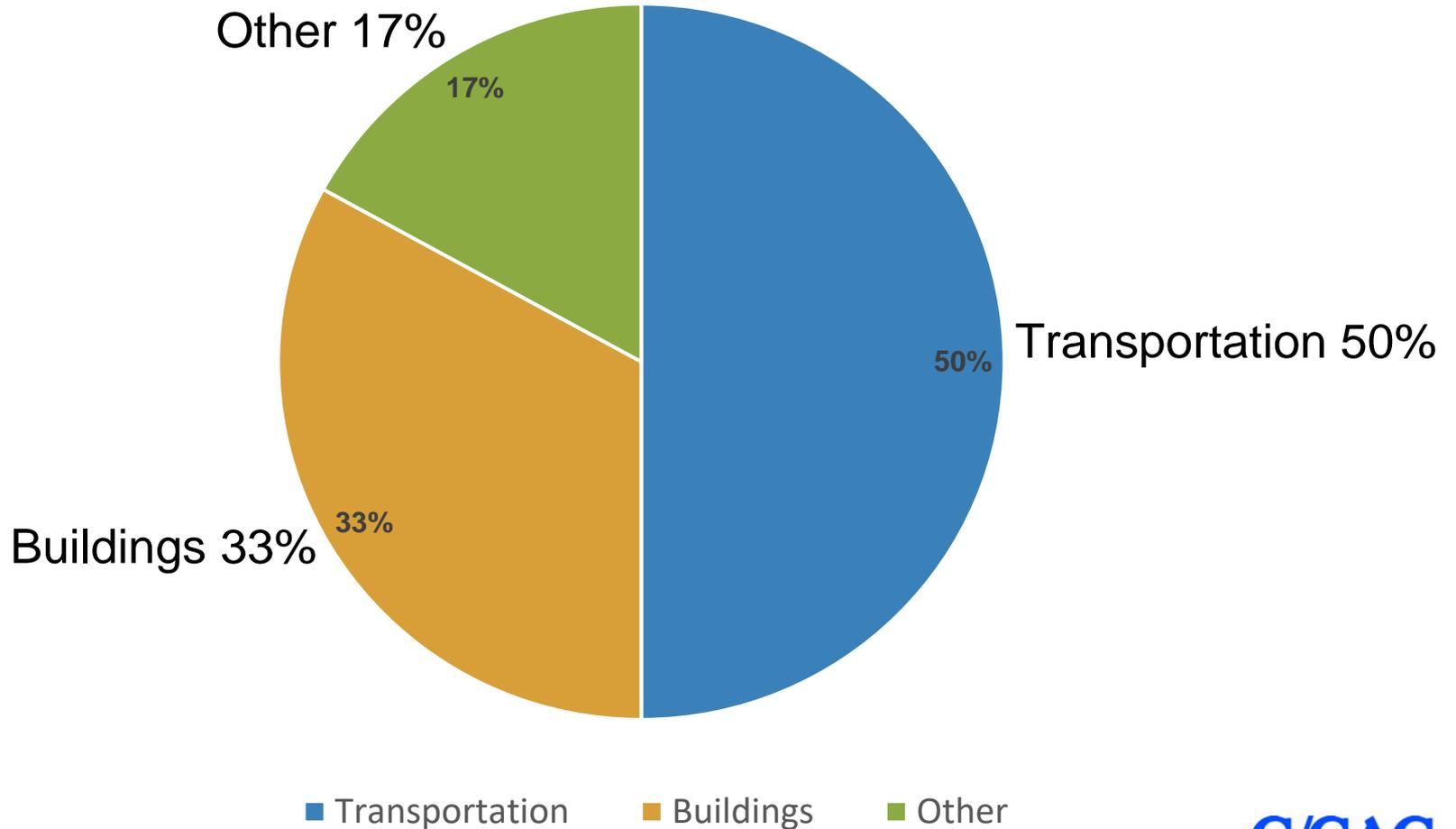
1. Severe weather volatility
2. Increased temperatures
3. Water insecurity
4. Rising sea levels
5. Catastrophic wildfires





GHG & VMT Overview

San Mateo Countywide GHG Emissions





Legislation and Regulation

State Law and Exec Orders require GHG reductions

By 2035 all new passenger/light vehicles - zero emission - EO N-79-20
Emissions 40% below by 2030 - SB 32 (2016)

