City of San Luis Obispo

Climate Action Plan

Community Development Department

August 2012

Climate Action Plan

Adopted by Resolution No. 10388 (2012 Series)

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City staff would like to express its appreciation to the Chamber of Commerce, SLO Greenbuild Alliance, Homebuilder's Association, Association of Realtors, Kiwanis Club, Workforce Housing Coalition, Empower Poly, and all other community members who provided input on the Plan. Sincere appreciation is extended to the Cal Poly Climate Team students who drafted the initial strategies in the Climate Action Plan after extensive public outreach and research.

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Topic Abbreviations

Buildings	**BLD**
Renewable Energy	**RE**
Transportation & Land Use	**TLU**
Water	**WTR**
Solid Waste	**WST**
Parks & Open Space	**PKS**
Government Operations	**GO**

List of Acronyms

ADA ..... Americans with Disabilites Act
afy ..... Acre feet per year
ARB ..... California Air Resources Board
BAU ..... Business as usual
BTU ..... British Thermal Units
CAP ..... Climate Action Plan
CCA ..... Community Choice Aggregation
CCP ..... Climate Protection Campaign
CCR ..... California Code of Regulations
CEC ..... California Energy Commission
CEQA ..... California Environmental Quality Act
CFL ..... Compact Fluorescent Lightbulbs
COSE ..... Conservation & Open Space Element
CPUC ..... California Public Utilities Commission
CSI ..... California Solar Initiative
C-C Zone ..... Community Commercial
C-D Zone ..... Downtown Commercial
C-N Zone ..... Neighborhood Commercial
C-R Zone ..... Retail Commercial
C-S Zone ..... Service Commercial
C-T Zone ..... Tourist Commercial
GHG ..... Greenhouse gases
GIS ..... Geographic Information Systems
HASLO ..... Housing Authority of San Luis Obispo
HVAC ..... Heating, Ventilation, and Air Conditioning
ICLEI ..... Local Governments for Sustainability
IEPR ..... Integrated Energy Policy Report
IPCC ..... Intergovernmental Panel on Climate Change
IWMA ..... Integrated Waste Management Authority
kWh ..... kilowatt hours
LCFS ..... Low Carbon Fuel Standard
LED ..... Light Emitting Diode
LEED ..... Leadership in Energy and Environmental Design
LEED-CS ..... LEED for Core and Shell
LEED-NC ..... LEED for New Construction
M Zone ..... Manufacturing
MPG ..... miles per gallon
MPH ..... miles per hour
$MTCO_2e$ ..... Metric Ton of CO2 Equivalents
NEV ..... Neighborhood Electric Vehicle
O Zone ..... Office
PG&E ..... Pacific Gas and Electric
PV ..... Photo Voltaic
RPS ..... Renewable Portfolio Standard
R-1 Zone ..... Low Density Residential
R-2 Zone ..... Medium Density Residential
R-3 Zone ..... Medium-High Density Residential
R-4 Zone ..... High Density Residential
SLOCOG ..... San Luis Obispo Council of Governments
SRTP ..... Short Range Transit Plan
TRIP ..... Employee Trip Reduction Program
USGBC ..... Green Building Council
VMT ..... Vehicle Miles Traveled
WRF ..... Water Reclamation Facility

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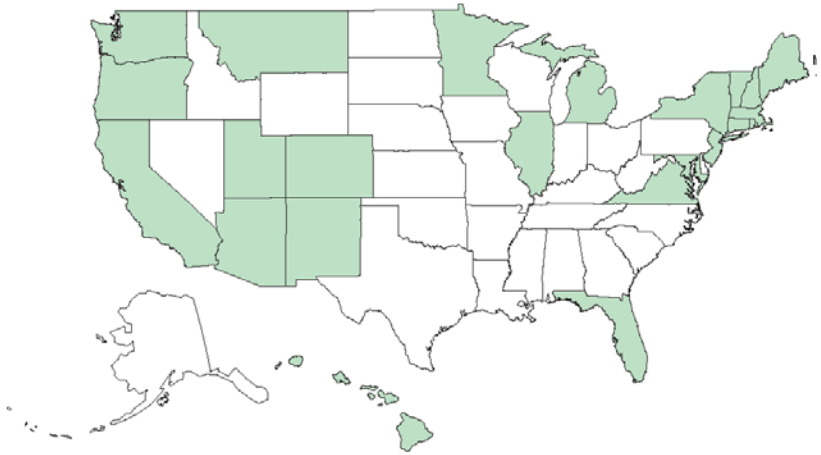
Executive Summary

The global challenge of climate change requires action at all levels of government. A wide range of policies have been adopted at the state and regional levels to reduce greenhouse gas (GHG) emissions, such as developing clean energy resources and promoting energy-efficient buildings and vehicles.

States with Adopted GHG Emission Reduction Targets



State(s)	Adopted Emission Reduction Target
VT	25% below 1990 levels by 2012
CT, MA, ME, NH, NY, OR, RI	10% below 1990 levels by 2020
CA, HI, NJ, MT, IL, WA	1990 levels by 2020
FL	1990 levels by 2025
NM	10% below 2000 levels by 2020
AZ	2000 levels by 2020
CO, MI, MN	15-20% below 2005 levels by 2015-25
UT	2005 levels by 2020
MD	25% below 2006 levels by 2020
VA	30% below BAU by 2025

California is among the nation's leaders in GHG emission reduction initiatives, including: an aggressive renewable energy portfolio standard, public benefit funds for renewables and efficiency, alternative fuel policies, new vehicle standards, and a statewide emission reduction target. The State's Global Warming Solutions Act of 2006 (AB 32) establish a goal of reducing statewide GHG emissions to 1990 levels by the year 2020.

Local governments are well positioned to develop and implement locally effective strategies to address the consequences of climate change and mitigate GHG emissions. In 2008, the City of San Luis Obispo committed to address climate change and joined ICLEI-Local Governments for Sustainability's Cities for Climate Protection campaign. Since that time, the City has completed the first step of the five milestone climate protection process: conduct a baseline emissions inventory. This Climate Action Plan (CAP) marks completion of the second and third milestones: adopting a GHG emissions reduction target and developing a plan to achieve that target. The adopted target is a reduction of communitywide emissions to 1990 levels by 2020, consistent with AB 32. The fourth and fifth milestones are implementation and monitoring.

Climate Action Plan Development

The process of drafting a CAP included a series of steps accomplished from 2010 thru 2012: research, outreach, local policy audit, and strategy review. Research included review of climate science, climate planning guidance documents, climate policy enacted in other jurisdictions, and existing local policies and programs already serving to reduce GHG emissions. In addition, an

extensive public outreach effort was begun that continued throughout the process. Outreach was conducted through farmers' market booths, community group meetings, a website (SLOCOOL.org) and Facebook page, digital surveys, feedback boards at local grocery stores, and a visit to a local elementary school. Early in the plan development process, the goal of public outreach was to raise public awareness of climate planning and to hear from community members about their hopes and fears for the future of San Luis Obispo.

The research phase of plan development was concluded with development of a policy audit. This audit served as a basis for emissions reduction strategy development. During strategy development, outreach efforts shifted focus with the intent of gauging the level of support for potential measures. Feedback was solicited from the community, City staff, and multiple local groups, and used to refine strategies in the plan. A complete list of public outreach events is included in the Appendix. Strategies that act directly on emissions sources were quantified to demonstrate the projected effectiveness of the CAP.

GHG Reduction Strategies

Community strategies for climate change adaptation and reduction of GHG emissions are divided into six chapters: **Buildings**, **Renewable Energy**, **Transportation & Land Use**, **Water**, **Solid Waste**, and **Parks & Open Space**. Strategies that will help reduce GHG emissions associated with City **Government Operations** have been separated into their own chapter.

Buildings addresses emissions associated with the heating, cooling, and operating of structures. This includes electricity and natural gas consumption in residential and commercial buildings, as well as the energy needed to run industrial processes. *The goal is to make buildings more energy efficient.* In the GHG Emissions Inventory, buildings account for 43% of total GHG emissions, largely due to aging inefficient structures. Over 80% of the City's housing stock is more than 20 years old. New construction is already subject to stringent State efficiency standards, so significant emission reductions will be achieved through energy efficiency improvements to older building stock.

The **Renewable Energy** chapter focuses on local energy production from renewable sources that produces no or minimal GHG emissions. *The goal is clean and renewable energy sources.* One of the barriers to renewable energy installations is high upfront costs. Several strategies seek to ease the initial financial burden through the use of incentives, including: federal, state and local financing, reduced permit fees, and streamlining of development review processes.

Transportation & Land Use addresses the largest contributor to community emissions: vehicles. *The goal is to improve transportation options.* This chapter encourages use of a variety of transportation modes and cleaner vehicles. It also outlines long-term changes to land use

patterns to reduce trip lengths and encourage safe, attractive environments where people will want to walk or bike.

Water used by the community must be pumped, treated, and delivered. Each of these steps uses energy, which creates GHG emissions. *The goal is to reduce and reuse consumed water.* Community-wide strategies focus on voluntary programs to reduce water use in existing buildings, require new buildings to reduce anticipated water use, and encourage use of reclaimed water when possible.

Solid Waste deposited in a landfill emits methane, which is 21 times more powerful in trapping GHGs than carbon dioxide. *The goal is to prevent, reduce, reuse and recycle waste.* The chapter focuses on increasing the rate at which waste is diverted from the Cold Canyon Landfill through recycling and other programs. Strategies include consideration of an adjusted volume-based rate system, improved recycling and composting options, and researching other waste reduction programs such as a food packaging ordinance or waste audits.

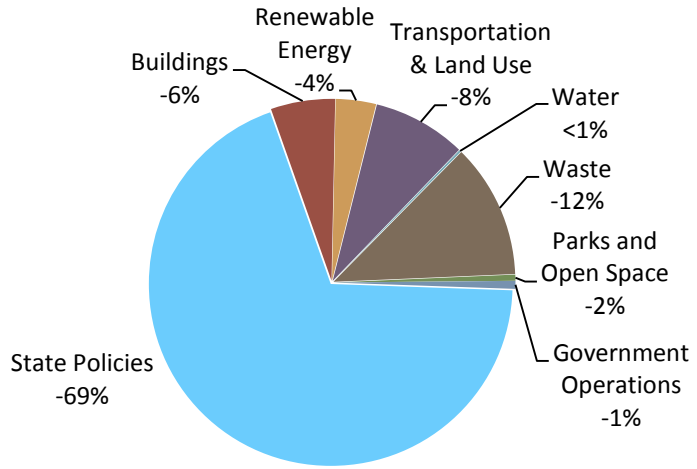
While the maintenance of **Parks & Open Space** areas generates GHG emissions, these areas also have the potential to directly reduce emissions through carbon sequestration; trees, plants and soils absorbing carbon. *The goal is to maintain natural areas, plant additional trees and acquire more open space.* Strategies in this chapter cover energy-efficient maintenance, water conservation, tree planting, community gardens and open space preservation.

Government Operations identifies GHG reduction strategies for City facilities, fleets, infrastructure and employees. *The goal is to reduce GHGs from government operations to 1990 emissions levels.* This is the same level of GHG reductions as the community target. Strategies focus on facilities, streetlights and traffic signals, water and wastewater infrastructure, the vehicle fleet, employee commuting, and employee business travel.

