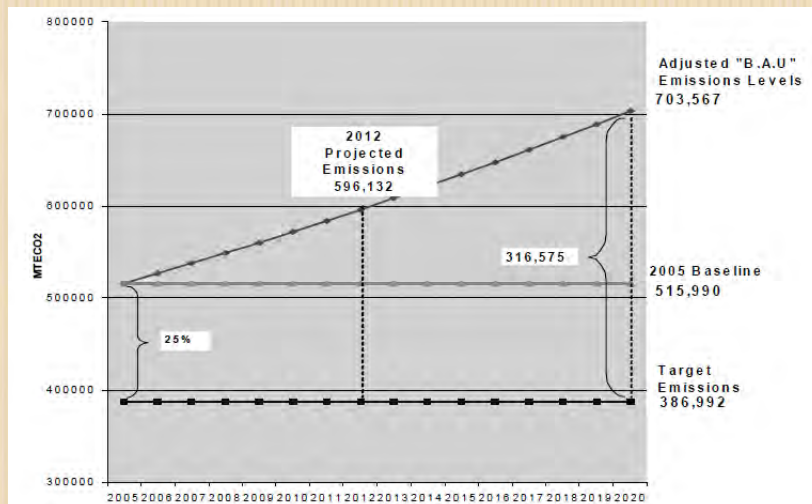


CITY OF CHICO CLIMATE ACTION PLAN

Phase I Overview, Discussion of Plan Components

Emissions Inventory Baseline and Projections



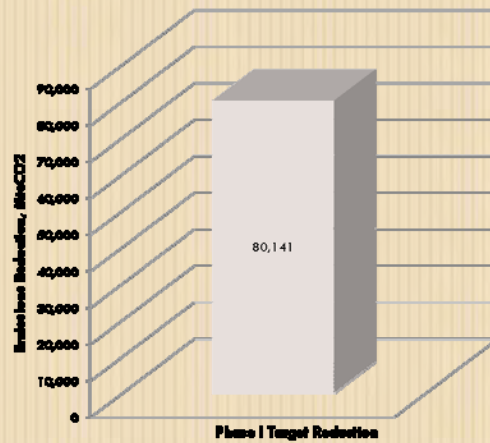
Climate Action Plan Timeline

- Fall 2010: Development of CAP
- 2011-2012: Phase I Implementation
- 2011: Evaluation of Phase I Success
- 2013-2015: Phase II Implementation
- 2015: Evaluation of Phase II Success
- 2016-2020: Phase III Implementation

Climate Action Plan Targets

	Target Date	Annual MteCO2 Emissions goal	Additional MteCO2 Reductions Needed to Meet Goal
PHASE 1 TARGET: Reduce to Base Year Emissions	Dec. 2012	515,990	80,142 <i>(62,413 has been achieved)</i>
PHASE 2 TARGET: 10% Below Base Year	Dec. 2015	464,391	89,762
PHASE 3 TARGET: 25% Below Base Year	Dec. 2020	386,992	146,671
Total Annual MteCO2 Reduction Needed by 2020			316,575

