



# CITY OF MERCED

## PROGRAMMATIC CLIMATE ACTION PLAN FOCUS GROUP

DECEMBER, 2014

BILL KING, CITY OF MERCED PRINCIPAL PLANNER

JENNIFER VENEMA, PMC



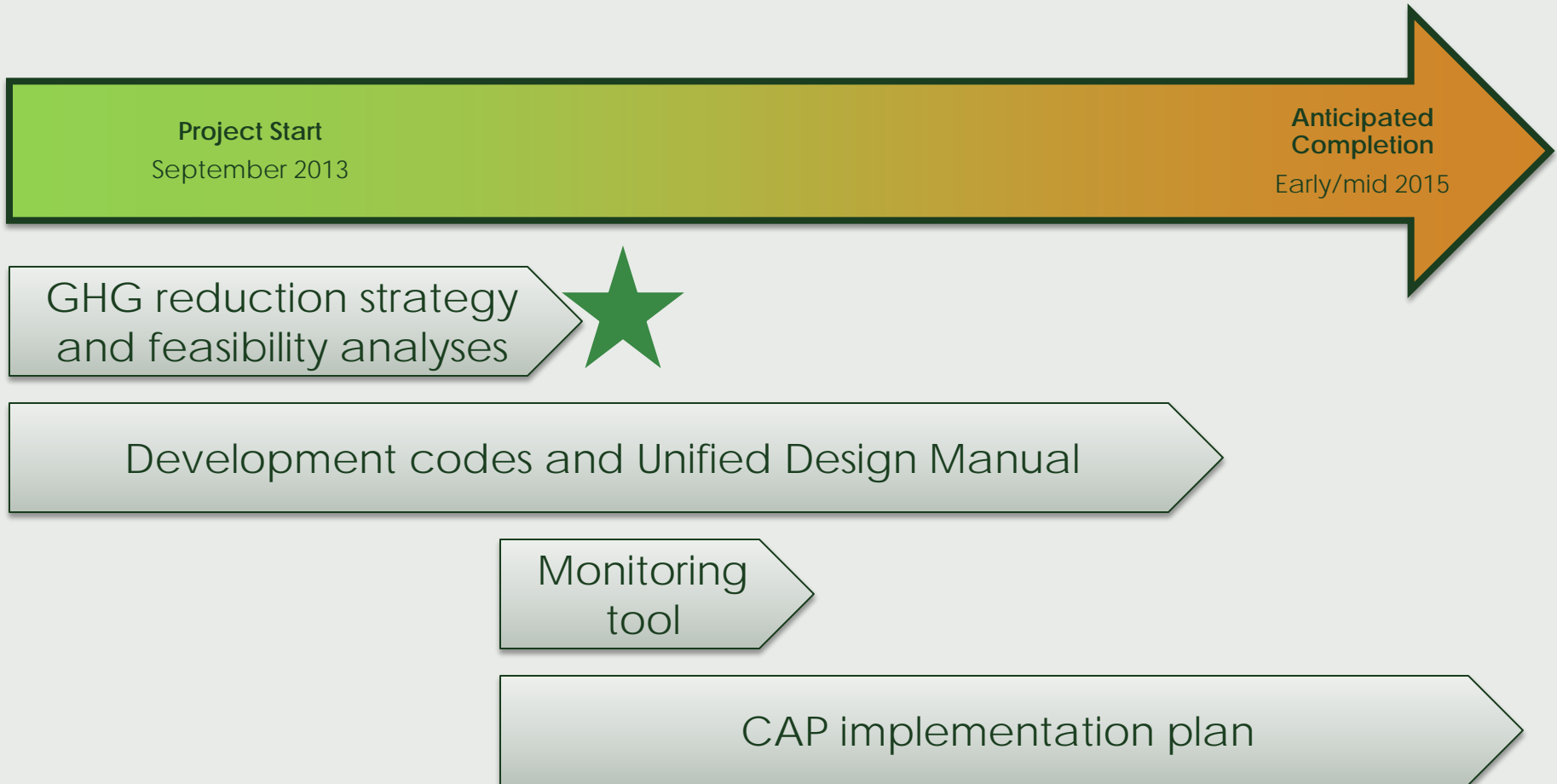


# Agenda

- Welcome and introductions (5 minutes)
- Emissions forecast updates (5 minutes)
- Measures and performance-based approach (20 minutes)
- Feasibility analysis (10 minutes)
- Focus Group discussion (60 minutes)
- Next steps (5 minutes)
- Time for additional comments, questions, and discussion (15 minutes)

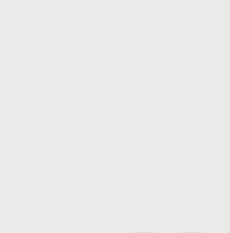


# Anticipated Timeline





# CITY OF MERCED PROGRAMMATIC CLIMATE ACTION PLAN



## PROJECT OVERVIEW





# CEQA categories

- Aesthetics
- Agriculture and forestry
- Air quality
- Biological resources
- Cultural resources
- Geology and soils
- Greenhouse gas emissions
- Hazardous materials
- Housing
- Hydrology and water quality
- Land use
- Mineral resources
- Noise
- Public services
- Recreation
- Transportation
- Utilities



# Regulatory Background

- **AB 32 and Scoping Plan**
  - Reduce state GHG emissions to 1990 levels by 2020
- **SB 97**
  - GHG analysis is required as part of CEQA
- **SB 375**
  - SCS/APS to be part of Regional Transportation Plan
- **SJVAPCD Requirements**
  - Regulatory authority for direct and indirect air pollution
  - Indirect Source Review regulation
- **CEQA Guidelines**
  - Opportunity for streamlined review of GHGs for new development



# Project Outcomes

## Tools to Streamline Regulations

Stand-alone  
implementation plan

Monitoring and reporting  
tools

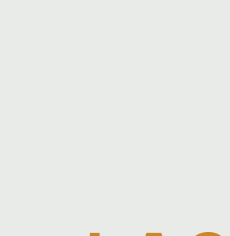
Development codes

Unified Design Manual





# CITY OF MERCED PROGRAMMATIC CLIMATE ACTION PLAN



## LAST MEETING RESULTS




# September 10 Focus Group Meeting


- Last meeting.
  - Preliminary reduction measure results
  - Discussion of measure priorities
  - Identify Priority Measures


**CITY OF MERCED**  
CLIMATE ACTION PLAN  
IMPLEMENTATION  
FEBRUARY 27, 2014


## WHAT IS A CLIMATE ACTION PLAN?


The Climate Action Plan (CAP) is like a road map to improve resource efficiency and the quality of life in the City of Merced based on a broad set of community values and goals.