Other GHG Reduction – Bills and Executive Orders

- Emissions to 1990 GHG levels by 2020 - AB 32 (2006)
- Regional GHG target - SB 375 (2008)
- Change in Traffic Analysis - SB 743 (2013)
- Carbon Neutrality by 2045 - EO B-55-18
- MTC Plan Bay Area- GHG reduction goals





Reducing GHG & VMT

1. Reduce Vehicle Miles Traveled (# of and length trips)

- More compact development
- Mode shift
- Carpools
- Bicycle and pedestrian
- Transit including shuttles

2. Electrification and Hydrogen

- Electric vehicles and Charging Stations
- Electric Bikes
- Alternative Fuel heavy vehicles



3. Other

- Urban Greening – Trees - Sequestration
- Buildings- Phasing out natural gas



C/CAG's Current Programs and Projects

- Supporting carpools, shuttles, and senior transit
- Investing in bicycle and pedestrian facilities
- Supporting Highway 101/Express Lane (roadway pricing/ high-occupancy vehicles)
- Funding Energy Watch & RICAPS
- Land use planning: Updating the TDM policy
- VMT Model to assist in implementation of SB 743
- Funding 21-Elements – Supporting Home for All.





Efforts of other Regional Agencies

BAAQMD

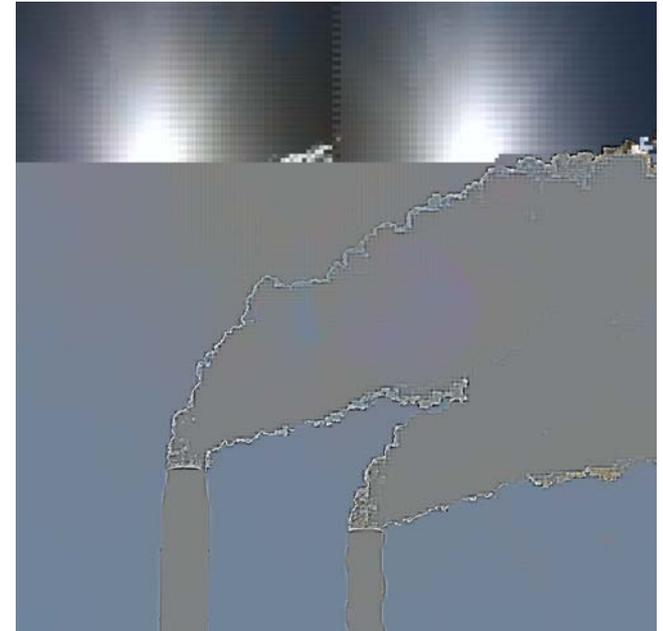
- Permitting
- Health Protection
- Planning and Resources
- Grants

Peninsula Clean Energy

- Cleaner Energy
- Building and Vehicle Electrification
- Resiliency for vulnerable customers

Local Cites and County Efforts

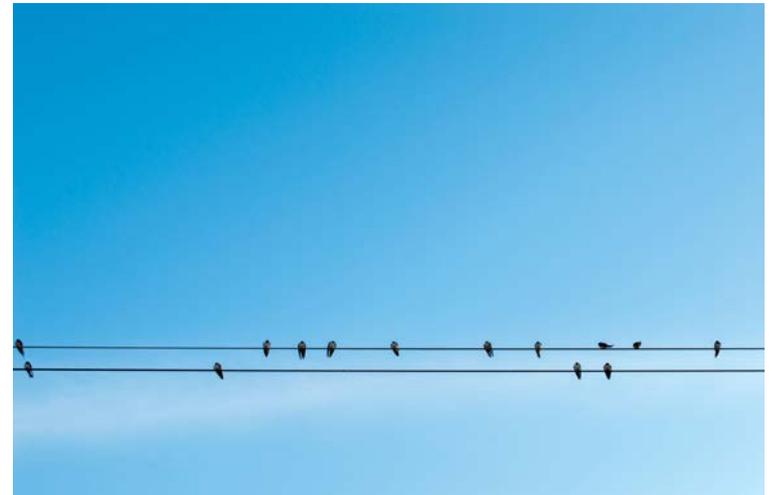
- Climate Action Plans
- EV Infrastructure
- Fleet Transition
- Retiring Methane (natural) gas systems





Market "Drivers"