GHG Reduction Summary

This CAP is a policy document, adopted by Resolution, that provides a road map to achieve the City's GHG reduction goals. It needs to be dynamic, with continual updates that address changes in technologies and the natural environment. When combined with State policies, the local GHG reduction strategies presented in this CAP can achieve the target of 1990 emissions levels by 2020; a 22% reduction from projected business-as-usual (15% below the 2005 emissions baseline).

2020 GHG Reductions by Topic Contribution

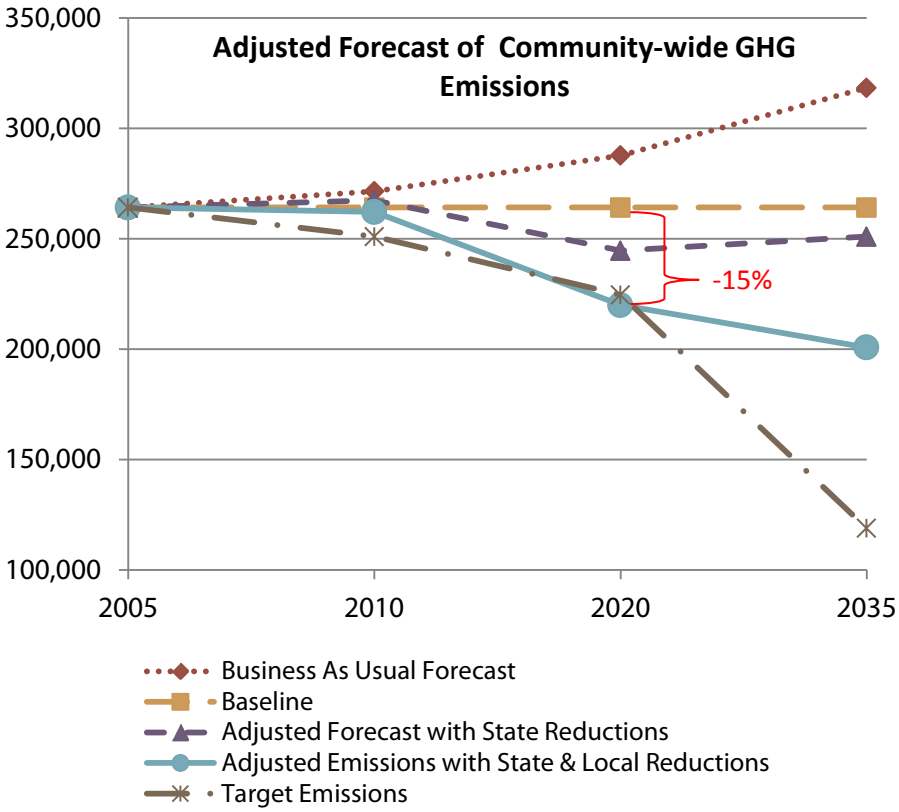


The majority of local emissions reductions come from transportation, waste and buildings strategies. Collectively, local strategies included in this CAP will address 31% of the emissions reduction required to achieve the 2020 target. State policies to reduce GHG emissions, such as vehicle fuel efficiency standards, renewable portfolio standards, and building energy efficiency and CALGreen construction standards, will result in emissions reductions in the community that make up the remaining 69% required to reach the target.

Conclusion

The adjusted GHG emissions forecast shows that implementation of all strategies in this plan can achieve a 15% reduction from baseline levels by 2020, which will meet required AB 32 State reduction goals.

For consistency with County and regional planning efforts, a second reduction forecast year of 2035 is included. The target emissions curve slopes dramatically downward after 2020 in response to the Governor's executive order (S-3-05) to reach a reduction in statewide emissions of 80 percent below 1990 levels by 2050. This is a laudable yet challenging goal, which will likely require significant technological innovation. Nevertheless, the path to the closer target in 2020 is a measurable reality. The appendix provides further detail on the calculations and assumptions used to document that path.



Public Outreach and Edcucation

The majority of the GHG reduction strategies in the CAP are based on voluntary behavior from the community. The most vital step towards achieving the reduction target is public outreach and education. A well informed community is empowered to make alternative decisions, or in many cases, to continue environmentally sound practices already taking place in SLO. The City will work with the County, State and other regional organizations to develop a comprehensive education program targeting energy-efficiency, renewables, alternative transportation, and other CAP communitywide objectives. A specific *Public Outreach and Education* strategy section is included at the end of each chapter.

Introduction

Rising concentrations of carbon dioxide and other greenhouse gases are altering temperature and rainfall patterns and contributing to rising sea levels. Climate change is a global issue, but local governments are uniquely positioned to identify the specific risks and most effective solutions for their communities.

The City of San Luis Obispo joined ICLEI-Local Governments for Sustainability's (ICLEI) Cities for Climate Protection (CCP) Campaign and adopted its five milestone process. This Climate Action Plan (CAP) represents step three of this five-step campaign and is consistent with recently enacted statewide climate legislation and San Luis Obispo's established General Plan goals.

Recognizing the importance of local action, the CAP presents measures that will serve as a road map to meeting San Luis Obispo's greenhouse gas (GHG) reduction targets. It addresses government operations emissions under the City's control, as well as community-wide emissions. The emissions reduction measures build on existing plans, policies and practices already adopted by the City, including the General Plan.

Purpose, Scope & Organization

Purpose

The CAP is a strategic document, rooted in the idea that effective global solutions to climate change will largely be the result of collective action of local communities and governments. The CAP enables the City to maintain local control of implementing State direction (AB32 – the California Global Warming Solutions Act) to reduce GHG emissions to 1990 levels by 2020. GHG reduction strategies align with existing General Plan policies, and adoption of a CAP is an Other Important Objective in the City's 2011-13 Financial Plan. Having an adopted CAP will also allow the City to streamline the California Environmental Quality Act (CEQA) review process of certain development projects.

The plan identifies strategies to guide the development and implementation of GHG reduction measures in the City of San Luis Obispo and quantifies the emissions reductions that result from these strategies. In addition to addressing strategies to reduce GHG emissions, the CAP includes adaptation measures to improve the City's ability to address the potential impacts that climate change may have on the City and its residents. The overall benefit of the CAP is larger than reducing GHG emissions; it is quality of life improvements for the community, potential energy cost savings for residents and businesses, and protection of the environment for future generations.

Scope

The CAP is adopted by Resolution, and is not law. Some strategies will be implemented through ordinance, while others will require

development of educational programs or prioritizing resources for infrastructure. The CAP proposes strategies to reduce GHG emissions from community-wide activities and government operations. Community-wide activities are broken down into six focus areas: **buildings**, **renewable energy**, **transportation and land use**, **water**, **solid waste**, and **parks and open space**. Corresponding goals include: energy-efficient buildings, clean and renewable energy sources, improved transportation options, reduced water consumption, reduced waste, and maintenance and growth of the urban forest.

Organization

Each chapter describes sources of GHG emissions, existing actions, and new strategies. Where possible, the GHG reduction strategies are quantified in terms of expected amount of emissions reduced by 2020. When combined with anticipated emissions reductions from State requirements, San Luis Obispo can reach its adopted GHG reduction target.

Adaptation measures are included at the end of each chapter. These measures indicate actions the City can take to respond to climatic changes that will occur regardless of actions taken to reduce emissions.

Understanding Climate Change

The Evolution of Climate Science

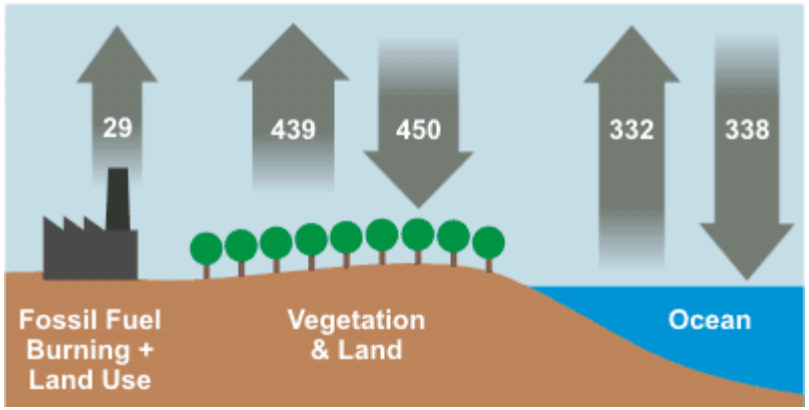
Mounting scientific evidence links rising atmospheric GHG concentrations to global climate change caused by human activities. Although uncertainty has surrounded the issue of climate change since the mid-twentieth century, it is evident that higher levels of GHG emissions in the atmosphere are warming temperatures. Melting Arctic sea ice, shrinking glaciers, rising sea levels, lengthening growing seasons, and shifting flora and fauna geographic ranges all point to climate change.

The questions surrounding climate change are no longer about whether the earth's temperature is rising, but to what extent, how fast, and with what impacts. Ongoing scientific studies have documented a rise of 1.3 degrees Fahrenheit in the average surface air temperature of the earth over the last century along with a continual rise in atmospheric concentrations of carbon dioxide.[1] Global climate models accounting for both natural and human-related activity have shown that the global climate is warming more rapidly than it would under solely natural conditions. The natural cycle produces and removes GHGs via forests and oceans to keep a

1 Henson, R, 2008.

balance, but humans produce extra GHGs without removing any. While fossil-fuel derived GHGs are a very small component of the global carbon cycle, the extra GHGs are cumulative because the

The Global Carbon Cycle



Note: Numbers represent flux of carbon dioxide in gigatons
Source: Intergovernmental Panel on Climate Change, 2007

natural carbon exchange cannot absorb all the additional GHGs.[2] A climate action plan identifies ways humans can reduce the GHGs they generate to bring the cycle closer to balanced.

The Mechanics of Climate Change: Greenhouse Effect

Greenhouse gases play an essential role in keeping earth habitable; without them, surface temperatures would average negative two degrees Fahrenheit.[3] Approximately 50% of solar radiation is absorbed by the earth's surface, 30% is reflected back to space, and 20% is absorbed by the earth's atmosphere. The energy absorbed by the earth's surface is released as infrared radiation from the earth. While some energy is lost to space, GHGs trap the majority of heat and radiate it back to the earth's surface. This delicate energy balance, called the Greenhouse Effect, nurtures life and supports the complex natural ecosystems in which humans thrive.

Human activities are altering this delicate balance. Since the days of the Industrial Revolution, atmospheric concentrations of greenhouse gases have increased due to the burning of fossil fuels—including coal, oil, and natural gas—in vehicles, power plants, factories, and homes. Concentrations of nitrous oxide, carbon dioxide, and methane have increased 18%, 36%, and 148% respectively.[4] Higher concentrations of greenhouse gases have resulted in a stronger Greenhouse Effect that traps more heat and reduces the radiation of heat into space. The result is a documented increase in the average surface temperature of the earth.