- 

The CAP provides the City's strategies to enhance mobility, protect quality natural resources, maintain a healthy environment and livable community, and expand clean energy sources.
- 

California state guidance outlines minimum content for a CAP. Merced's CAP strategies are local and community-based. Strategies rely on public outreach, incentives, capital projects, leadership, and volunteer actions.
- 

Strategies help residents and businesses save energy and money, while improving the city's air quality.
- 

New tools will help the City to implement the CAP, including a work plan with performance targets, monitoring program, an update to the City's zoning code, and a user-friendly design manual.
- 

With these strategies and tools in place, new housing, stores and employment opportunities will incur fewer entitlement costs and be sited faster, while satisfying environmental review requirements.
- 

Success relies on community involvement and partnerships. The CAP celebrates and encourages community-based spirit.

Funded by the Strategic Growth Council

PSMC2

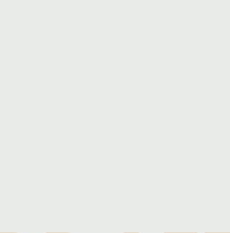


# Priority Measures Identified by Focus Group

- Higher density and mixed-use development
- Traffic efficiency
- Electric vehicles
- CALGreen standards
- Residential renewable energy
- Nonresidential renewable energy
- Water efficiency for landscaping
- Composting of organic waste
- Improved recycling



# CITY OF MERCED PROGRAMMATIC CLIMATE ACTION PLAN



## UPDATES TO GHG INVENTORY AND MEASURES



# Emissions process





# Changes to Electricity Emissions

- Inventory used emissions as reported by Great Valley Center using state protocols.
- Updated for Merced Irrigation District's actual electricity sources.
  - 44% of community electricity in 2008



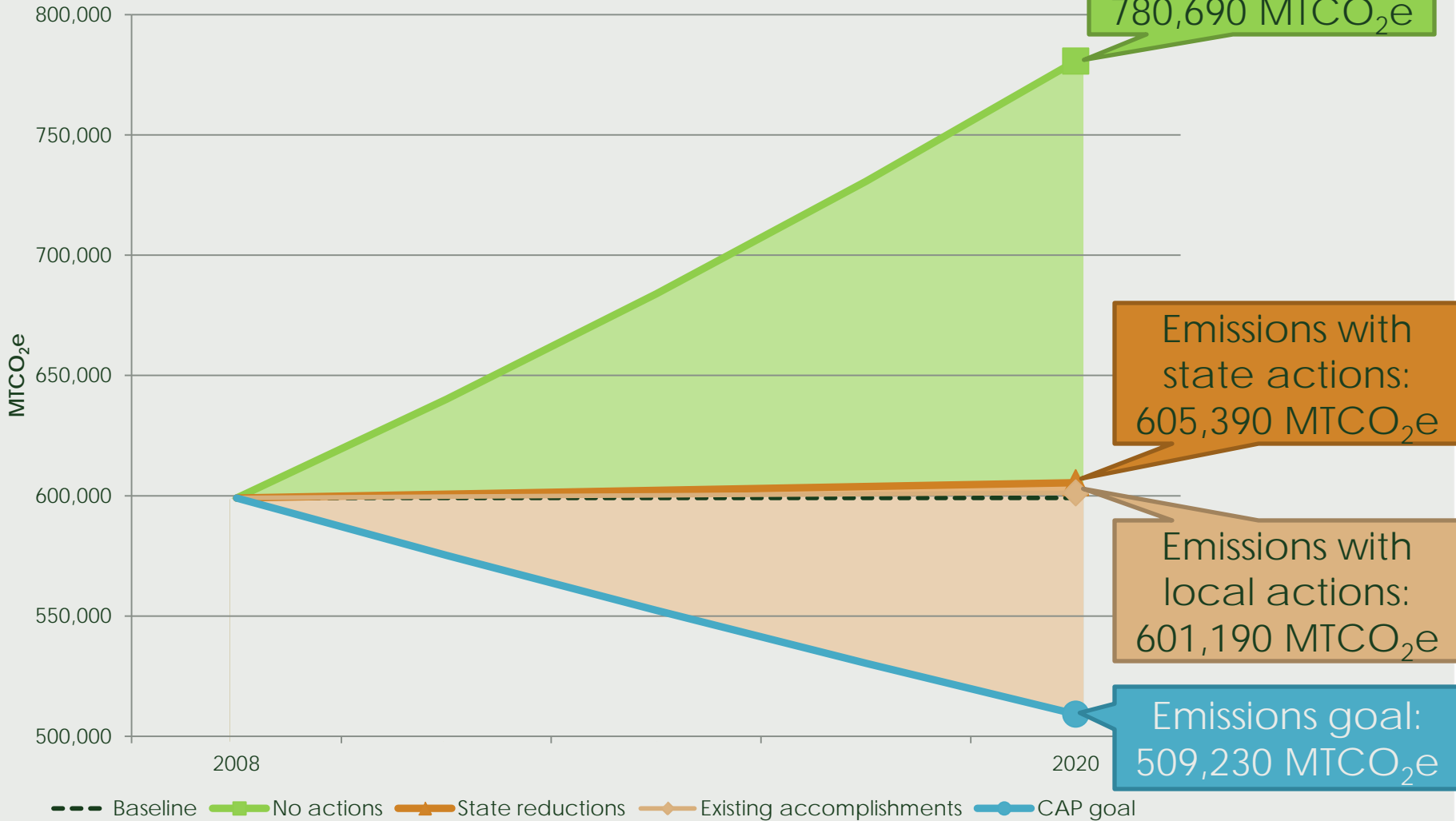


# Updates since September Focus Group Meeting

- Minor language and metric updates to several measures.
- Changes to composting measure.
- New measures:
  - Reductions from G Street underpass
  - Meter all unmetered residential water customers



