



CITY OF MERCED

PROGRAMMATIC CLIMATE ACTION PLAN FOCUS GROUP

NOVEMBER, 2014
BILL KING, CITY OF MERCED PRINCIPAL PLANNER
JENNIFER VENEMA, PMC



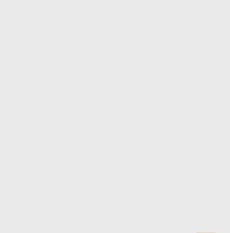


Agenda

- 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)



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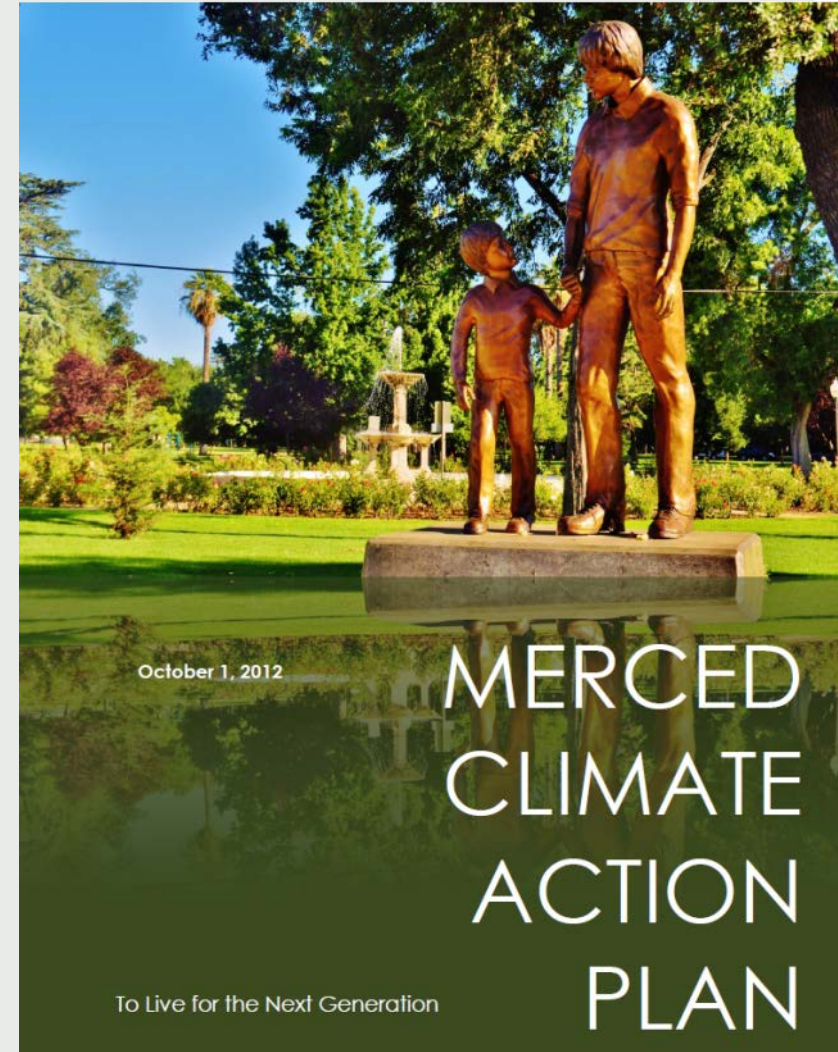


PROJECT UPDATE



Project Purpose

- Implement the City's Climate Action Plan (CAP)
 - CAP adopted in October 2012
 - Goal: Reduce greenhouse gas (GHG) emissions to 1990 levels by 2020 (equal to 15% below 2008 levels)