The challenges associated with climate change are complex and forecasting continues to be plagued with uncertainty. Under business-as-usual scenarios, scientific models suggest that atmospheric carbon dioxide levels may double those of the pre-industrial period by the mid-twenty-first century. The Intergovernmental Panel on Climate Change (IPCC) predicts a corresponding rise in average global surface temperature between 2.7 and 8.1 degrees Fahrenheit in the same time period.[5] The extent of future impacts depends on how quickly and to what degree GHG emissions can be reduced on a global scale in addition to how well

2 Intergovernmental Panel on Climate Change, 2007

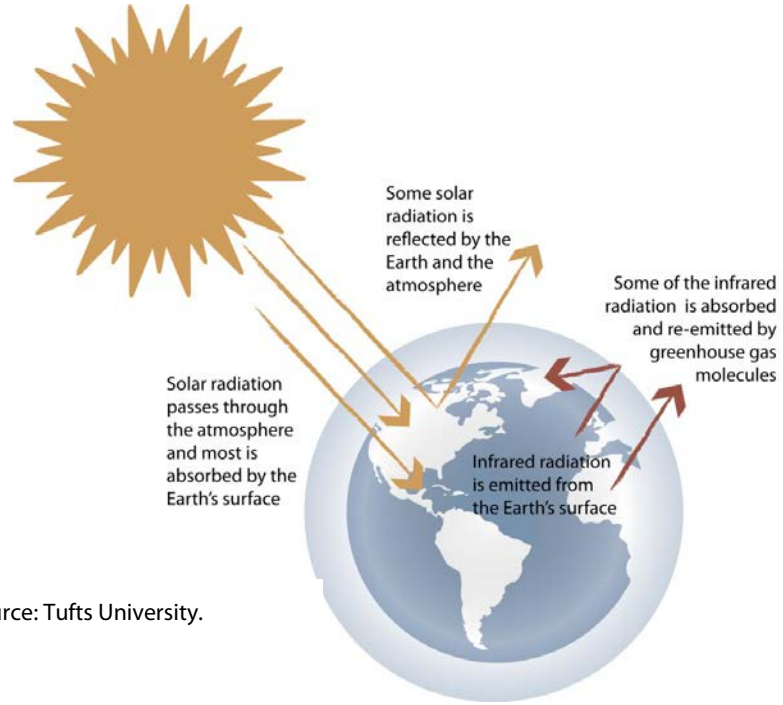
3 U.S. Environmental Protection Agency, 2009.

4 Intergovernmental Panel on Climate Change, 2007.

5 Intergovernmental Panel on Climate Change, 2007.

areas are able to adapt to climate change effects. The solution lies in global action, which is the cumulative sum of local reform.

The Greenhouse Effect

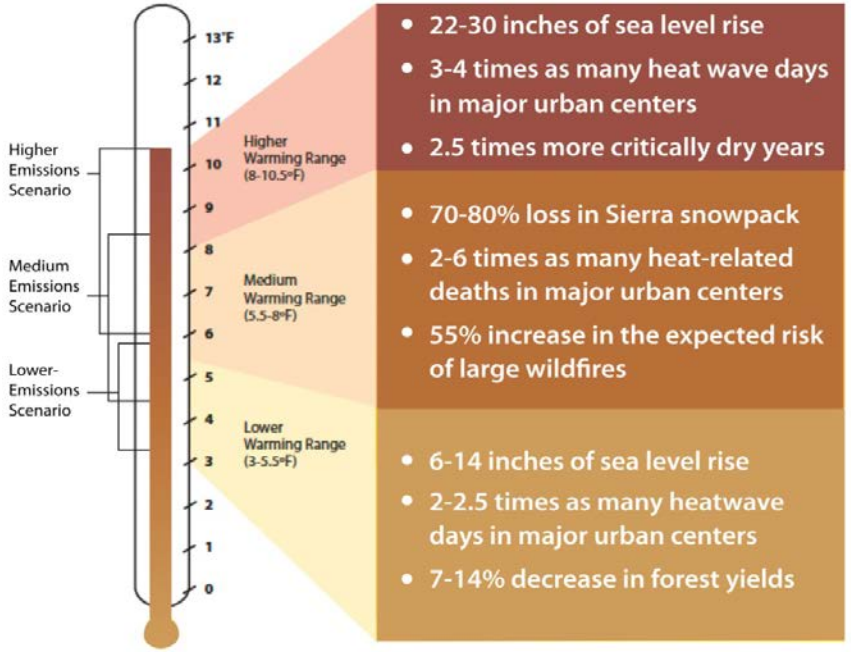


Source: Tufts University.

Climate Change Impacts

California's climate is already changing. Annual nighttime temperatures statewide have increased 0.33 degrees Fahrenheit per decade since 1920, while daytime temperatures have increased by 0.1 degrees Fahrenheit per decade during the same period.[6] Increases in average temperatures in California result in variations in temperature by area and by season, which will have a number of potential consequences including: wildfire, public health issues, flooding, drought, and agricultural risks.

Potential Climate Change Impacts



Source: California Energy Commission

Increased Wildfires

Wildfires have increased in frequency and intensity in recent years.[7] Rising temperatures cause shifts in precipitation patterns and earlier melting of mountain snowpack. This reduction in rainfall, combined with a longer growing season (i.e. more fuel) and higher

6 California Natural Resources Agency, 2009.

7 California Natural Resources Agency, 2009.

temperatures, can lead to an increase in the frequency and intensity of wildfires. In a relatively hot and arid climate like that of San Luis Obispo, an increase in wildfire danger in wildland-urban interface areas is an expected consequence of climate change.

Impacts on Public Health

Higher overall temperatures increase the likelihood and severity of heat waves. Higher temperatures are associated with increased risk of heat-related deaths and illness. This risk is greater for people in economically depressed areas with reduced access to air conditioning. Higher temperatures also increase air pollution by increasing fuel evaporation, raising energy demand, and creating ideal conditions for smog formation.

Flooding, Drought & Reduced Snowpack

Climate change threatens to alter rainfall patterns in San Luis Obispo, increasing the frequency and severity of both flooding and drought. It also threatens the State's overall water cycle. The majority of precipitation in California falls as winter snow in the mountains. The mountain snowpack stores this water, supplying the State's water needs in the dry summer months. Rising temperatures will have two significant impacts on this important process: more precipitation comes as rain and less as snow causing flooding; and spring snowmelt will happen earlier. This means a longer period of low-flow conditions in the warmer months causing impacts to water supplies, fish and other aquatic life.[8]

8 California Natural Resources Agency, 2009.

Threats to Agriculture

Agriculture is a critical industry in California ($37.5 billion in revenue in 2010) that supplies half of the nation's domestic fruits and vegetables.[9] Rising temperatures and increased drought conditions in the State's agricultural areas will increase water demand and constrain agricultural output when water supply becomes less reliable. Rising temperatures can also negatively impact crop yield and quality. Many of the most valuable crops in California—such as fruits and nuts—require a certain period of cool temperatures in the winter to properly set their fruit. Rising winter temperatures can lead to late or irregular blooms, meaning lower quality and yield at harvest time.[10]

Five Milestone Process

The City of San Luis Obispo has a long history of supporting sustainable and environmentally friendly initiatives and practices. Upon joining the Cities for Climate Protection Campaign in 2008, San Luis Obispo committed to following its established Five Milestone Process consisting of the following steps:

1. Conduct a baseline emissions inventory and forecast.
2. Adopt an emissions reduction target for the forecast year.
3. Develop a local climate action plan.
4. Implement the plan's policies and measures.
5. Monitor and verify results.

9 California Department of Food and Agriculture, 2012.

10 California Natural Resources Agency, 2009.

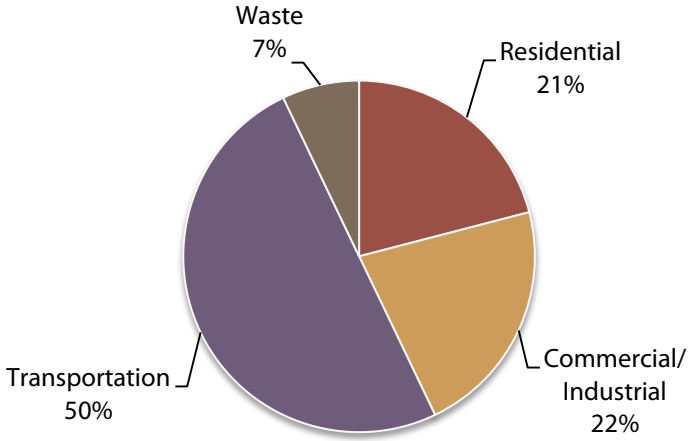
GHG Inventory

Pursuit of the first milestone began in 2008 when the City conducted an emissions inventory and business-as-usual (BAU) forecast.[11] The emissions inventory identifies 2005 as the baseline year for which comprehensive energy use data is available. The baseline data in the inventory provides a basis for establishing strategies that are appropriate for San Luis Obispo's emissions patterns and for quantifying any reductions over time. Emissions resulting from government operations were quantified separately as a subset of community-wide emissions and are addressed in this document under Government Operations.

In addition to naturally occuring GHGs, human processes generate emissions that impact the Greenhouse Effect. Emissions inventories use carbon dioxide equivalents (CO_2e) as a standard unit for measuring carbon footprints. The idea is to express the impact of each different greenhouse gas in terms of the amount of CO_2 that would create the same amount of warming.[12] For example, methane traps over 21 times more heat per molecule than carbon dioxide and one metric ton (MT) of methane would show as 21 $MTCO_2e$.

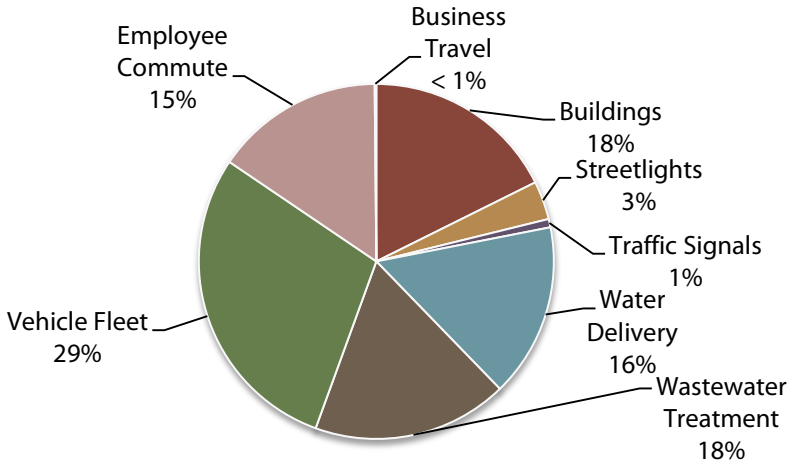
Community-wide emissions were split into four sectors: Commercial & Industrial, Residential, Transportation, and Solid Waste. The City's community-wide emissions in 2005 came to a total of 264,240 $MTCO_2e$. Half of community emissions come from transportation sources, which includes vehicle trips passing through San Luis Obispo on Highways 101 and 1.

2005 Community Wide GHG emissions (264,240 $MTCO_2e$)



Government operations emissions were separated into Vehicle Fleet, Employee Commute, Business Travel, Buildings or Facilities, Streetlights, Traffic Signals, Water Delivery and Wastewater.

City Operations Emissions (6,700 $MTCO_2e$)



11 City of San Luis Obispo, 2009.

12 The Guardian, April, 2011.

In 2005, government operations accounted for 2.5% of the total community-wide emissions, or 6,700 $MTCO_2e$.