# Updated Forecast and Goal

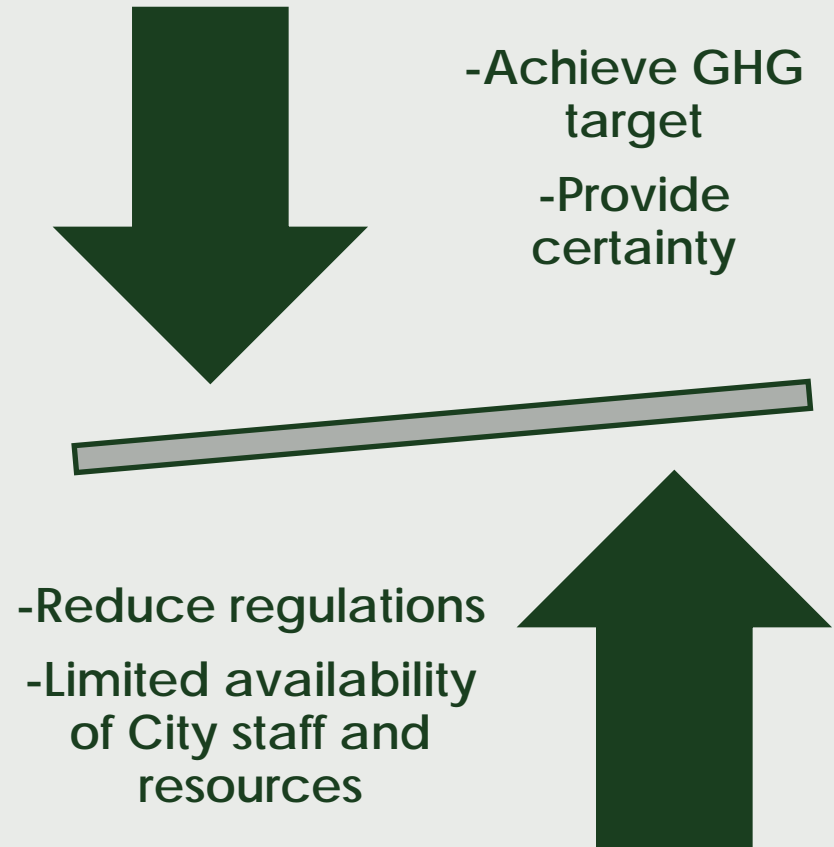






# Balancing Priorities to Achieve the 2020 Target

- Council direction is to meet the minimum elements of a qualified CAP for CEQA streamlining