Project Outcomes

Tools to Implement the CAP

Stand-alone
implementation plan

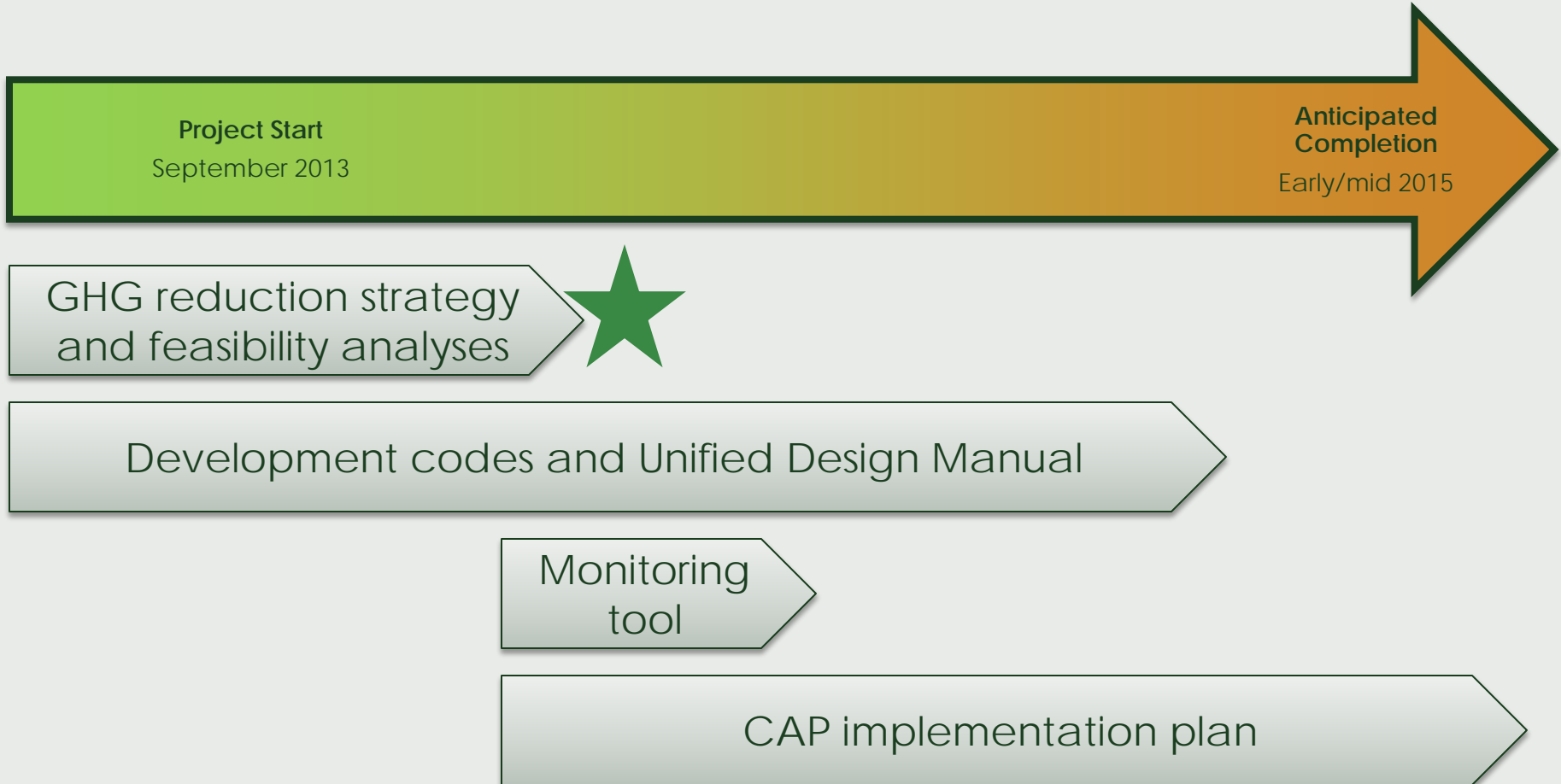
Monitoring and reporting
tools

Development codes

Unified Design Manual



Anticipated Timeline





Why Implement the CAP?

- Meet existing regulations
- Implement the General Plan
- Streamline new development
- Meet community values



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
- **CEQA Guidelines**
 - Opportunity for streamlined review of GHGs for new development
- **SJVAPCD**
 - Regulatory authority for direct and indirect air pollution
 - Indirect Source Review regulation
- **City of Merced**
 - Adopted CAP: Achieve 1990 levels by 2020
 - General Plan EIR mitigations to reduce impacts on GHG emissions



Regulatory Background - SJVAPCD

- SJVAPCD does not provide plan-level guidance for interpreting CEQA guidelines for plan-level GHG analysis





Simplifying and satisfying regulations

CEQA Guidelines Section 15183.5: Achieving Streamlining with the Adopted CAP

Quantify emissions, both existing and projected over a specified time period, resulting from activities within a defined geographic area

Establish a level, based on substantial evidence, below which the contribution of emissions from activities covered by the plan would not be cumulatively considerable

Identify and analyze the emissions resulting from specific actions or categories of actions anticipated within the geographic area

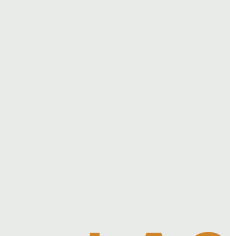
Specify **measures or a group of measures, including performance standards** that **substantial evidence** demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level

Establish a mechanism to monitor the plan's progress toward achieving the level and to require amendment if the plan is not achieving specific levels

Adopt the GHG Reduction Strategy in a public process following **environmental review**.