Identifying the Least-Cost Path

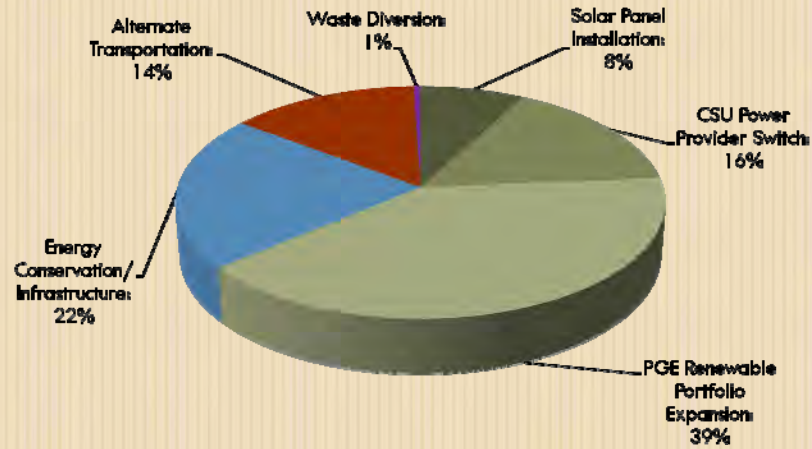


Identified Emissions Reductions 2005-2010

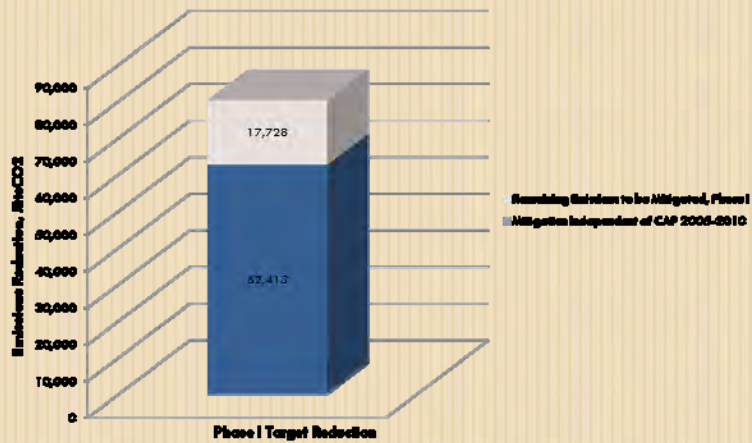
- Reductions monitored from all sectors community-wide
- The aggregate impact of these projects will reduce emissions levels by **62,413 MteCO₂** annually by the end of 2010
- Early Action Leaders Include:



Sources of Identified Emissions Reductions



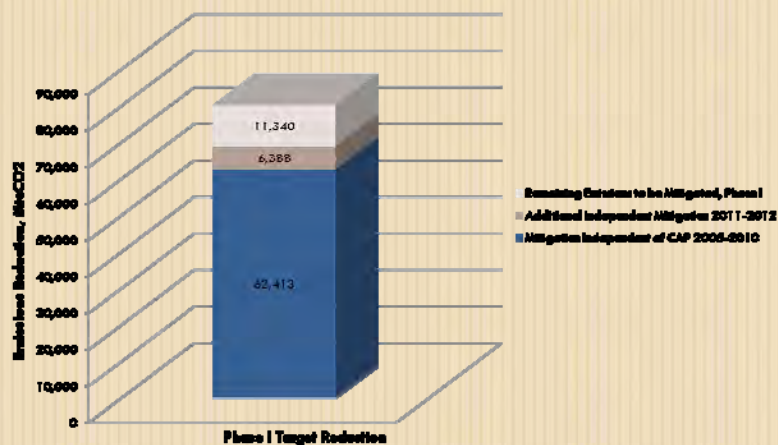
Progress Towards Phase I Target



Expanded Impact During Phase I

- These programs include:
 - Solar PV Installation
 - Hybrid Vehicles Sales
 - Home Weatherization
 - Lighting Efficiency Retrofits
 - *Energy Star* Appliance Sales
- Their aggregate impact will reduce emissions levels by an additional **6,388 MteCO₂** annually by the end of Phase I

Progress Towards Phase I Target



CAP Phase I Project Analysis

<u>Project</u>	<u>Annual Emissions Reduction (MteCO2)</u>	<u>Net Up-Front Costs</u>	<u>Annual Savings</u>	<u>Simple Payback</u>	<u>Net Present Value</u>	<u>Net Cost/MteCO2 Mitigated Annual Average</u>	<u>Funding</u>
Phase I Suite							
Totals	2,752	\$6,014,483	\$862,948	6.8 years	\$3,799,801	-\$174	All projects currently funded from grants or other sources