# CITY OF MERCED PROGRAMMATIC CLIMATE ACTION PLAN

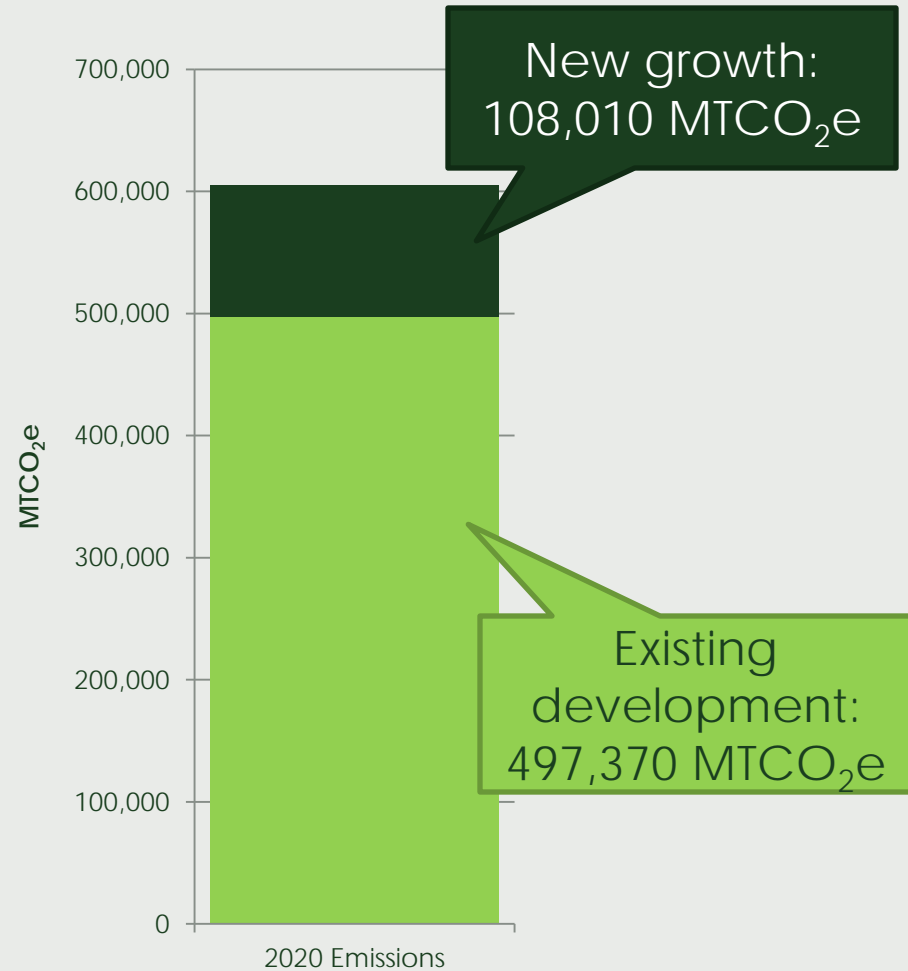


## MEASURES AND PERFORMANCE APPROACH



# Understanding Contribution of New and Existing Development

- 18% of 2020 emissions from development to be built after 2014





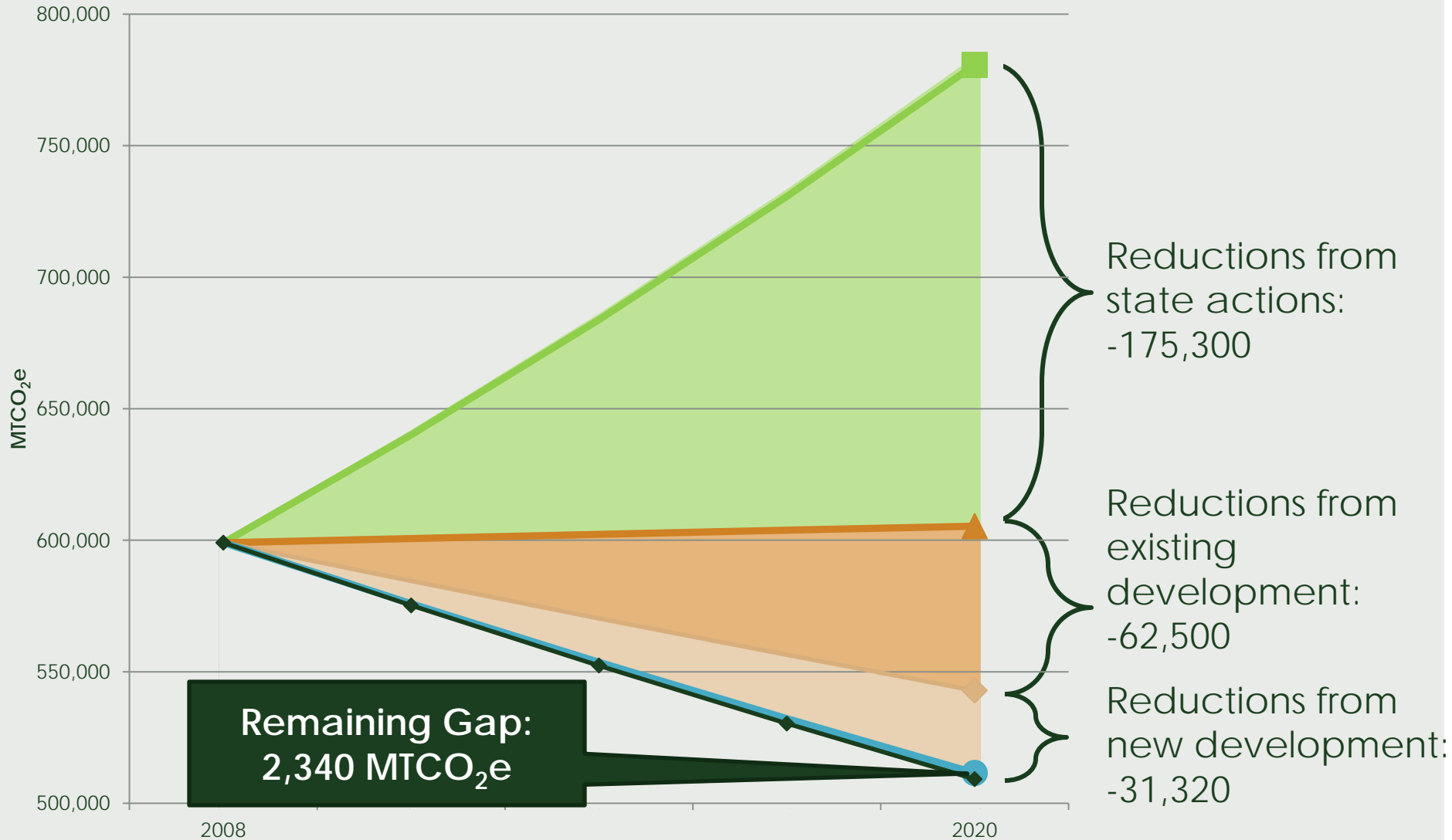
# New Emissions

- CAP measures applied to existing development: 9% below baseline.
- With growth, gap to achieve target : 37,760 MTCO<sub>2</sub>e.
  - Too large to mitigate with existing development alone





# Achievement of the Target with Performance-Based Approach





# Performance-Based Approach

- Target: close the gap with new development
  - Requires a **29% reduction below BAU for emissions from new development**
  - Different way of applying CAP measures
  - Intent is to provide developers with flexibility
- New projects select from a range of measures.
- Certainty that projects will achieve CAP goals while supporting SJVAPCD regulations
  - 29% goal is from SJVAPCD project-level guidance



# Performance-Based Approach

- Helps comply with air district regulations.
- Implements adopted General Plan EIR to mitigate buildout.
- Measures support suggested ISR mitigations.
- Advances CAP goal of streamlining development review.





# Performance-Based Approach

## New single-family house

- Good access to public transit.
- Be located in an area with a moderate degree of road connectivity
- Have a solar water heating system.
- Designed for solar access and/or solar panels.
- Etc.

## New 5-person business

- Have an on-site public EV charging station.
- Use passive solar design techniques.
- Be located in a mixed-use project (15% commercial, 85% apartments).
- Etc.



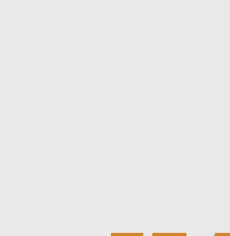


# Performance-Based Approach 16% Reduction

- New AB 32 Scoping Plan:
  - State must reduce emissions 16% below business-as-usual by 2020
- Achieving a 16% reduction with new development in Merced:
  - Remaining gap of 16,380 MTCO<sub>2</sub>e
  - 12.3% below baseline
- Actions to close gap:
  - Advanced retrofits for another 8,775 existing houses, or
  - Another 4,027 existing units with rooftop solar systems, or
  - Another 2,372 existing businesses undergoing retrocommissioning



# CITY OF MERCED PROGRAMMATIC CLIMATE ACTION PLAN



## FEASIBILITY ANALYSIS



# Feasibility Analysis

- Reviews each measure for implementation considerations.
- Can be used to prioritize measures.
- Helps identify potential challenges.