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LAST MEETING RESULTS




September 10 Focus Group Meeting

- Last meeting.
 - Project overview
 - Presentation from Institute for Local Governments
 - Preliminary reduction measure results
 - Discussion of measure priorities


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

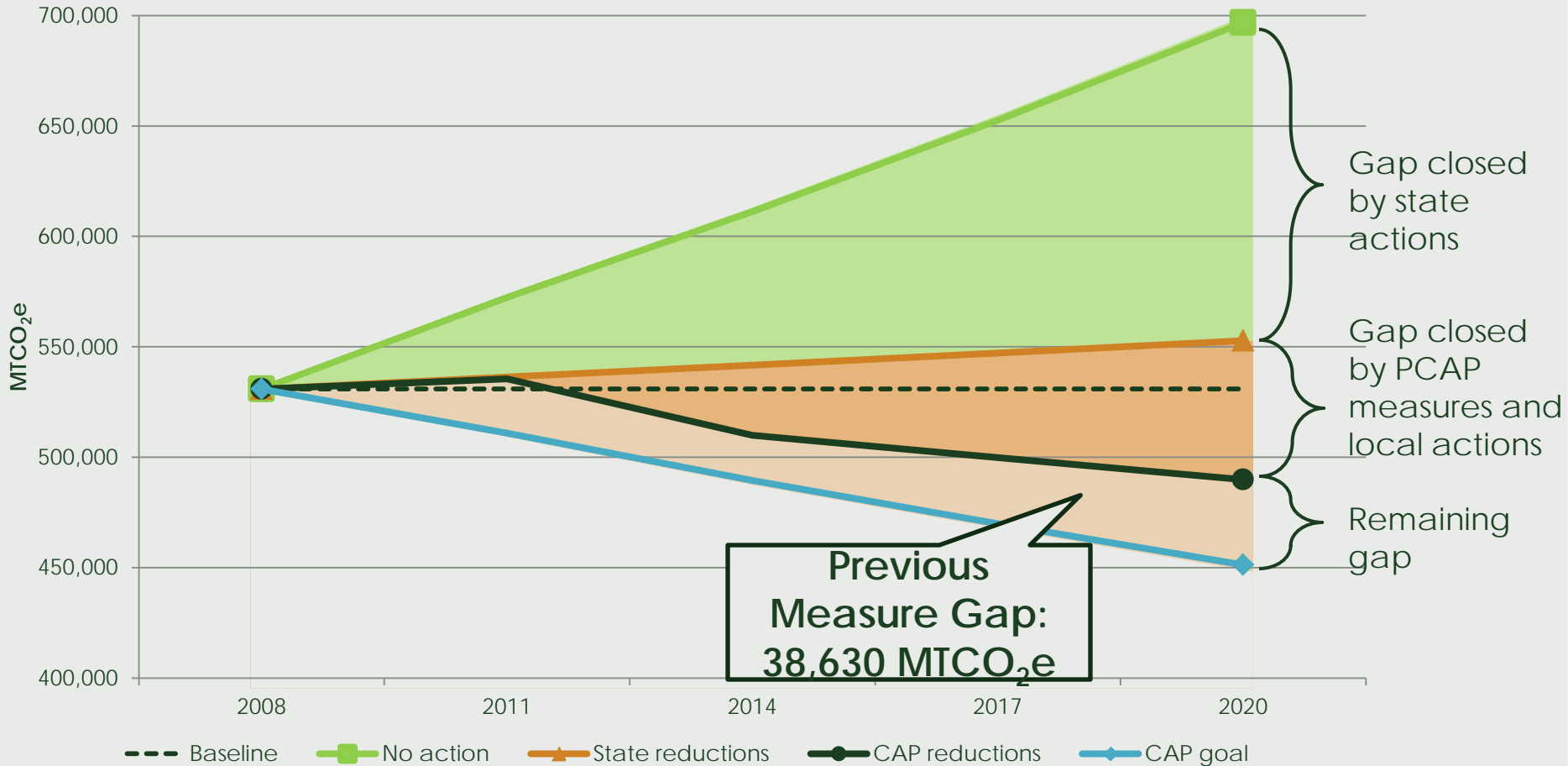


Priority Measures Identified by Focus Group

- 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



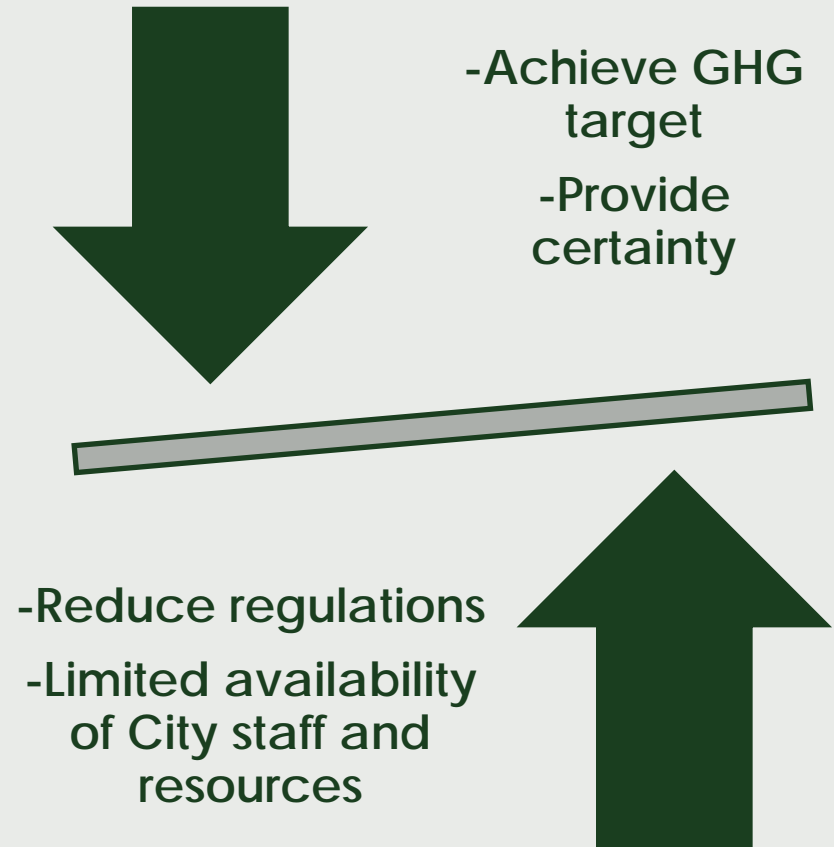