- GM - All electric passenger by 2035
- Ford - All electric in Europe by 2030
- Volvo - All electric in by 2030
- Fed Ex - All electric by 2040
- UPS - Investing in EV van companies
- Proterra – Electric Busses
- US Military – Hydrogen, Solar, Battery
- Green Tech – Solar, Battery, Hydrogen, HVAC





Context/Timing

- Focus on transportation, mode shift, and electrification; with more limited role in reducing GHG from buildings.
- Future work dependent on securing additional funding.
- Partnerships are critical to success: PCE, County Office of Sustainability, others.
- Many of these items are rapidly evolving and will require flexibility and multiple iterative strategies.
- **All options will include an Equity element or framework.**
- **There might be significant State and Federal funding for GHG reducing transportation**



Potential Opportunities for C/CAG

	TOPIC AREA	OPTIONS FOR ENGAGEMENT	EQUITY COMPONENT	PARTNERS
a	GHG Mitigation Program (Applied for \$660k Caltrans Planning Grant)	Prepare a C/CAG GHG Mitigation Program and templates to assist Cities <ul style="list-style-type: none"> • Bike/ped • Electric vehicles and bikes • Urban greening 	Identifies geographic areas to target or income thresholds and potential linkages with affordable housing projects.	<ul style="list-style-type: none"> • PCE • Caltrans • Count OOS • Member Agencies



Potential Opportunities for C/CAG

	TOPIC AREA	OPTIONS FOR ENGAGEMENT	EQUITY COMPONENT	PARTNERS
b	Electric Vehicles Charging Infrastructure	Feasibility Plan for implementing Gov Exec Order N-79-20; role for C/CAG; identify estimated charging stations; opportunities for funding; policy issues	Identify environmental justice and equity geographies to target investments, and Countywide eligibility for households	<ul style="list-style-type: none">• PCE• Member Agencies





Potential Opportunities for C/CAG

	TOPIC AREA	OPTIONS FOR ENGAGEMENT	EQUITY COMPONENT	PARTNERS
c	E-Bikes & Bicycle Infrastructure	<p>Feasibility Plan to expand E-Bike use for individual owners</p> <p>Best Practices regarding planning/design for storage/public charging; equity concerns</p>	<p>Identify environmental justice and equity geographies to target investments, and Countywide eligibility for households</p>	<ul style="list-style-type: none"> • PCE • Member Agencies





Potential Opportunities for C/CAG

	TOPIC AREA	OPTIONS FOR ENGAGEMENT	EQUITY COMPONENT	PARTNERS
d	Heavy Fleet Alternative Fuels	Feasibility Study identifying steps to transition heavy fleet in San Mateo County to alternative fuels.	TBD	<ul style="list-style-type: none">• PCE• Fleet Owners





Discussion

Questions, Comments, Omissions?

Summary

- a) CCAG GHG Mitigation Program (Caltrans Planning Grant)
- b) Electric Vehicles Charging Infrastructure (Feasibility Study to Implement Governors order requiring new passenger vehicles to be zero emission)
- c) E-Bikes & Infrastructure (Feasibility Study to expand use of E bikes and identify best practices)
- d) Heavy Fleet Alternative Fuels (Roadmap for long term heavy fleet conversion to alternative fuels)

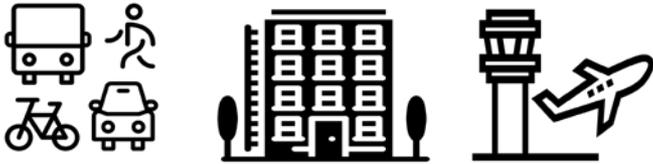


Feedback - Polling

Google Poll Questions

1. Are we headed in the right direction with options for GHG reduction?
2. What is your relative ranking of the options?
 - a) CCAG GHG Mitigation Program (Caltrans Planning Grant)
 - b) Electric Vehicles Charging Infrastructure
 - c) E-Bikes & Infrastructure
 - d) Heavy Fleet Alternative Fuels
3. Are there other high impact GHG solutions that CCAG should investigate? (OPEN ENDED)

QUESTIONS?



Sean Charpentier, Program Director, scharpentier@smcgov.org
Kim Springer, Transportation Coordinator kspringer@smcgov.org
Jeff Lacap, Associate Transportation Coordinator,
jlacap@smcgov.org