# Feasibility Analysis

- Five factors:
  - GHG reductions
  - Available partners and programs
  - Consistency with CAP values
  - Fiscal impact to community
  - Fiscal impact to City
- Score of 1 to 5 on each factor





# Feasibility Analysis Criteria

GHG Reduction	Value (MTCO <sub>2</sub> e)	Scale (MTCO <sub>2</sub> e in 2020)				
		<3,000	3,000–6,000	6,001– 9,000	9,001-12,000	>12,000
		1	2	3	4	5
Partners and Programs	Existing partners or resources exist to implement programs	Scale				
		No potential partnerships or programs	Potential programs but no partnerships to facilitate	Partnerships but no funding or programs	Partnerships and programs in place that require support of City staff	Partnerships with funding and programs in place, no support from City required
		1	2	3	4	5
Consistency with CAP Values	Value	Scale (number of values the measure is consistent with)				
	Clean Energy Resources, Public Outreach and Involvement	0	1	2	3	4
		1	2	3	4	5
Financial Impact to the Community	Value	Scale				
	<i>Initial investment required, but costs are revenue positive with savings in energy bills</i>	Net costs	Limited investment	Cost neutral	Limited return on investment	Substantial return on investment
		1	2	3	4	5
Financial Impact to the City	Value	Scale				
	<i>Initial investment required, but costs are revenue positive with savings in energy bills</i>	Net costs	Limited investment	Cost neutral	Limited return on investment	Substantial return on investment
		1	2	3	4	5



## Example: Feasibility Analysis – Nonresidential Renewable Energy

Factor	Scores				
GHG Reduction	1	<b>2</b> (3,000–6,000 MTCO <sub>2</sub> e)	3	4	5
Available partners and programs	1	2	3	<b>4</b> (Requires support of City staff )	5
Consistency with CAP values	1	2	<b>3</b> (Consistent with 2 values)	4	5
Fiscal impact to community	1	2	3	<b>4</b> (Limited return on investment)	5
Fiscal impact to City	1	<b>2</b> (Limited investment)	3	4	5
<b>Average score: 3</b>					



# Feasibility Analysis

## Cost-Benefit Factors

- Analysis of all measures
  - Specific estimates of community savings
  - Estimated City staff time and cost
- Twelve measures received more extensive analysis
  - Specific estimates of community costs
  - Total cost per MTCO<sub>2</sub>e reduced
  - Payback period



# Example: Cost-Benefit Analysis

## Basic

- Measure 4: Improve feasibility and use of bicycles.

5-year FTE	1.5
Annual staff cost	\$46,000
Annual community savings	\$121,700

## Detailed

- Measure 13: Energy retrofits to single-family homes.

5-year FTE	2.5
Annual staff cost	\$77,200
Annual community savings	\$775,300
Annual community costs	\$3,164,000
Cost per MTCO <sub>2</sub> e	\$1,250
Payback period	21 years



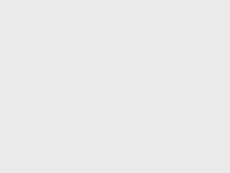


# Cost-Benefit Comparisons

Measure	City Costs and Savings		Community Costs and Savings		
	Five-Year Staff Needs (FTE)	Capital Costs	Average Total Cost to Participant	Average Annual Savings per Participant	Payback Period (Years)
3: Carpool and car share	0.5	\$0	\$4	\$12	Less than 1
5: Telecommuting	0.5	\$0	\$0	\$110	1
10: CALGreen	0.75	\$0	\$1,700	\$170	17