Challenge to Achieving Target





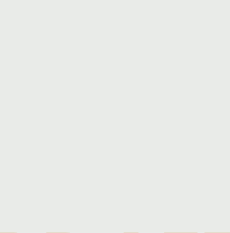
Balancing Priorities to Achieve the 2020 Target

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





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UPDATES TO GHG INVENTORY AND MEASURES



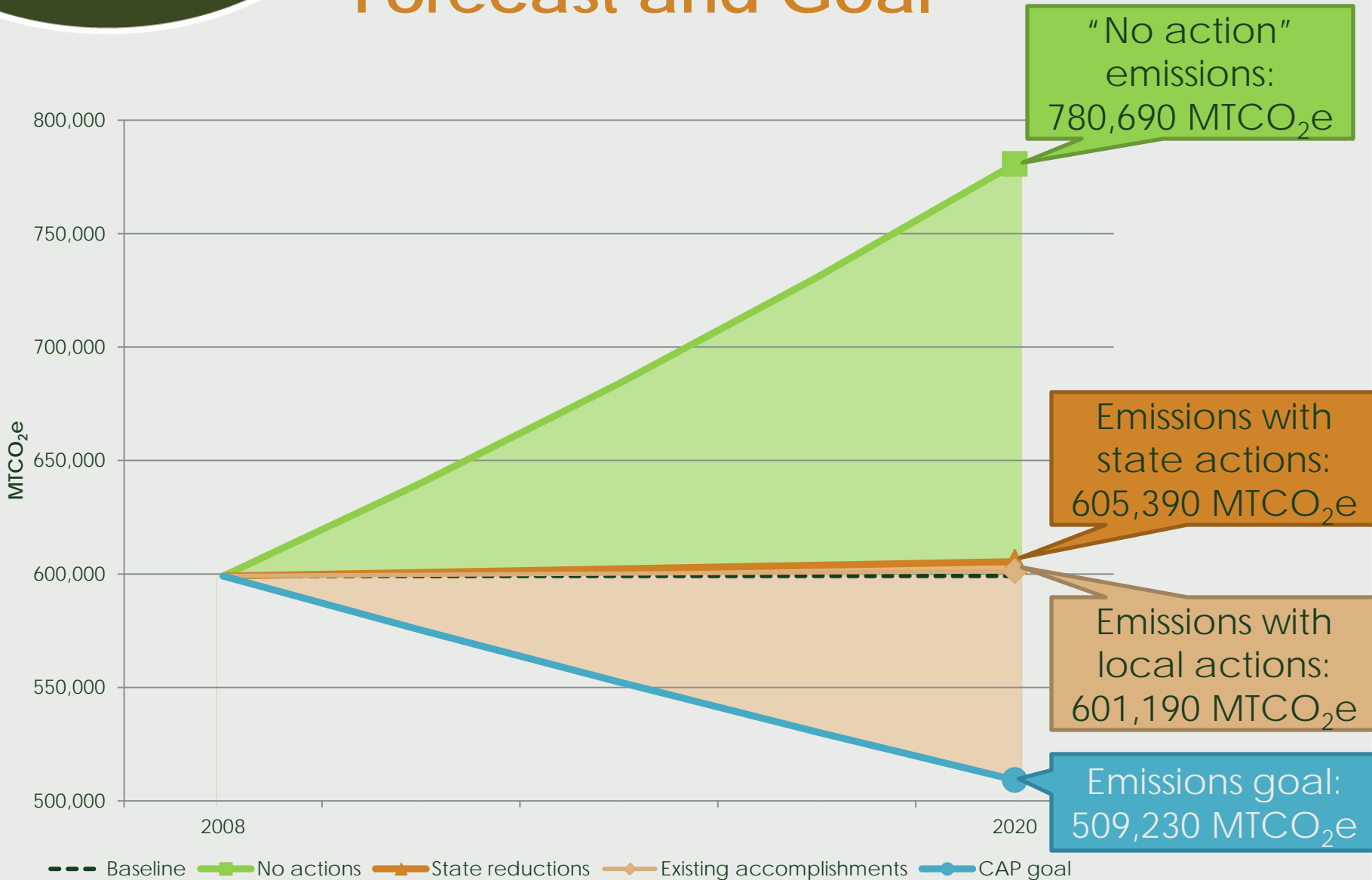
Changes to Electricity Emissions

- 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





Forecast and Goal





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MEASURES AND PERFORMANCE APPROACH