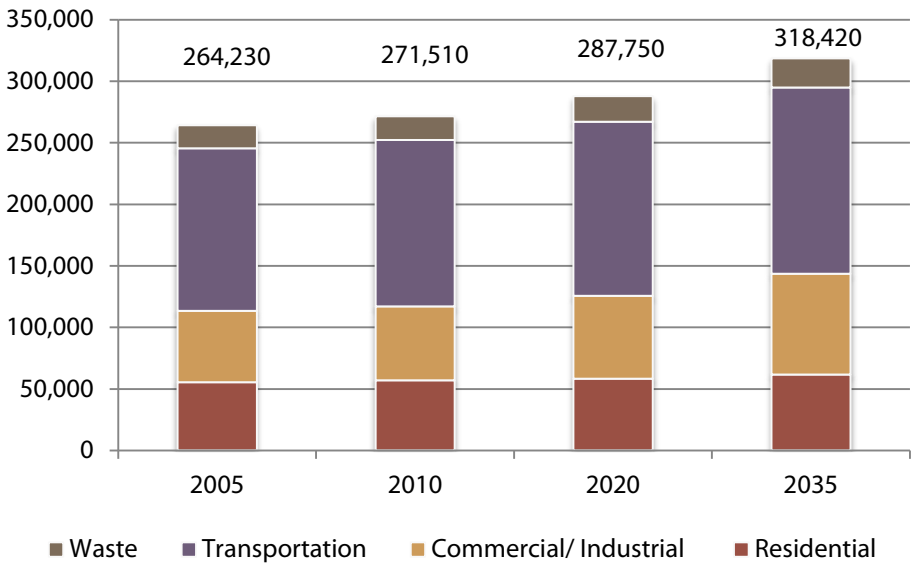
GHG Reduction Target

The emissions inventory identified a GHG reduction target, consistent with the Proposed Scoping Plan for AB 32, of 15% below the baseline year by 2020. This equates to 22% below the projected buisness-as-usual (BAU) forecast by 2020, which takes into account anticipated growth in the population and built environment.

Business-As-Usual Forecast

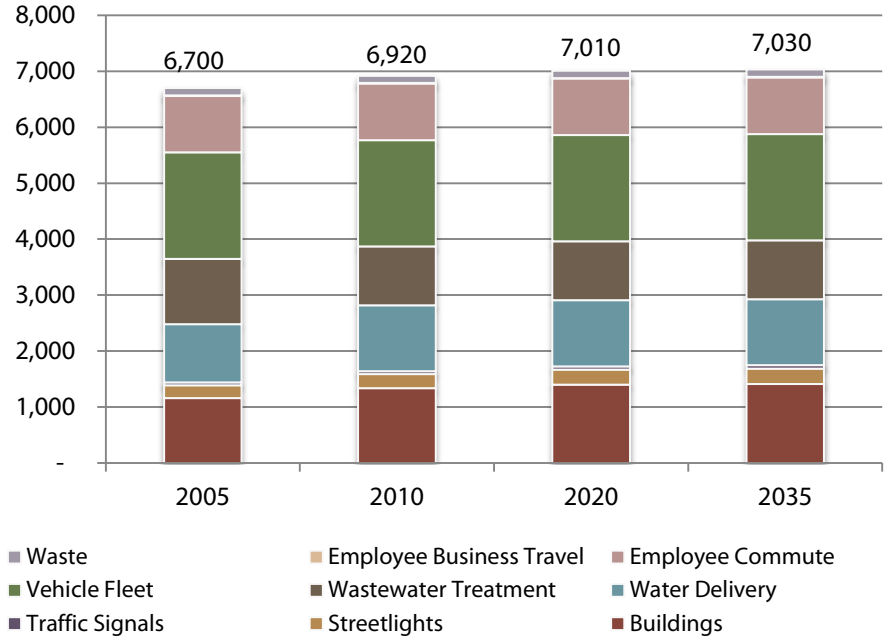
The GHG emissions inventory report included a business-as-usual (BAU) forecast for community and government emissions.

Business-As-Usual Forecast of Community-wide Emissions



The BAU forecast indicates that emissions will increase, especially in the commercial/industrial sector, as the community's population and jobs continue to grow. The BAU forecast for both community-wide emissions and City government operations reflects actual and anticipated growth rates between 2005, 2010, 2020, and 2035. Community growth rates are based on 2010 San Luis Obispo Council of Governments (SLOCOG) adopted growth projections of population and jobs. The BAU forecast for City governement operations also reflects anticipated changes in facilities, vehicle fleet, streetlight use, and employee commuting behaviors.

Business-As-Usual Forecast of Government Operations Emissions



State Policies to Reduce GHG Emissions

AB 32, SB 375 and SB 97

Various pieces of climate change legislation have become law in California since San Luis Obispo's emissions inventory baseline year of 2005. **AB 32** is the primary legislation that contains the State's adopted GHG reduction strategies to reduce GHG emissions to 1990 levels by the year 2020. This target is estimated to be 15% below emissions measured in the baseline year of 2005. One of the central requirements of AB 32 directed the California Air Resources Board (ARB) to create a Climate Change Scoping Plan, which was adopted by ARB in 2008. The Climate Change Scoping Plan recognizes the unique ability of local governments to impact emissions reductions through policy change.

The Climate Change Scoping Plan also recognizes that passenger vehicles are the single biggest source of GHG emissions in California, and one of the biggest obstacles to reaching the goal of 1990 GHG levels by 2020. To address this, **Senate Bill (SB) 375** was signed into law in 2008. This bill—largely an anti-sprawl measure—supports the implementation of AB 32 by (1) requiring that metropolitan planning organizations (MPO) create regional transportation plans that include strategies for reducing GHG emissions from passenger vehicles, (2) aligning the regional housing needs allocation process with regional transportation planning, and (3) incentivizing transit-oriented residential projects that further AB 32 goals. SLOCOG, the region's MPO, has adopted reduction targets for per capita emissions from passenger vehicles of 8 percent below baseline (2005) for the years 2020 and 2035.[13]

Another important piece of State legislation is **SB 97** (2007). SB 97 identifies greenhouse gas emissions associated with a project as potentially significant environmental impacts under the California Environmental Quality Act (CEQA). CEQA allows lead agencies to analyze and mitigate the significant effects of greenhouse gas emissions at a programmatic level, such as in a general plan, or as part of a separate plan to reduce greenhouse gas emissions (CEQA 15183.5). The CAP serves as the City's qualified GHG reduction plan, because it contains the following required plan elements:

- ☑ Community-wide GHG emissions inventory and "business-as-usual" forecast of 2020 community-wide GHG emissions;
- ☑ GHG reduction targets consistent with AB 32 (i.e. a level, based on substantial evidence, below which the contribution to greenhouse gas emissions from activities covered by the plan would not be cumulatively considerable);
- ☑ Analysis of local and state policies and actions that may impact GHG emissions within the jurisdiction;
- ☑ Quantification of GHG reduction measures demonstrating that, if implemented, the GHG reduction targets will be met;
- ☑ Implementation and monitoring strategy and timeline; and
- ☑ Adequate environmental review of the CAP.

[13] SLOCOG Preliminary Sustainable Communities Strategy

Incorporation of these plan elements allows the CAP to be used in the cumulative impacts analysis of later projects. The environmental document for each project must identify those requirements specified in the CAP that apply to the project, and if those requirements are not otherwise binding or enforceable, should be incorporated as mitigation measures applicable to the project (CEQA 15183.5b). The City will develop a mitigation matrix as an offshoot of the CAP for projects that exceed specified GHG thresholds. The matrix will include quantifiable CAP reduction measures consistent with SB 97 direction.

A number of other laws directly relate to local climate planning efforts and will result in local GHG emissions reductions. The laws are outlined in the following sections.

Clean Car Standards, AB 1493 (Pavley)

Signed into law in 2002, AB 1493 requires carmakers to reduce GHG emissions from new passenger cars and light trucks beginning in 2011. Regulations were adopted by ARB in 2004 and took effect in 2009 with the release of a waiver from the U.S. Environmental Protection Agency (EPA) granting California the right to implement the bill. ARB anticipates that the Pavley standards will reduce GHG emissions from new California passenger vehicles by about 22% in 2012 and about 30% in 2016, all while improving fuel efficiency and reducing motorists' costs.[14]

Low Carbon Fuel Standard

Established in 2007 under an executive order from Governor Schwarzenegger, the Low Carbon Fuel Standard (LCFS) directs the California Environmental Protection Agency, the California Energy Commission, and the California Air Resources Board to develop protocols for measuring the life-cycle carbon intensity of transportation fuels to be included as part of the state's early action item for implementing AB 32. The LCFS will reduce the average carbon intensity of transportation fuels by 10%.[15]

Renewable Portfolio Standard

California's Renewable Portfolio Standard (RPS) is one of the most ambitious renewable energy standards in the country, mandating that 33% of electricity delivered in California is generated by renewable sources like solar, wind, and geothermal by 2020. The California RPS was first codified in 2002 by SB 1078 (requiring 20% renewable electricity mix by 2010) and further strengthened in April 2011 with the adoption of SB X 1-2 (requiring 33% renewable electricity mix by 2020).[16] The RPS intends to boost the economy and establish California as a leader in the development and use of renewable energy.

Despite the 2020 goal of California's RPS, technological and political challenges may prevent some investor-owned utilities from meeting the 33% target by 2020. In 2010, the California Public Utilities Commission reported that 18% of California's electricity came from

[14] California Air Resources Board, 2010.

[15] California Air Resources Board, 2011.

[16] California Public Utilites Commision, 2011.

renewable sources in 2010, missing the 20% goal by 2%. California utilities have more than enough renewable electricity under consideration to meet the 33% target by 2020. However, due to contract and transmission limitations, not all of this new electricity may be available in time.[17] Taking these issues into account, this document assumes a more conservative forecast of a 28% renewable mix by 2020.

California Building Codes, Title 24

Title 24 of the California Code of Regulations (CCR) regulates how each new home and business is built or altered in California. It includes requirements for the structural, plumbing, electrical, and mechanical systems of buildings, and for fire and life safety, energy conservation, green design, and accessibility in and about buildings. Two sections of Title 24 – Part 6, the California Energy Code, and Part 11, the California Green Building Standards Code or CALGreen Code – contain standards that address GHG emissions related to new construction. These two sections require direct electricity, natural gas, and water savings for every new home or business built in California. Part 6, which was last updated in January 2011, also includes requirements for lighting, insulation and equipment upgrades to residential and nonresidential buildings undergoing additions, alterations or repairs. CCR Title 24 are statewide codes and standards that must be enforced by local agencies through the construction application process.

[17] California Public Utilites Commision 2011.

Part 11, 2010 California Green Building Code

California is the first state in the nation to adopt a mandatory green building code, the California Green Building Standards Code, or CALGreen. The CALGreen Code became a mandatory code beginning January 1, 2011. The code takes a holistic approach to green building by including minimum requirements in the areas of planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality. The CALGreen code has minimum mandatory standards and two additional tiers of voluntary measures intended to achieve greater levels of effeciency which result in lower levels of GHG emissions. Local governments must enforce the minimum standards and can choose to adopt either Tier 1 or Tier 2 standards to achieve greater positive environmental impacts. The CAP maintains minimum CALGreen requirements, and proposes incentives for projects that elect to meet Tier 1 standards.