# CITY OF MERCED PROGRAMMATIC CLIMATE ACTION PLAN

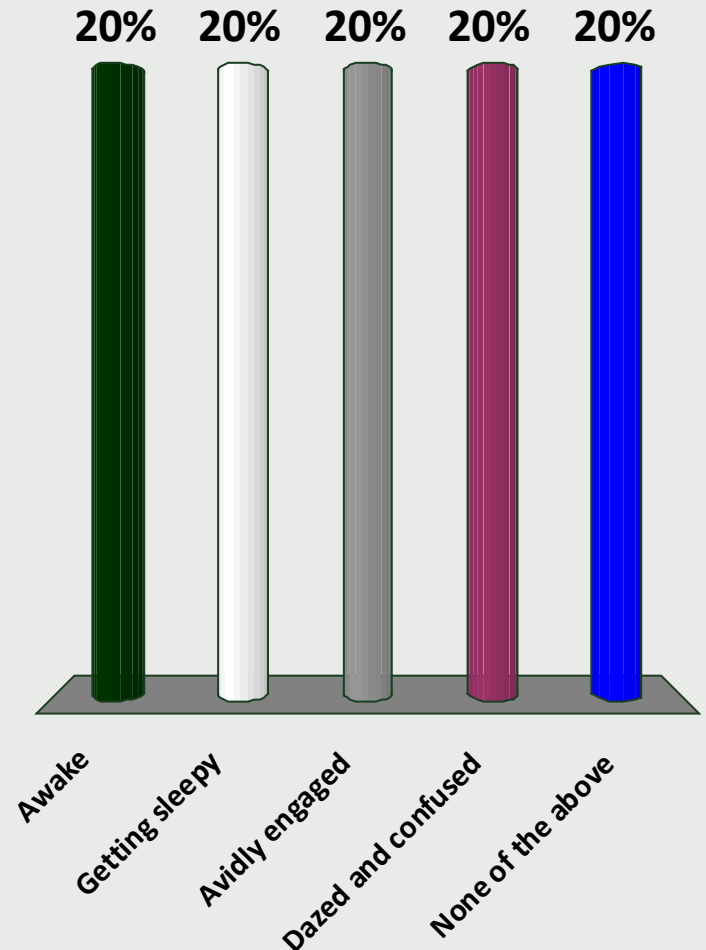


## DISCUSSION AND ACTIVITIES



# What is your current status?

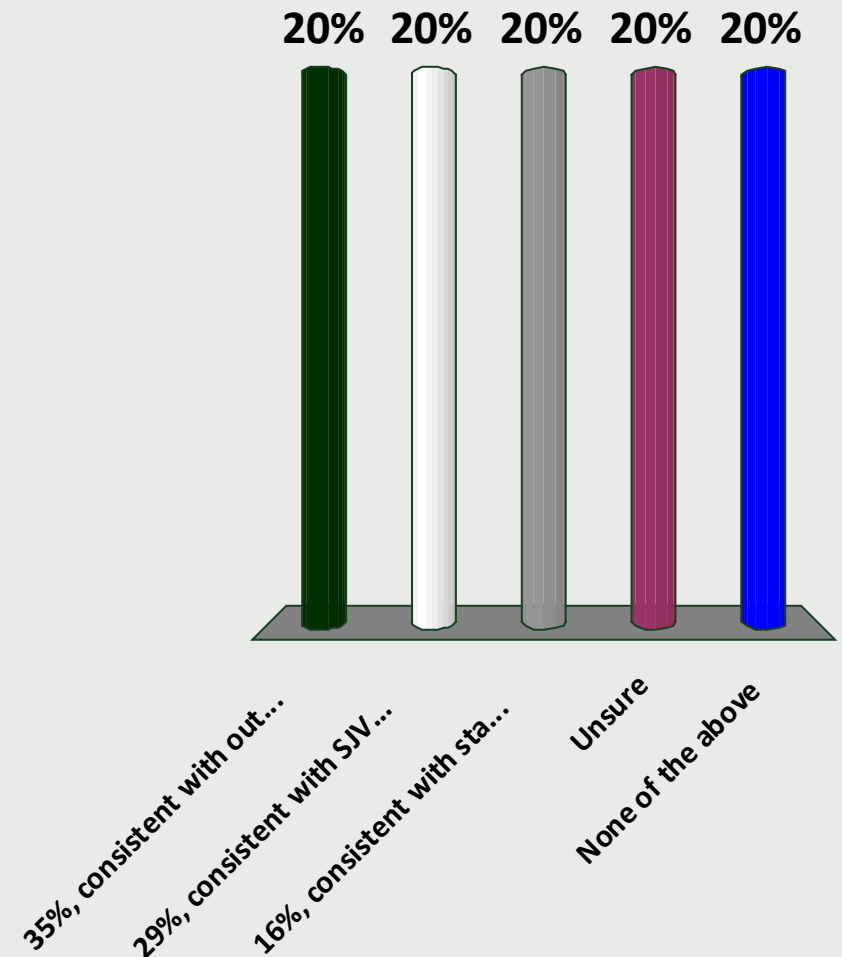
- A. Awake
- B. Getting sleepy
- C. Avidly engaged
- D. Dazed and confused
- E. None of the above





# What level of reduction is appropriate for new development?

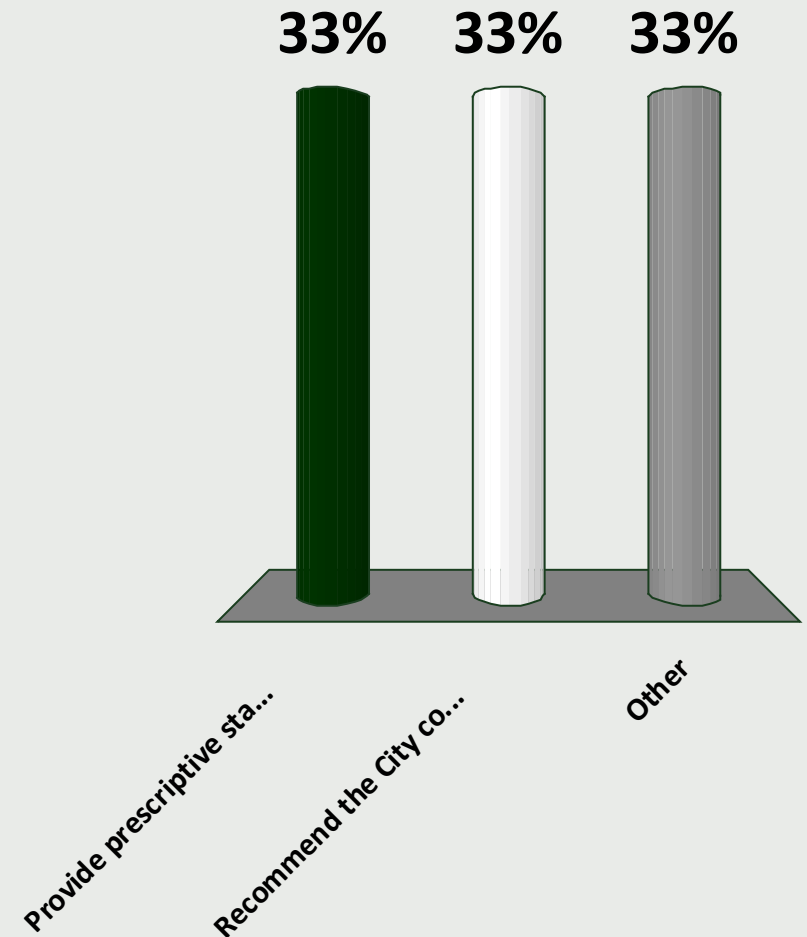
- A. 31%, consistent with outstanding gap to achieve the target
- B. 29%, consistent with SJVAPCD guidance
- C. 16%, consistent with statewide Scoping Plan forecasts
- D. Unsure
- E. None of the above