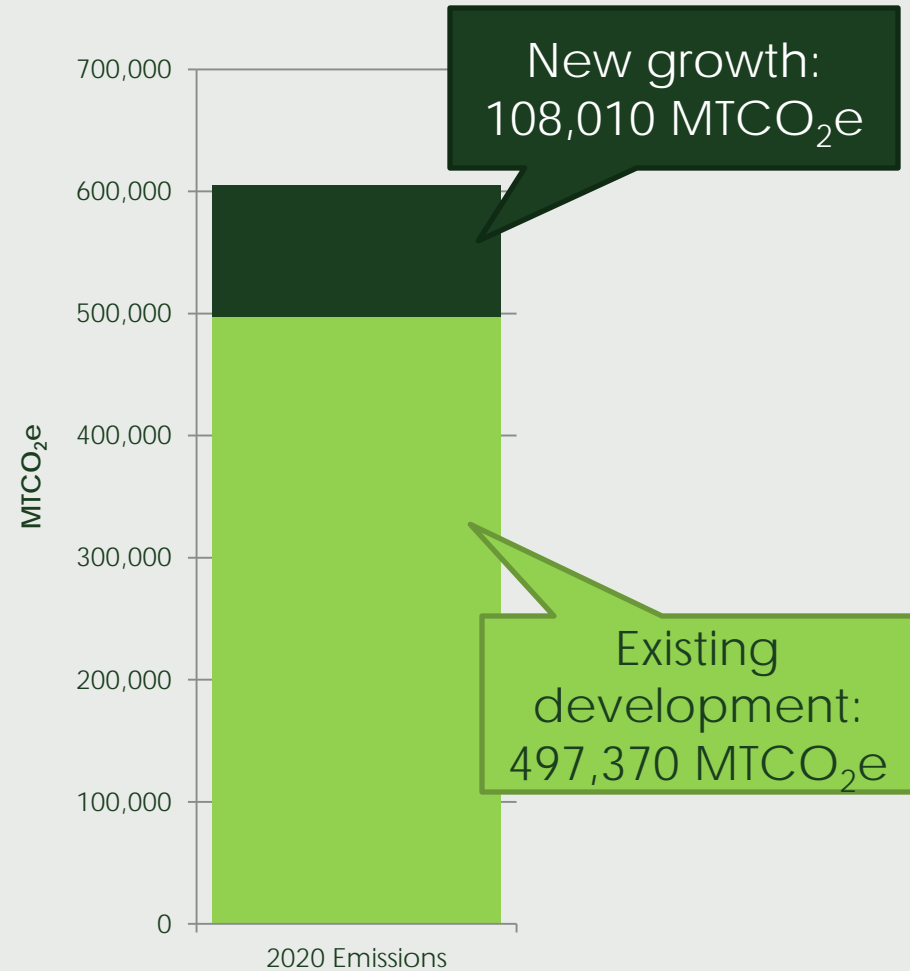
Updates since September Focus Group Meeting

- 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



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 MTCO₂e.
 - Too large to mitigate with existing development alone