Mandatory CALGreen standards do not require explicit reductions in energy consumption beyond the minimum Title 24 Part 6 standards. However, if a local agency elects to adopt either of the optional tiers of CALGreen, additional prerequisites and electives must be implemented by new development projects. For the voluntary energy efficiency prerequisites, Tier 1 is a 15% and Tier 2 is a 30% improvement over minimum Title 24 Part 6 requirements.

The GHG forecast in this plan incorporates the net energy and water benefit of new Title 24 requirements that did not exist in the baseline year. These estimates are based on California Energy Commission studies that compare each new update of Title 24 to its former version. The AB 32 Scoping Plan calls for ongoing triennial

updates to Title 24 that will yield regular increases in the mandatory energy and water savings for new construction. As such, the GHG forecast also includes a conservative estimate of the energy and water reductions due to future updates of Title 24 based on historic growth rates. The energy reductions quantified in the forecast from Part 6 Energy Code updates are based on the assumption that the triennial updates to the code will yield regular decreases in the maximum allowable amount of energy used from new construction.

California Solar Initiative

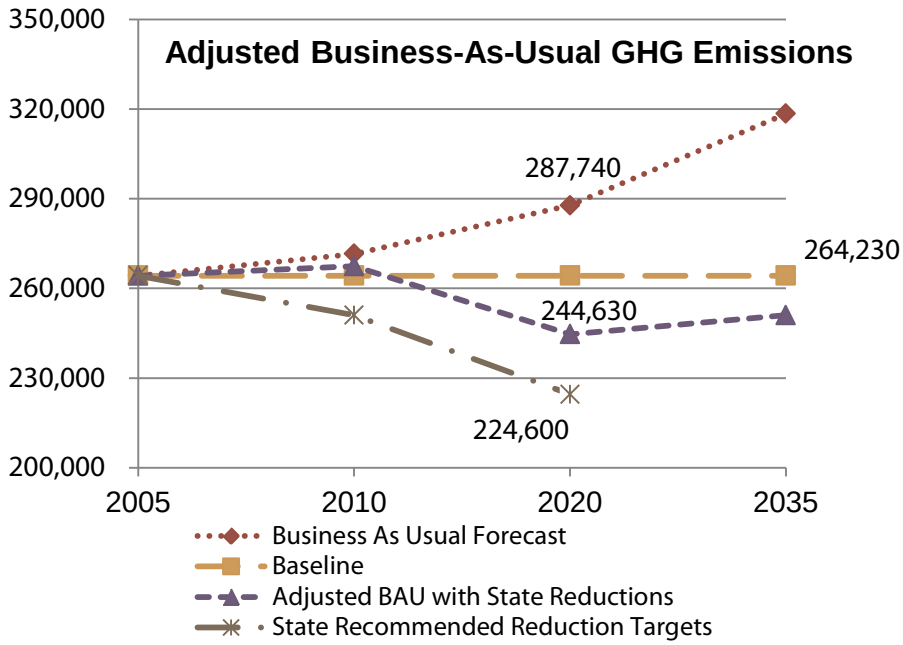
The California Solar Initiative (CSI) was authorized in 2006 under SB 1 and allows the California Public Utilities Commission (CPUC) to provide incentives to install solar technology on existing residential, commercial, nonprofit, and governmental buildings if they are customers of the State's investor-owned utilities (IOUs): Pacific Gas & Electric (PG&E), San Diego Gas & Electric (SDG&E), or Southern California Edison (SCE). The CSI program has a budget of nearly $2.2 billion to be expended by 2016 with a goal to reach 1,940 megawatts (MW) of installed solar power throughout the State by that time.[18] The CSI program has several components, including the Research and Development, Single-family Affordable Solar Housing (SASH), Multi-family Affordable Solar Housing (MASH), and Solar Water Heating Pilot Program, each of which provides incentives to further the installation of solar technology on California's buildings.

Adjusted Business-As-Usual Forecast

Implementation of State legislation has direct impacts on the current and future GHG emissions in San Luis Obispo. State policies address emissions that are difficult for the City to directly influence with local policy such as vehicle fuel efficiency and the emissions associated with the generation of electricity.

Local Impact of State Emissions Reduction Policies

State Law	Amount of Emissions ($MTCO_2e$)		
	2010	2020	2035
Clean Car Standards (Pavley)	0	-21,020	-35,420
Low Carbon Fuel Standard	0	-9,330	-8,690
Renewable Portfolio Standard	-3,490	-10,290	-17,070
California Solar Initiative	-640	-1,490	-1,420
Title 24	0	-980	-4,850
Total Emissions Reductions	-4,130	-43,110	-67,450



18 California Energy Commission and California Public Utilities Commission, 2011.

Reductions resulting from State policies are estimated to reduce GHG emissions 15% below projected business-as-usual (BAU) GHG emissions. This means the City must implement local strategies to reduce emissions by an additional 7% to reach the 2020 reduction target of 22% below BAU (15% below baseline).

Climate Action Plan Development

In 2009, the City partnered with the Cal Poly Climate Team to develop a CAP. The draft plan was developed over two phases: (1) auditing the City's existing policies, and (2) drafting the CAP. Education and outreach was conducted throughout the process and is described in more detail below.

Phase 1: Development of a citywide policy audit and other background research was completed by December 2009. This included identifying existing policies and programs that either support or conflict with the City's GHG reduction goals, reviewing strategies implemented in other jurisdictions to identify those strategies that are applicable to San Luis Obispo, and holding community workshops to gather public feedback.

Phase 2: The research and community input completed in Phase 1 served as an informational foundation for creation of a draft CAP that identifies specific emissions reduction strategies, establishes progress-tracking indicators, and makes policy implementation recommendations. The expected emissions reduction from each strategy was calculated to demonstrate how the City can reach its GHG reduction target of 1990 levels by the year 2020.

Public Engagement

City residents were involved at all stages of plan development. Outreach efforts included hosting booths at four separate Thursday night Farmers' Markets, four community meetings, electronic outreach including a Facebook page and a website, digital surveys, visits to local schools, and Saturday visits to local supermarkets.

Early in the plan development process, public engagement efforts focused on sharing information with the public, raising awareness, and gaining an understanding of community needs. Activities included an educational climate change game, a board where residents could identify the ways they are already working to reduce their own carbon footprint, and walking surveys. Emphasis was placed on soliciting community-based ideas for addressing climate change, which was used as the foundation for draft GHG emissions reduction strategies.

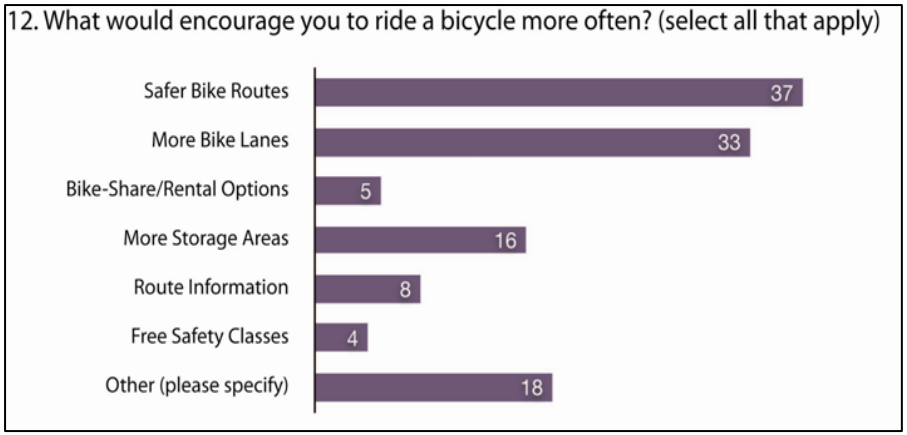
The Climate Team and staff made a number of Saturday visits to local supermarkets, where the team shared details of the project with interested residents, solicited feedback on draft strategies, and invited residents to upcoming meetings. In an attempt to engage residents of all ages, visits were also made to local schools. Students

were given an opportunity to share some of their ideas and to learn more about climate change and how it might affect San Luis Obispo. Flyers announcing upcoming community meetings were also dropped off at schools for students to take home to their parents.

Subsequent public workshops and events focused on presentation of draft GHG reduction strategies and gathering feedback on which strategies residents could support. Presentations and participation excercises were also held at regular meetings of local community groups, including: Home Builder's Association, Greenbuild Alliance, Association of REALTORs, Chamber of Commerce, Kiwanis Club, Empower Poly, and Workforce Housing Coalition.

A website (SLOCOOL.org) and Facebook page allowed residents to post questions and comments via Facebook or email, and review updates and information about future events. Three digital surveys were administered through web resources. Two of the surveys focused on residents, and a third survey was sent to the business community via the Chamber of Commerce.

Sample Survey Question



Finalizing the City's Reduction Strategies

GHG emissions reduction policies and programs reflect public input, climate science literature, State and Federal legislation, emerging planning policy, and CAPs adopted by other jurisdictions. The majority of the community GHG reduction strategies are based on voluntary behavior. The CAP guides residents and workers to make alternative efficiency-based decisions, or in many cases, to continue environmentally sound practices already taking place in SLO. Where strategies have potential to impose costs on the community, a cost-benefit analysis shall accompany implementation proposals. The overall benefit of the CAP is larger than reducing GHG emissions; it is quality of life improvements for the community and protection of the environment for future generations.

How to Read this Document

BLD 1: Energy Conservation Ordinance

The City shall develop an Energy Conservation Ordinance for residential and commercial properties.

Implementation:

- ☑ BLD 1.1 Develop residential energy conservation (REC) standards for properties being renovated or sold.
- ☑ BLD 1.2 Develop commercial energy conservation (CEC) standards for properties being renovated or sold.
- ☐ BLD 1.3 Identify alternative energy conservation measures for historic structures that do not compromise the integrity of the building.

Emissions Reduction: 

Program Description:

An Energy Conservation Ordinance will require energy efficiency upgrades at the time of sale or as a condition of processing a construction permit for a major renovation or addition to a building. The REC and CEC standards will require property owners to complete an energy audit prior to the sale of a building. It is anticipated the ordinance will require property owners to implement a combination of these strategies proportional to the scale of the construction project or value of property sold. Exemptions may be made for structures built after the year 2000, energy efficiency retrofits completed within the previous five years, or participation in the Energy Upgrade California rebate program. The ordinance will include specific measures for single-family homes, multi-unit homes, and commercial properties, with specific provisions for historic structures (BLD 1.1 through 1.3). Property owners will be expected to make upgrades that will reduce energy use by a minimum of 20% at the time of sale.

Implementation Time Frame: Mid-Term

Indicators & Monitoring:

- Number of properties completing retrofit upon sale, renovation or addition.

Community Benefits: 

Strategy Title and Measure

Necessary Action Items

Actions that implement the strategy. A checked box indicates continuation of existing efforts.

Emissions Reductions

= -500 $MTCO_2e$

Estimated amount of GHG emissions reduced by the year 2020, measured in metric tons of carbon dioxide equivalent ($MTCO_2e$).

Measure Time Frame:

Identifies the time frame for implementing each measure to achieve the GHG reduction.

Monitoring:

Indicators that will be used to measure progress.

Co-Benefits:

Identifies the additional benefits to be achieved through the implementation of each program.