# What is the most appropriate strategy to close the gap and achieve the target?

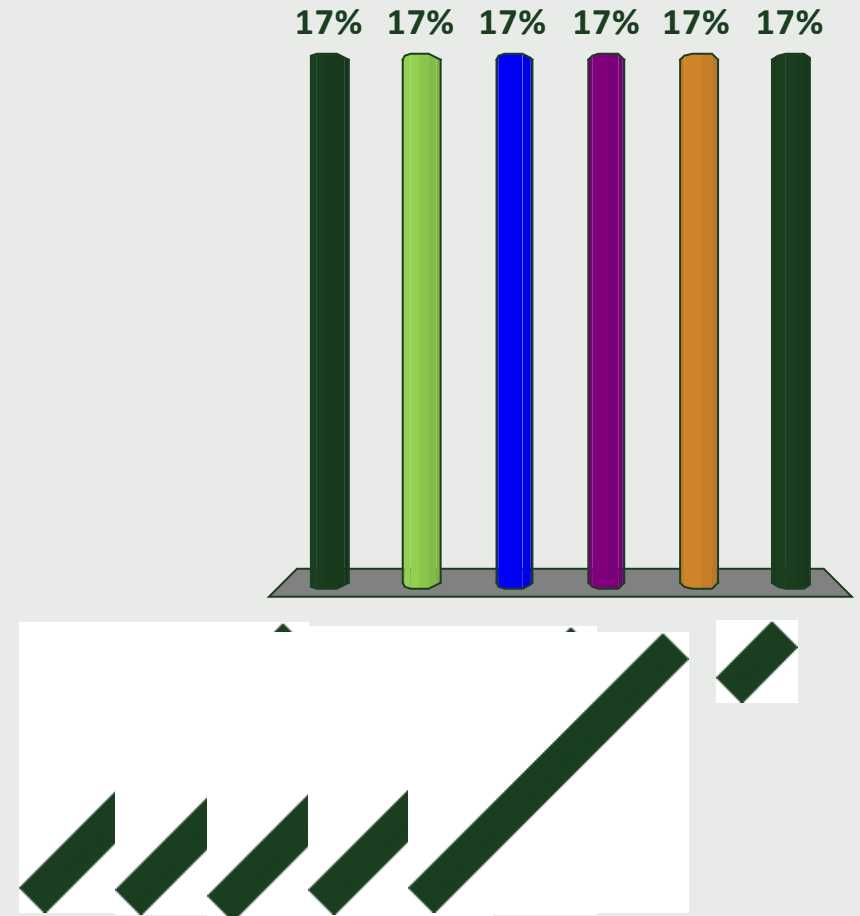
- A. Provide prescriptive standards
- B. Recommend the City commit to other voluntary or incentive-based programs
- C. Other





# What is the preferred approach to close any remaining gap?

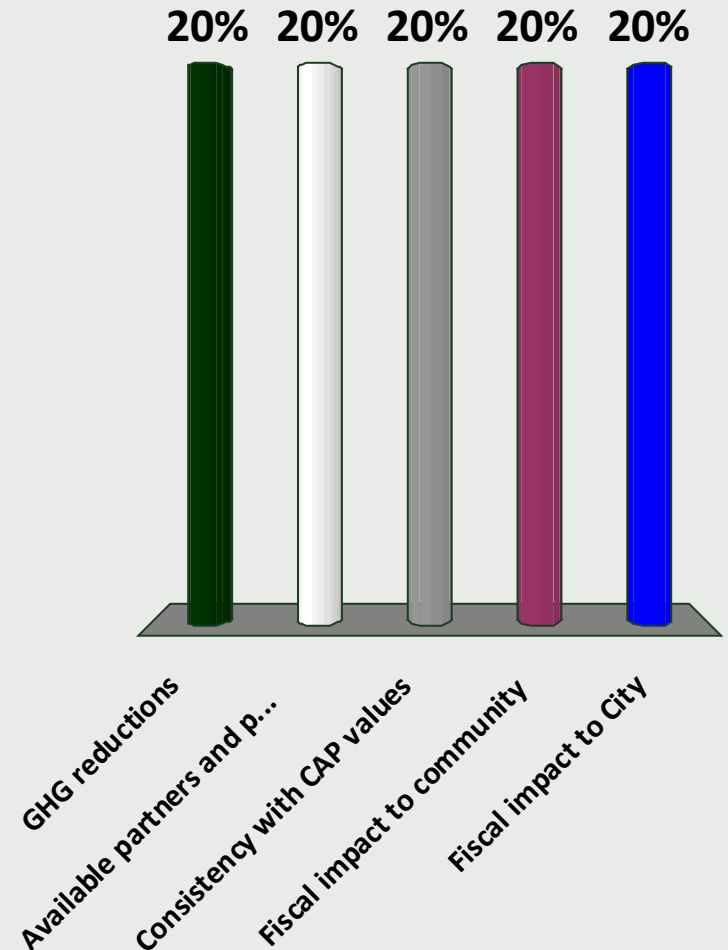
- A. Provide greater incentives for on-site solar energy
- B. Increase retrofits of existing homes and businesses
- C. Promote greater adoption of alternative modes of transportation for local businesses
- D. Focus more development in higher-density locations
- E. Improve recycling and waste minimization efforts
- F. Other