City Government Leadership

<u>Project</u>	<u>Annual Emissions Reduction (MteCO2)</u>	<u>Net Cost/MteCO2 Mitigated Annual Average</u>	<u>Funding</u>	<u>Additional Benefits</u>
Government Leadership				
LED Street Lights	160	-\$6.71	Energy Efficiency Conservation BG	Better Light Quality, Decreased Maintenance
Lighting Upgrades	42	-\$8.27	CEC Low-Interest EE Loans	Decreased Maintenance
HVAC Control Retrofits	27	\$33.37	CEC Low-Interest EE Loans	Decreased Maintenance
New Chillers (City Hall/ Council Building)	100	\$1.81	CEC Low-Interest EE Loans	Decreased Maintenance
PC Power Management	31	-\$32.98	CEC Low-Interest EE Loans	Decreased Maintenance
Additional Hybrid Vehicles	20	-\$7.59	City Equip. Replacement Fund	Improved Air Quality
Added Acreage Central Irrigation Control	5	\$2.37	City New Development	Significant Water Savings

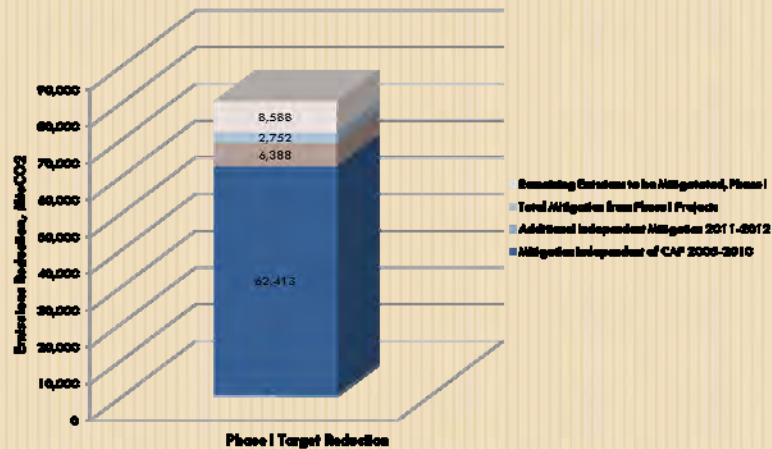
Community Outreach & Residential Energy

<u>Project</u>	<u>Annual Emissions Reduction (MteCO2)</u>	<u>Net Cost/MteCO2 Mitigated Annual Average</u>	<u>Funding</u>	<u>Additional Benefits</u>
Community Outreach				
Household, School Outreach	805	-\$154.75	Recycling/ Resource Conservation Grants	Public Engagement, Educational
Business Climate Partnership	N/A	N/A	Recycling/ Resource Conservation Grants	Business Community Engagement
Workshops	N/A	N/A	PGE Innovators Pilot	Public Collaboration, Vetting
Website	N/A	N/A	PGE Innovators Pilot	"Hub" for all things CAP-related
Residential Energy Efficiency				
Weatherization/ Energy Audits- Pilots	108	-\$1.77	PGE Innovators Pilot	Trial Results, Encourages Additional Action
Retrofit Upon Resale Ordinance	11	-\$8.45	(Home Sales Process)	Water Conservation

Transportation & Waste Management

<u>Project</u>	<u>Annual Emissions Reduction (MteCO2)</u>	<u>Net Cost/MteCO2 Mitigated Annual Average</u>	<u>Funding</u>	<u>Additional Benefits</u>
Alternative Transportation				
New Bike Path- 99 Corridor	497	\$15.21	ARRA, CMAQ, Local Transportation Funding	Rider Safety, Air Quality, Less Auto Traffic
Franchise Waste Collection Zones	683	-\$6.50	N/A	Decreased Wear on Streets, Decreased Noise
Expanded Bus Service	43	-\$6.56	BCAG	Less Auto Traffic
New Bike Route- 2nd Street Couplet	36	\$6.39	CMAQ	Rider Safety, Air Quality, Less Auto Traffic
Waste Management				
Landfill Gas Capture	78	N/A	N/A	Energy Generation
Additional Composting	106	N/A	N/A	N/A