Additional Benefits

In addition to reducing greenhouse gases, many strategies provide additional health, economic, or educational benefits when implemented. These tags can be found throughout the document.

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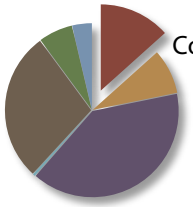
Buildings

Goal: Reduce energy-related emissions by promoting greater energy efficiency at the point of final use in buildings.



13% of Total Community GHG Reductions

Reduces Energy Demand

Community Savings

Education & Awareness

The GHG emissions associated with energy use from buildings account for 43% of community-wide GHG emissions (113,620 $MTCO_2e$). These emissions come from fossil fuels that supply energy to residential, commercial, and industrial buildings, facilities and associated appliances. Energy-related GHG emissions can be reduced by using less energy through conservation and making buildings more efficient with the energy they use.

Energy is used to light, heat, and cool buildings, as well as power appliances, equipment, and electronics that are used within each building. Small, low-cost actions such as switching to more efficient light bulbs, or line drying clothes instead of using a dryer, can provide significant energy savings, which results in emissions reductions. Energy efficiency improvements also can increase property values, reduce monthly utility costs, and improve indoor air quality.

Fossil fuels supply roughly 90 percent of the world's commercial energy; energy-related emissions account for more than 80 percent of the carbon dioxide released into the atmosphere each year (World Resources Institute).

State Reductions

Title 24 – Part 6, the California Energy Code, and Part 11, the California Green Building Standards Code or CALGreen Code – require direct electricity, natural gas, and water savings for every new home or business built in California. Part 6 also includes requirements for lighting, insulation and equipment upgrades to residential and nonresidential buildings undergoing additions, alterations or repairs.

Existing Actions

Existing local policies that reduce energy use within the community can be found in the General Plan, Community Design Guidelines, and Zoning Regulations. These policies include:

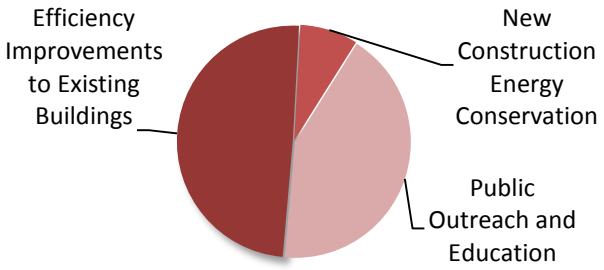
- ☑ Design standards that promote sustainable and efficient development, such as maximizing passive ventilation and cooling systems, and use of natural lighting within buildings.
- ☑ Application requirements for large development projects to complete green building and low impact development checklists.
- ☑ Additional energy efficiency performance standards for proposed buildings taller than 50 feet.

☑ Energy efficiency mitigations for projects that may have a significant environmental impact.

Buildings Strategies

Local strategies to reduce community-wide energy-related emissions from buildings include energy efficiency requirements, programs, incentives, education and outreach. Many of the building strategies align with policies in the County *EnergyWise Plan* and pending State legislation.

Building GHG Emissions Reductions by Strategy (-3,543 MTC0$_2$e)



The majority of emissions reductions can be achieved through energy efficiency improvements to existing buildings. Conserving existing building stock also preserves "embodied energy", which is the sum of energy inputs used in initial building construction.

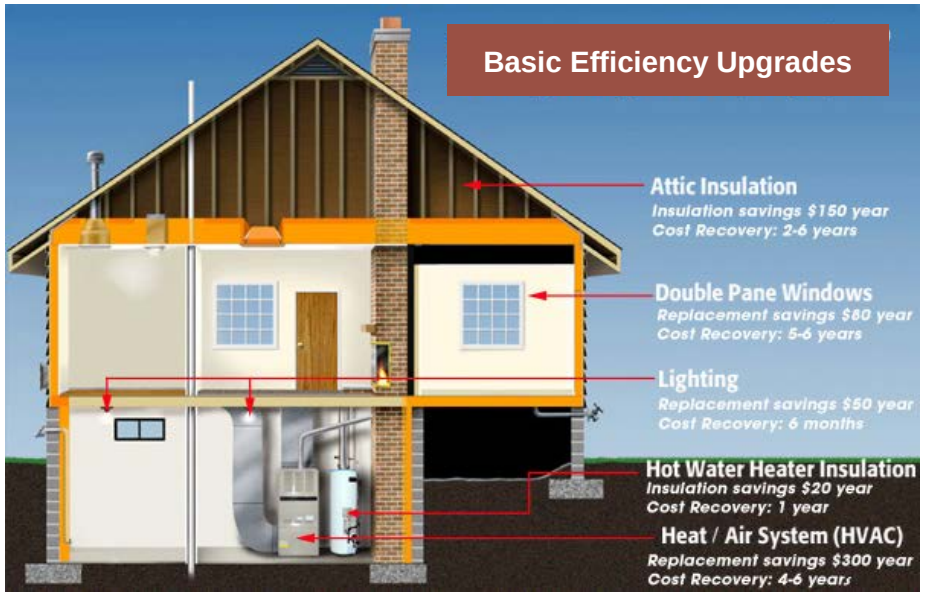
BLD 1: Efficiency Improvements to Existing Buildings

Implement local programs, and collaborate with the County and State, to improve energy efficiency in older building stock.

-1,745 MTCO$_2$e

Program Description:

An efficient building ensures that space heating and cooling, water heating, insulation systems and electrical systems are working together to achieve the optimal comfort using the least amount of energy. Building performance is improved by sealing leaks and insulating the "envelope" or exterior shell. Efficiency upgrades can: eliminate drafts, quiet the interior, reduce mold, save money on utility bills, reduce respiratory irritants, reduce energy use, improve fire safety, and lower GHG emissions.



Energy ratings by certified professionals are the first step. Energy ratings inform owners and buyers about the energy efficiency of a building, its operating costs, and improvements that can be made to make the building more energy efficient. Making this information available helps consumers make better decisions. Property owners

will be able to receive incentives for completing energy ratings of older buildings and submitting the results to the City.

Energy efficiency upgrades to older buildings are a common goal of the City, County and State. Continuing education of the public using energy ratings, online resources, State-mandated annual energy reports for nonresidential buildings (AB 1103), and energy monitors will create the basis of information that leads to more retrofits. This aligns with the State's Comprehensive Energy Efficiency Program for Existing Buildings (AB 758), which requires the Energy Commission to develop and implement strategies for energy assessments, benchmarking, energy use ratings and labels, cost-effective energy efficiency improvements, financing, outreach and green workforce training.

Implementation:

- ☐ BLD 1.1 Accomplish 425 residential energy-efficiency retrofits and 10,000 square feet of commercial efficiency retrofits annually, by encouraging energy ratings, offering rebates and incentives, and supporting regional education efforts such as an *EnergyWatch* energy-efficiency website.
- ☐ BLD 1.2 Encourage property owners to monitor building energy use through energy monitors, web applications and State-required energy use disclosures (AB 1103).

In 2012, the average cost of an energy rating is $400 to $700, which includes: infrared and blower door testing for air leaks, insulation, HVAC and duct inspection, utility history analysis, safety and mold testing, air pressure mapping, and customized efficiency upgrade recommendations.

- ☐ BLD 1.3 Evaluate options for a local energy conservation ordinance, pursuant to pending State legislation (AB 758), that requires entry-level efficiency upgrades identified in certified energy ratings.
- ☐ BLD 1.4 Identify energy efficiency upgrades for historic structures that do not compromise the historic integrity of the building, such as interior upgrades like insulation, air sealing, and wrapping ducts.

Implementation Time Frame: **Mid-Term**

Indicators & Monitoring:

- Number of energy ratings submitted to City in exchange for nominal compensation.
- Number of permits issued that include energy-efficiency retrofits.
- Annual review of PG&E *Green Communities* local data on residential and nonresidential energy consumption trends.

BLD 2: New Construction Energy Conservation

Encourage and incentivize new development to exceed minimum Cal Green requirements.

-288 MTCO$_2$e

Program Description:

The City has established incentives for certain green building practices in new construction. Downtown development projects

that exceed Cal Green standards have the opportunity to develop at taller heights than those that only meet minimum efficiency standards. Expansion of incentives for projects that go beyond Cal Green requirements will encourage additional energy conservation in new construction, and reduce energy-related GHG emissions beyond State law.

Utilization of the latest "smart" appliances and other green technologies such as cool roofs and cool pavement in new construction helps reduce energy demand. Cool roofs use special reflective pigments that reflect sunlight, making a building cooler and air conditioning use less frequent. Cool pavement reflects more solar energy reducing heat absorption in the built environment.

Implementation:

- ☐ BLD 2.1 Expand incentive program for projects that exceed Title 24 energy efficiency standards.
- ☐ BLD 2.2 Require new development to install energy-efficient appliances.
- ☐ BLD 2.3 Amend design guidelines and other documents to promote low impact development strategies such as cool roofs and cool paving surfaces.

Implementation Time Frame: Near-Term

Indicators & Monitoring:

- Percentage of new construction projects that exceed Cal Green requirements.
- Percentage of new projects with smart grid appliances.

BLD 3: Public Outreach and Education

-1,510 $MTCO_2e$

Collaborate with local utility providers, the County and State, businesses, and community organizations to develop energy conservation campaigns and marketing for existing programs.

Program Description:

Voluntary energy efficiency and conservation programs provide incentives to residents and businesses to reduce energy use, and collectively work towards reducing community-wide GHG emissions. Energy Upgrade California is one program being implemented statewide that offers rebates up to $4,000 for energy efficient upgrades to buildings. Energy-efficiency mortgages, sponsored by federally insured mortgage programs (FHA and VA) and the conventional secondary mortgage market (Fannie Mae and Freddie Mac), are used to purchase existing homes that will have energy efficiency improvements completed. The City will work to educate the public about this financing option and other programs offered by Federal, State and regional agencies and utility companies via publications and online materials.

The City will also strengthen partnerships with local organizations committed to promoting green building design and energy-efficient living standards. Development of a certification program that recognizes businesses with energy efficient operations will help promote energy conservation and grow community-wide awareness.

Implementation:

- ☐ BLD 3.1 Promote energy efficiency programs and available financing options including energy-efficiency mortgages, State energy programs, Energy Upgrade California, utility company upgrade programs, and local rebates.
- ☐ BLD 3.2 Collaborate with the County, State, and energy providers to develop a central website for streamlined access to energy efficiency resources, including a database of certified energy raters and recommended upgrades.
- ☐ BLD 3.3 Work with local green building organizations on education and outreach programs.
- ☐ BLD 3.4 Work with the business community to establish a green business certification program.

Implementation Time Frame: Near-Term

Indicators & Monitoring:

- Number of local participants in Energy Upgrade California.
- Number of hits on community web portal.
- Number of certified green businesses.

Adaptation

An increase in the frequency and severity of heat waves is one anticipated consequence of climate change in California. Higher temperatures mean increased energy demand to power residential and commercial air conditioning, and increased strain on energy distribution systems. Improved standards to promote more energy-efficient buildings can reduce indoor air temperatures during heat waves, thereby reducing energy consumption of cooling systems.

Heat waves can also threaten vulnerable populations such as infants, elderly, and those without access to cool indoor spaces. Improving emergency preparedness for heat waves will help at-risk residents avoid the negative impacts of higher than normal temperatures.