# What is the most important issue for measure implementation?

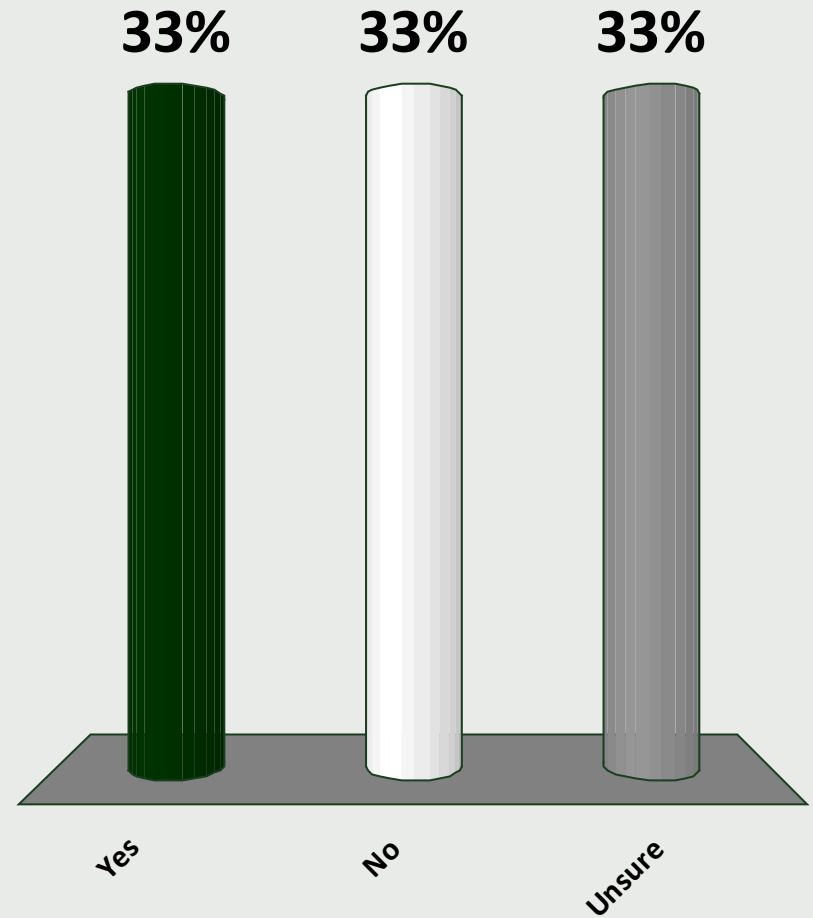
- A. GHG reductions
- B. Available partners and programs
- C. Consistency with CAP values
- D. Fiscal impact to community
- E. Fiscal impact to City





To prioritize measures for next steps, should we weight any of the issues more highly than others? (I.e., assign measures a higher score when they meet the priority criteria versus other criteria?)

- A. Yes
- B. No
- C. Unsure

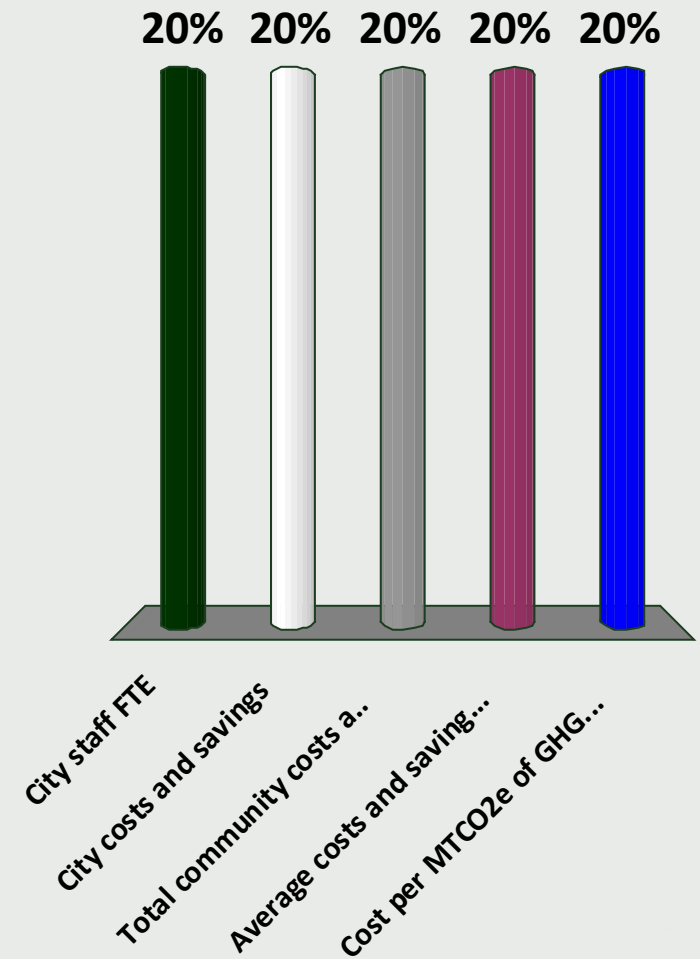






# What cost-benefit information is the most useful?

- A. City staff FTE
- B. City costs and savings
- C. Total community costs and savings
- D. Average costs and savings per participant
- E. Cost per MTCO<sub>2</sub>e of GHG emissions





# Review Tools

- Feasibility and prioritization discussion



# Questions for Focus Group

- Do the feasibility criteria presented today reflect the most important issues for prioritizing CAP measures to implement? If not, what other issues should we consider when ranking measures?



# Questions for Focus Group

- Should any feasibility criteria receive a greater weight when determining which CAP measures to prioritize for implementation? Examples may include the availability of external partners or resources, or costs to the City.

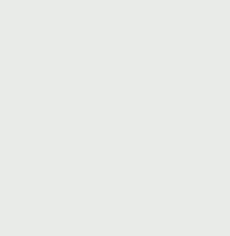


# Questions for Focus Group

- What information will be most useful to equip the City, community leaders, and partners to implement the CAP?



# CITY OF MERCED PROGRAMMATIC CLIMATE ACTION PLAN



## NEXT STEPS



# Monitoring and Achieving the CAP

- Monitoring progress is a criteria CEQA criteria for streamlining
  - Monitoring and reporting tool
  - Annual reports to City Council

## Monitoring components

Community-  
Wide Indicators

CAP Measure  
Progress



# Next Steps

- Compile CAP measures into CAP Implementation Plan
- Prepare Unified Design Manual (UDM) framework
  - January – March 2015: Prepare UDM and codes
- May 2015: Review Compiled Project
- June 2015: Community Open House





# Thank you

Please use comment cards for any additional thoughts you'd like to share. You can also provide any additional thoughts later by email directly to Bill King.

For additional questions, please contact Bill King

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