Progress Towards Phase I Target



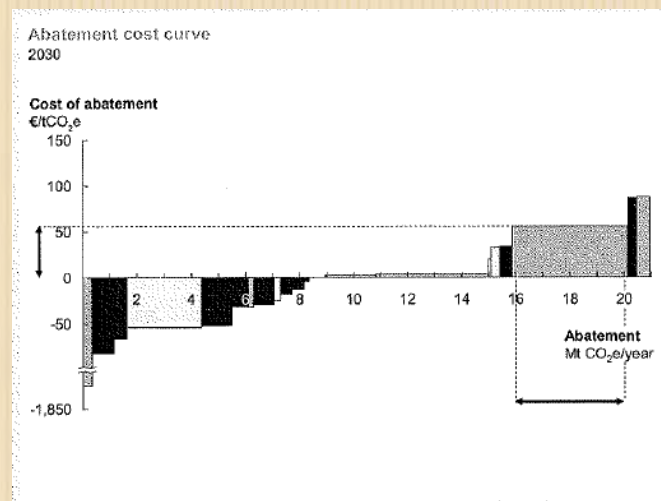
Additional Components of the CAP

- Analysis of Additional Potential Mitigation Measures
- Potential Programs Currently in Development
- Business Climate Partnership
- Website
- Direct Outreach
- Implementation Monitoring & Oversight

Additional Cost-Benefit Analysis

- The Institute for Sustainable Development will work in collaboration with Dr. Pete Tsournos' Econ 466: *E.N.R.* class over the course of Fall 2010
- We will conduct a comprehensive cost-benefit analysis of additional selected measures from the STF list of *Identified Potential Emissions Mitigation Projects*
- The result will be a prioritization of measures by cost-effectiveness to help guide City decision making throughout the three phases of implementation

Example Abatement Cost Curve



Potential Programs in Development

- Tree Maintenance/ Planting Sponsorship Program
 - City Urban Forest Manager D. Britton, Scott Gregory
- Green Business Program
 - Mayor's Business Advisory Committee, Chamber, DCBA
- Alternative Transportation Planning
 - STF, Existing Transportation Committees, BCAG & SB-375
- 'Right to Recycle' MF Unit Outreach Program
 - CLIC Environmental Advocacy Program
- Expansion of Residential Energy & Outreach Program
 - PG&E Innovators Group & City of Chico

Business Climate Partnership

- A Forum for Community Businesses to:
 - Acknowledge Climate Change as an important issue, which they are a part of
 - Come together with like-minded businesses to discuss the problem and potential solutions
 - Connect with relevant, valuable resources
 - Receive recognition for their leadership in taking action to reduce their emissions

Website

- PGE Innovators Pilot
- Inventory Report, CAP Document
- Interactive Action Registry
- Personal Footprint & Personal Action Calculator
- News & Information, Links, Resources, Updates



Direct Outreach

- Direct Outreach to Residents
 - Sustainability Task Force (STF) Education Committee
 - Challenge 1,000 households to reduce energy consumption and VMT by 7%
- Direct Outreach to Students
 - Chico Unified School District
 - Gateway Science Museum
- Workshops
 - *This Way to Sustainability*

Implementation Oversight

- Key to implementation success will be continual monitoring of:
 - Emissions Levels
 - Project Implementation Success
 - Best Practices State-Wide and Nationally
 - Grant Availability
 - Changes in Grid Mix and in Input Price Levels
- Oversight responsibility will rest with the City A.S. Manager/ Sustainability Coordinator
 - Assistance provided by the Institute for Sustainable Development

CAP Document Components

- Introduction
 - Background, Legislation
- Chico Highlights
 - STF, Discuss Overall Approach, Actions Already Taken
- Inventory, Projections
- Targets, Timeline
- Projects
 - Phase I
 - Additional Potential
 - Prioritization

CAP Document Components Cont'd

- Programs
- Policies
 - Connections with greater General Plan
- Outreach
- Adaptation Plan
- Potential Funding
- Implementation Responsibility, Monitoring
- Appendices
 - Calculations

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