BLD Adaptation 1: Public Relief during Extreme Heat

Facilities that provide air-conditioned indoor space should be accessible to the general public during heat waves. They should be City-owned facilities, educational buildings, commercial structures or any other air-conditioned building that is centrally located and can accommodate up to 100 people. Agreements shall be developed that define an extreme heat event and the hours each facility will be available to the public.

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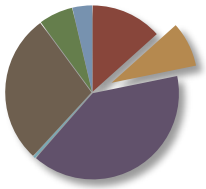
Renewable Energy

Goal: Use cleaner and renewable energy sources.



7% of Total Community GHG Reductions

Supports Local Business

Community Savings

Energy conservation and efficiency reduce GHG emissions by decreasing demand for energy created from burning fossil fuels. A third alternative to reduce GHG emissions is utilization of renewable energy sources like solar and wind. Renewable energy generation does not produce GHG emissions, making it a cleaner alternative to traditional energy sources. State and local programs and incentives have led to the installation of nearly 200 renewable energy systems on residential and commercial properties within the City since 2005.

State Reductions

State incentives such as the California Solar Initiative (CSI) offer cash back on the costs of installing solar technology on existing residential, commercial, nonprofit, and governmental buildings if they are customers of the State's investor-owned utilities. California's Renewable Portfolio Standard (RPS) is one of the most ambitious renewable energy standards in the country, mandating that 33% of electricity delivered in California is generated by renewable sources like solar, wind, and geothermal by 2020.

Existing Actions

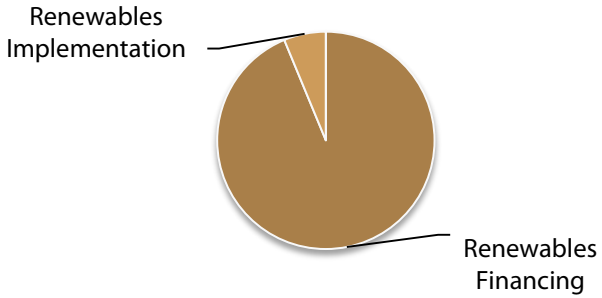
The City continues to support renewable energy through policies in the Conservation and Open Space Element (COSE) of the General Plan, including:

- ☑ Solar access standards for new development that ensure new and existing buildings maintain adequate solar access for future solar installations.
- ☑ Solar power requirements for new single-family residential projects of 20 or more dwelling units.
- ☑ Photovoltaic solar collector requirements for common-use facilities in multi-family residential developments with 20 or more units.

Renewable Energy Strategies

Local strategies supporting installation of renewable energy systems are a combination of financing, incentives and outreach. A local renewable energy financing program can help develop the City's clean energy economy.

Renewable Energy GHG Reductions by Strategy (-2,240 MTC0_2e)



RE 1: Renewable Energy Financing

Promote a wide range of renewable energy financing options including a renewable energy fund or loan program.

-2100 $MTCO_2e$

Program Description:

Financing programs help to remove the high upfront costs of renewable energy equipment by allowing participants to take out low-interest loans that will be offset by low to minimal monthly energy costs. The City will evaluate the feasibility of a public and/or private low-interest loan program. The California Energy Commission offers energy-efficiency financing for cities, counties, and special districts. A community-funded renewable energy fund asks customers to voluntarily pay a little extra on their utility bills. These customer donations are distributed once a year to individuals, schools and nonprofit agencies that are generating solar and wind power. Renewable energy generated goes into the electrical grid and is distributed to customers.

The County's *EnergyWise Plan* includes formation of a countywide energy collaborative that will include cities, the County, state and local agencies, and investor-owned utilities. The City will support this regional approach to provide renewable funding and financing.

Implementation:

- ☐ RE 1.1 Support efforts to implement a revolving low-interest loan program or renewable energy fund.
- ☐ RE 1.2 Work with the County to build a collaborative network to promote renewable funding and financing.
- ☐ RE 1.3 Work with the County and regional energy providers to evaluate a "feed-in tariff" program that pays property owners generating renewable energy based on the amount of energy generated.

Implementation Time Frame: Mid-Term

Indicators & Monitoring:

- Number and size of renewable energy projects installed.
- Number of residents and/or businesses taking advantage of financing and funding programs.

RE 2: Renewable Energy Implementation

-140 $MTCO_2e$

Incentivize renewable energy generation in new and existing developments.

Program Description:

The City will offer incentives to offset elevated construction costs associated with renewable energy installations. New developments receiving incentives will need to generate a minimum share of their energy requirements through on-site renewable technologies. Amendments to development codes, design guidelines and the Zoning Regulations will be completed as necessary to make renewable energy use easier.

Implementation:

- ☐ RE 2.1 Incentivize renewable energy generation by streamlining review processes, reducing permit costs, and/or

allowing modest density bonuses for construction projects with renewable energy installations.

- ☐ RE 2.2 Revise City policies and regulations as needed to eliminate barriers to the use of renewable energy, and implement General Plan programs that require solar power for certain residential projects (COSE 4.6.17).
- ☐ RE 2.3 Evaluate the feasibility of a regional Community Choice Aggregation program to procure electricity from renewable resources.

Implementation Time Frame: Mid-Term

Indicators & Monitoring:

- Number and size of renewable energy projects installed.
- Number of residents and/or businesses taking advantage of incentive programs, and associated cost savings.

RE 3: Public Outreach and Education

Increase community awareness of renewable energy programs. Educate professionals about benefits of integrating renewable technologies in project design.

Program Description

Community members need to be informed about federal, state, regional and local renewable energy programs using a mixed media approach; online, in-person, and on television. The Renewable Energy Secure Communities project for SLO County (SLO-RESCO) project is a regional partnership working to identify the best mix of resources for clean, secure and affordable energy. The City supports SLO-RESCO's efforts and will help the public and decision makers consider their research results.

Photovoltaic cells are becoming more commonplace on residential and commercial rooftops, but design professionals should consider additional opportunities to capture solar energy on accessory structures.

Implementation:

- ☐ RE 3.1 Educate the community about renewable energy programs using various methods, such as the City's website, TV channel, flyers in reception areas, and public events.
- ☐ RE 3.2 Consider results of the SLO-RESCO project.
- ☐ RE 3.3 Encourage the use of photovoltaic installations whenever possible during design review process.

Implementation Time Frame: Near-Term

Indicators & Monitoring:

- Attendance at public events focused on energy.
- Number of projects with photovoltaic systems.

Adaptation

Climate change increases the probability of extreme heat events, which increases the demand for cooling systems in buildings. Alternative energy generation reduces demand on traditional transmission infrastructure, and provides additional energy security.

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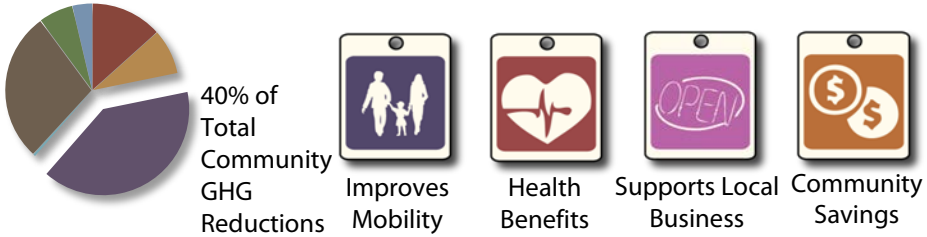
Transportation & Land Use

Goal: Improve transportation options.



Vehicle miles traveled (VMT) is the main indicator used to track GHG emissions produced from vehicle combustion of fossil fuels. VMT is estimated using traffic counts from 176 locations and includes vehicle trips on all streets, highways, and freeways within the City limits. The 2005 Baseline GHG Inventory estimates a citywide daily VMT of 768,239, and approximately 50% of the community-wide GHG emissions, from vehicle traffic. While this is higher than the statewide percentage of total emissions coming from vehicles (41%), some of the transportation-related emissions in the City may be attributable to pass-through traffic on State Highways 1 and 101. Based on the City's traffic model, about 34% of citywide daily VMT is pass-through traffic. With a land area of just over 10 square miles, many trips within San Luis Obispo are short and may not require an automobile.

Transportation-related GHG emissions are directly influenced by trip length, mode of travel, and vehicle efficiency. Mode choice and trip length are indirectly influenced by land use patterns. Replacing vehicle trips with alternative modes of transportation, including bicycling and walking, reduces VMT and related GHG emissions. Expanding the existing network of bicycle and pedestrian routes, increasing the safety of alternative modes of travel, and conducting additional education and outreach efforts facilitate and promote car-free alternatives.

State Reductions

The Pavley Standards (AB 1493) require carmakers to reduce GHG emissions from new passenger cars and light trucks beginning in 2011. The anticipated statewide GHG emissions reductions are about 22% in 2012 and about 30% in 2016. These standards build upon the State's Low Carbon Fuel Standard to improve fuel efficiency and reduce motorists' costs.

The State has also indirectly reduced local VMT from campus commuters. Over the last several years, California Polytechnic State University (Cal Poly) has developed additional on-campus housing, which reduces vehicular travel to and from campus.

Existing Actions

Transportation

The City of San Luis Obispo's first Bicycle Facilities Plan was adopted in 1985. Since then, the City has increasingly focused on providing additional bicycle infrastructure, safety education, and community outreach programs for cyclists. This investment in infrastructure and safety programs earned the City the status of a Silver Level Bicycle Friendly Community from the League of American Bicyclists in 2007.

In 2010, there were more than 39 miles of bikeways in the City. A major goal of the City's 2007 Bicycle Transportation Plan is to have a complete network of bikeways, including Class II (striped bike lanes for one-way bicycle travel on a street) and Class III (designated bike routes along lightly traveled streets) by 2017, and Class I (bike paths reserved for bicycles and pedestrians separated from streets) by 2027. Recent bicycle infrastructure projects include the dedication of Morro Street south of downtown as a Bike Boulevard, bike-specific arrow markings, called "sharrows," along Monterey Street, the completion of portions of the City to Sea Bike Trail to Avila Beach, the Madonna Bike Path, and portions of the Railroad Safety Trail. Additionally, improvements include bike sensors at signalized intersections along Class II and Class III bikeways and a Caltrans Bike Box striped at the Madonna Road and Higuera Street intersection.

Efforts have also been made to encourage bicycle transportation through development review. In 1993, the City adopted bicycle parking standards requiring new development to provide safe and accessible long- and short-term bike parking as a condition of approval. New developments may reduce the number of required parking spaces by providing additional bike parking, above the minimum requirements. The Racks with Plaques program allows community groups to sponsor additional bike parking and has provided 100 additional bike parking spaces since 2005. Since 2006, the City has supported the County Bike Coalition's Bike Valet program at community events. Providing opportunities for bike parking facilitates alternative transportation, thereby reducing GHG emissions from vehicular travel.

The City continues to support community outreach and education related to bike and pedestrian safety through programs and events like the Bike Rodeo and the employee TRIP reduction program. Additionally, the community can participate in countywide events and programs like the Rideshare program, Commute for Cash Challenge, Safe Routes to School program, and Bike Month organized by SLOCOG's Regional Rideshare.