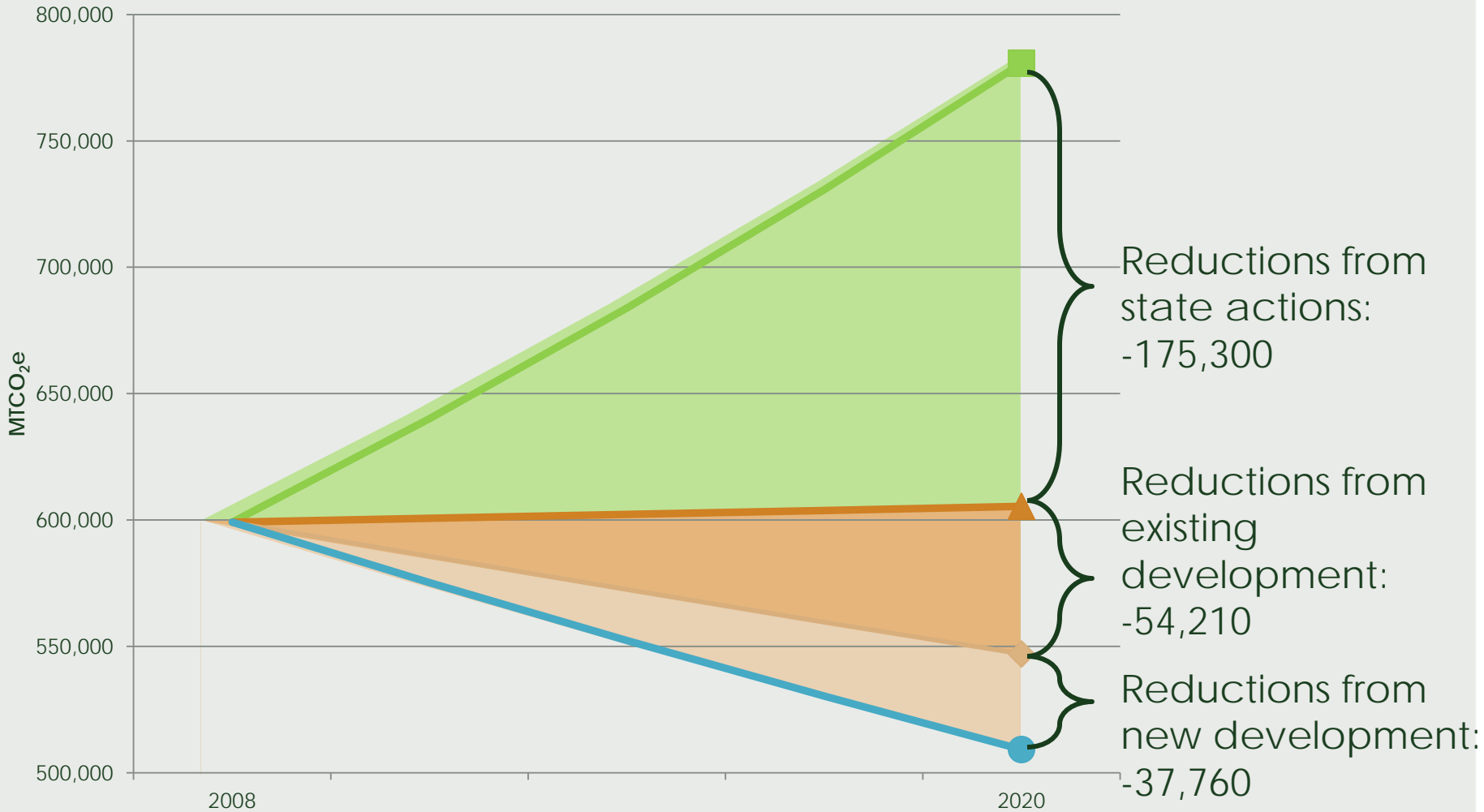


Performance-Based Approach

- Different way of applying CAP measures to new construction.
- Provides developers with flexibility.
- New projects select from a range of measures.
- Certainty that projects will achieve CAP goals while supporting SJAPCD regulations



Achievement of the Target with Performance-Based Approach





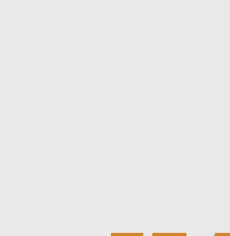
Performance-Based Approach

- 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.





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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 _{2e})	Scale (MTCO _{2e} 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	2 (3,000–6,000 MTCO ₂ e)	3	4	5
Available partners and programs	1	2	3	4 (Requires support of City staff)	5
Consistency with CAP values	1	2	3 (Consistent with 2 values)	4	5
Fiscal impact to community	1	2	3	4 (Limited return on investment)	5
Fiscal impact to City	1	2 (Limited investment)	3	4	5
Average score: 3					



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 MTCO₂e 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 ₂ e	\$1,250
Payback period	21 years

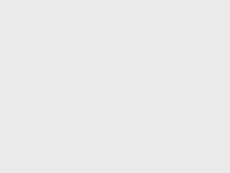


Cost-Benefit Comparisons

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



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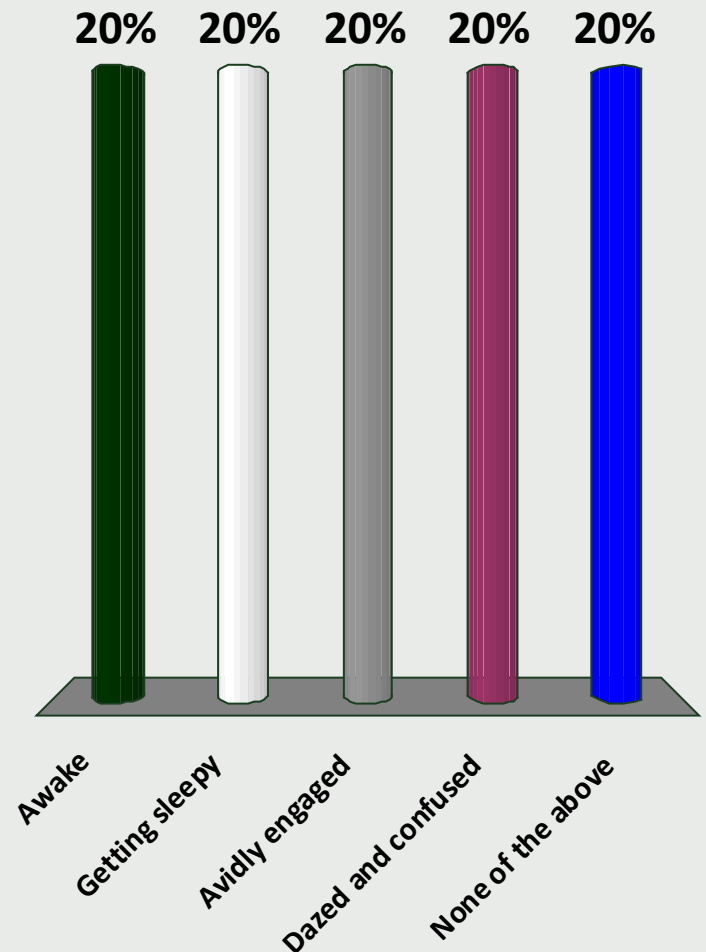


DISCUSSION AND ACTIVITIES



What is your current status?

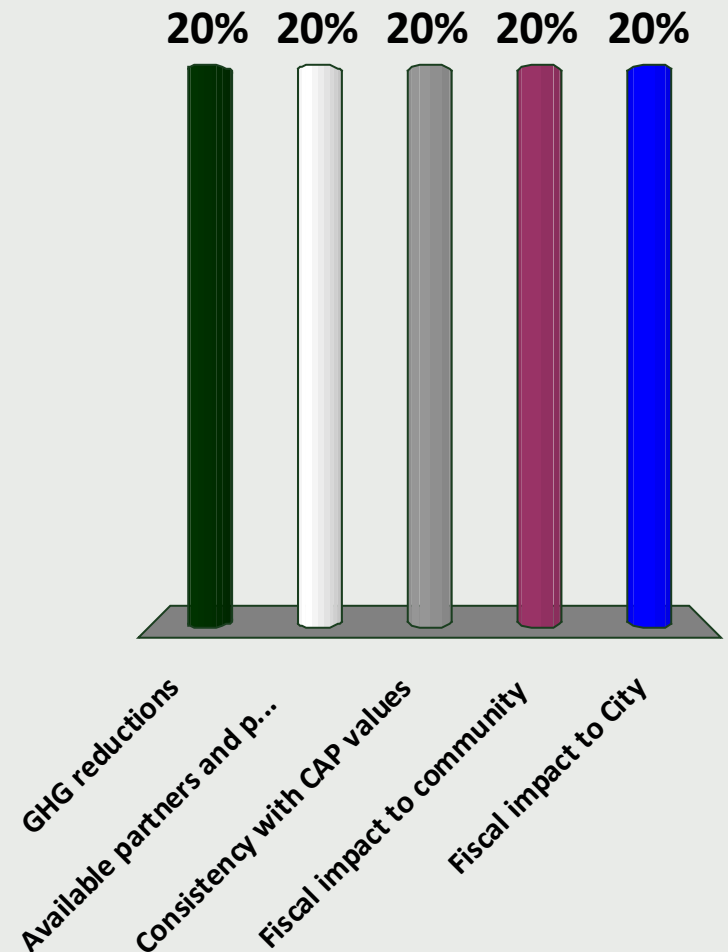
- A. Awake
- B. Getting sleepy
- C. Avidly engaged
- D. Dazed and confused
- E. None of the above





What is the most important issue for measure implementation?

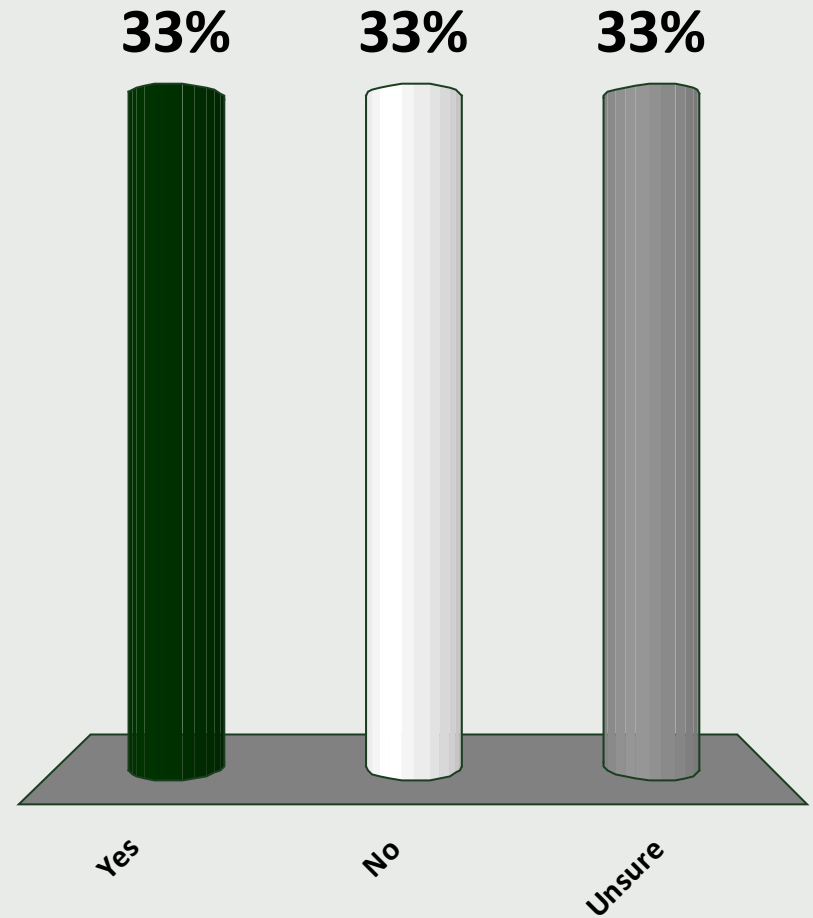
- A. GHG reductions
- B. Available partners and programs
- C. Consistency with CAP values
- D. Fiscal impact to community
- E. Fiscal impact to City





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?)

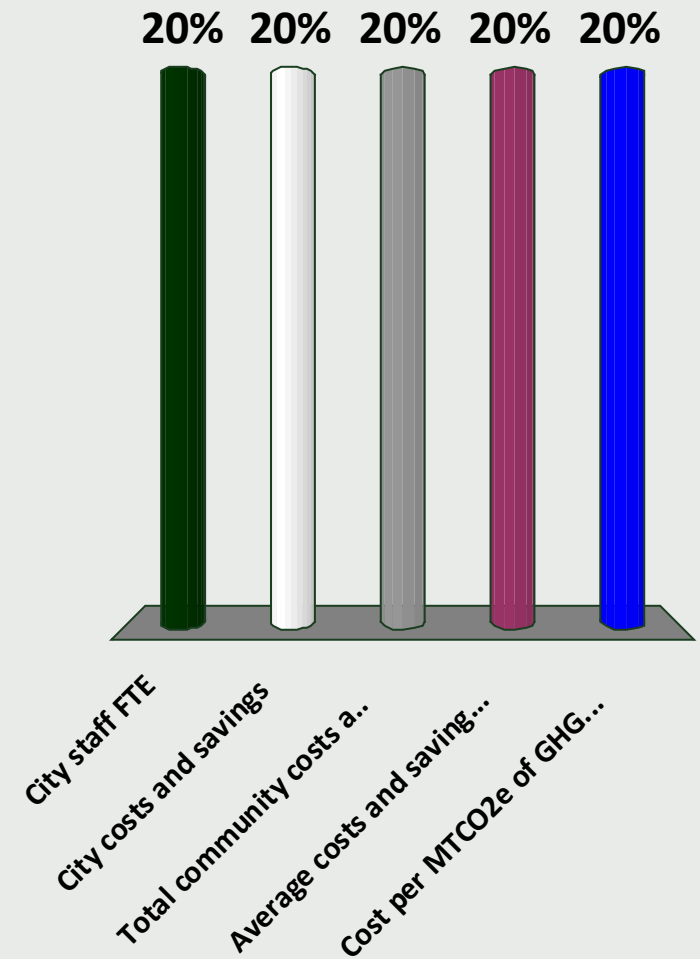
- A. Yes
- B. No
- C. Unsure





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 MTCO₂e 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.

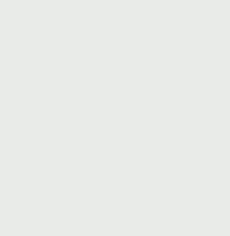


Questions for Focus Group

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



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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



Community-Wide Indicators

Local and state data + available inventory indicators = Estimated Progress



+



Waste

Methane emissions from waste sent to landfills from the community



Nonresidential Energy

Commercial and industrial electricity and natural gas consumed in the community



Residential Energy

Electricity and natural gas consumed by homes in the community



On-Road Transportation

Vehicle miles traveled (VMT) to, from, or within the community

= 650,000
MTCO₂e

Current
Emissions

+8.5% above
2005 levels



Measure Progress Example 17: Renewable electricity for on-site residential use

Metric progress

Number of homes
installing solar PV

100



Reductions per metric

Annual GHG reduction
per installation

~4 MTCO₂e



Total GHG Reduction

GHG reductions from
solar PV installations

400 MTCO₂e

Metric progress to date

Number of homes
installing solar PV

100



Target metric

Number of installations
by 2020

500



Progress to date

Implementation percent

20%



Next Steps

- Compile CAP measures into CAP Implementation Plan
- December 8, 2014: Economic Prosperity Workshop
- Prepare Unified Design Manual (UDM) framework
 - **January 22, 2015:** Focus Group #4 to review the framework and general concepts for the UDM
 - January – March 2015: Prepare UDM and code concepts
- March 2015: Project completion



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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