Land Use

Land use patterns influence the transportation choices we make in our community on a daily basis. Compact mixed-use neighborhoods that locate housing, jobs, recreation, and other daily needs within close proximity give us more choices in what mode of transportation to use. Walkable and transit-oriented communities are better serviced by public transit and make cycling and walking more attractive modes of transportation by reducing the distances to be traveled and allowing transit and infrastructure investments to be focused in areas where they will have the highest utility. Research has shown that compact development which includes higher density, increased diversity, and greater accessibility can reduce VMT to 20% to 40% below average.[1]

The City encourages mixed-use projects that mix residential and commercial on the same site. Mixed-use projects play an increasingly important role in providing additional housing, without

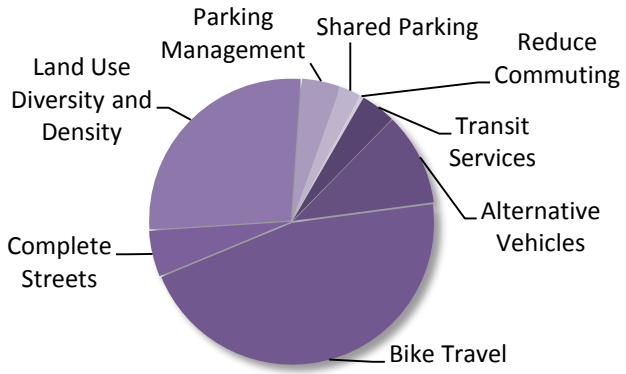
[1] U.S. Department of Transportation, 2010.

sacrificing opportunities for commercial and office spaces. The City has entitled several mixed-use projects in the Downtown core.

Transportation and Land Use Strategies

Strategies to reduce transportation-related GHG emissions focus on supporting alternative modes of travel, and making it easier for people to get to jobs, goods and services without traveling long distances in a vehicle.

Transportation Emission Reductions by Strategy (-10,509 $MTCO_2e$)



TLU 1: Transit Services

-420 $MTCO_2e$

Continue to maintain and expand transit services utilizing best practices in planning and management.

Program Description:

Transit expansion promotes additional ridership and aligns with San Luis Obispo's Council of Governments (SLOCOG) Sustainable Communities Strategy. Approximately 50% of those additional transit trips would otherwise be made by car, which means a reduction in VMT and related GHG emissions. The City will continue to grow transit ridership by implementing best practices in transit planning and development.

Implementation:

- ☑ TLU 1.1 Implement the Short Range Transit Plan.
- ☑ TLU 1.2 Continue to research federal and local funding for transit service upgrade projects.
- ☐ TLU 1.3 Support the County's *EnergyWise Plan* strategy to add transit routes that provide intercity express services.
- ☑ TLU 1.4 Continue to offer a free or discounted bus passes to residents who work in the downtown core, seniors and students.

Implementation Time Frame: Mid-Term

Indicators & Monitoring:

- Number of discounted bus passes distributed annually.
- Average number of passengers per revenue hour.
- Number of annual transit trips.

TLU 2: Alternative Vehicles

-1,110 $MTCO_2e$

Promote clean air vehicles (CAV), and expand the network of electric car charging stations and car-sharing parking spaces.

Program Description:

Access to designated parking and charging infrastructure facilitates

alternative vehicle use. The Air Pollution Control District's (APCD) Electric Vehicle (EV) Community Readiness Plan promotes expansion of EV charging infrastructure in the County. The City will take advantage of available EV Plan funding to retrofit existing charging stations, and establish new requirements for large developments to accommodate CAVs. The SLO2035 General Plan update should identify a street network appropriate for Neighborhood EVs.

Car-sharing helps reduce the number of cars on the road by providing an alternative to car-ownership. The City will encourage the continued expansion of car-sharing services by allowing parking spaces for these vehicles in additional places such as public lots and residential areas.

Implementation:

- ☐ TLU 2.1 Require all new development with 50 or more parking spaces to designate a minimum 8% of parking spaces for clean air vehicles.
- ☐ TLU 2.2 Require all new development with 50 or more parking spaces to pre-wire for electric vehicle charging stations, and provide a minimum 2 percent charging spaces.
- ☐ TLU 2.3 Work with the APCD on the EV Community Readiness Plan for the Central Coast.
- ☐ TLU 2.4 Identify a network of streets appropriate for Neighborhood EV use in the SLO2035 General Plan update.
- ☐ TLU 2.5 Allow car-sharing companies to designate spaces in public parking areas and multifamily housing projects.

Implementation Time Frame: Near-Term

Indicators & Monitoring:

- Number of working electric vehicle charging stations.
- Number of local car-share vehicles and members.
- Percent of parking in new developments reserved for clean air vehicles.
- Number of registered CAVs in the City.

TLU 3: Bike Travel

Increase the percentage of non-recreational trips that are made by bicycle.

-4,818 $MTCO_2e$

Program Description:

The City will continue to invest in bicycle infrastructure and programs that support the safe use of bicycles. A 20% bicycle mode share by 2020 can be achieved via the City's Bicycle Transportation Plan (BTP) and supporting State and Federal funding. The BTP establishes a citywide network of Class I, II, and III bikeways over the next 20 years.

Improvements to bicycle access and parking will make it easier to use a bicycle for commuting or running errands. Development of a bike-share program with self-serve rental kiosks throughout the community will be explored.

Implementation:

- ☐ TLU 3.1 Modify Bicycle Transportation Plan (BTP) to achieve 20% bicycle mode share by 2020.

- ☐ TLU 3.2 Develop additional funding and staff resources to implement the BTP, including cyclist safety programs and bicyclist commuter incentives.
- ☐ TLU 3.3 Research opportunities for a bike-share program near parking facilities.

Implementation Time Frame: Long-Term

Indicators & Monitoring:

- Miles of bike lanes and bike paths installed.
- Number of bike trips observed in biannual bike counts.
- Percentage of BTP projects completed.

TLU 4: Complete Streets

-551 $MTCO_2e$

Modify General Plan policies in the SLO2035 update to support a balanced, multimodal transportation network.

Program Description:

Implement the Complete Streets Act of 2008 by developing General Plan policies in the SLO2035 update that plan for a multimodal transportation network that safely accommodates all users. Develop a Downtown pedestrian master plan for safety and accessibility that includes best practices to increase safety at intersections, addresses discontinuous or poor quality sidewalks, and ensures that the City meets Americans with Disabilities Act (ADA) requirements. Expansion of the Safe Routes to School program will encourage students to use alternative modes of transportation to get to and from school. The City will focus on infrastructure improvements surrounding schools on City maintained streets.

Maintaining travel corridors in the transportation network allows pass-through traffic to separate from local users, which keeps traffic flowing. Reducing vehicle idling from stop and go traffic reduces GHGs from engine emissions.

Implementation:

- ☐ TLU 4.1 Require new and redeveloped street designs to address the needs of all users – motorists, pedestrians, bicyclists, children, persons with disabilities, seniors and users of public transit – where appropriate.
- ☐ TLU 4.2 Develop and adopt a Downtown Pedestrian Plan.
- ☐ TLU 4.3 Collaborate with SLO Regional Rideshare to expand Safe Routes to School programs, events, and projects.
- ☐ TLU 4.4 Research traffic congestion management techniques that decrease vehicle stop rate and time, such as signal synchronization or roundabouts.

Implementation Time Frame: Long-Term

Indicators & Monitoring:

- Completed projects that improve the balance of the City's transportation network for all users.
- Adopted Downtown Pedestrian Plan.
- Safe Routes to School participation rates.

TLU 5: Land Use Diversity and Density

-2850 $MTCO_2e$

Encourage compact urban form and mixed-use developments.

Program Description:

Promote compact urban form by amending regulatory documents to increase density and allow mixed-use projects in suitable zones, excluding low-density residential (R-1) neighborhoods. Transit-oriented development (TOD) is a type of mixed-use project designed to maximize access to public transit, and often incorporates features to encourage transit ridership. Mixed-use development can reduce the distance traveled for jobs, goods and services, and diminish transportation-related GHG emissions.

Implementation:

- ☑ TLU 5.1 Improve connectivity between neighborhoods and services based on opportunities identified in the SLO2035 General Plan update.
- ☑ TLU 5.2 Promote infill by amending the General Plan and Zoning Regulations to increase residential densities in suitable zones.
- ☑ TLU 5.3 Incentivize mixed-use development by reducing parking requirements, allowing alternatives to Parking and Driveway Standards, and streamlining permit review.
- ☐ TLU 5.4 Evaluate allowing mixed-use projects in the High-density residential zone in the SLO2035 General Plan update.
- ☐ TLU 5.5 Apply a Mixed-Use (MU) overlay zone to areas suitable for TOD based on the SLO2035 General Plan update.

Implementation Time Frame: Mid-Term

Indicators & Monitoring:

- Area of the City rezoned to allow higher residential density.
- Increased land use index (diversity of land uses).
- Number of new mixed-use developments.
- Mean travel time to work.

TLU 6: Parking Management

-460 $MTCO_2e$

Motivate Downtown visitors to park once and walk or ride to multiple destinations, or use transit to get to and from downtown.

Program Description:

Circling the block looking for parking increases vehicle emissions and creates Downtown traffic. Higher costs for short-term parking on the street will motivate Downtown visitors to park once in less expensive parking garages and walk or ride to multiple locations. It will also ensure that short-term parking close to businesses is available for consumers with a specific destination.

Implementation:

- ☑ TLU 6.1 Make Downtown parking structures an attractive alternative to meter parking by making on-street meter fees more expensive than structure parking.
- ☑ TLU 6.2 Locate transit stops and bicycle racks near parking structures to make alternative transportation choices Downtown more convenient.

Implementation Time Frame: Near-Term

Indicators & Monitoring:

- On-street parking vacancy rate.
- Parking structure occupancy rates.
- Annual revenue from parking structures versus parking meters.

TLU 7: Shared Parking -250 $MTCO_2e$

Reduce VMT and associated GHG emissions by further reducing parking requirements for land uses that share the same parking lot.

Program Description:

Businesses that have different peak hour parking usage can satisfy their parking needs, while consuming less land, by sharing lot space. Reductions in available parking spaces can reduce VMT if alternative modes of transportation are easy and accessible.

Implementation:

- ☐ TLU 7.1 Amend the Zoning Regulations to increase the potential shared parking reduction from 10% to 30%.

Implementation Time Frame: Near-Term

Indicators & Monitoring:

- Average shared parking reduction for tenants in multi-use centers.

TLU 8: Reduce the Need for Commuting -50 $MTCO_2e$

Increase local housing options for workers in the community that include variety in location, type, size, tenure and style of dwellings.

Program Description:

Maintaining an appropriate jobs-housing balance helps give residents the opportunity to live close to where they work, which reduces VMT from commuting. Supporting below market-rate (BMR) infill housing construction, including secondary dwelling units (SDU), helps increase housing options for workers in the community.

Implementation:

- ☑ TLU 8.1 Improve the City's jobs-housing balance to reduce VMT from commuting.
- ☑ TLU 8.2 Support infill housing projects that implement General Plan policies, especially BMR housing close to job opportunities.
- ☑ TLU 8.3 Continue to allow SDU construction and look for opportunities to reduce barriers to their production.

Implementation Time Frame: Near-Term

Indicators & Monitoring:

- Jobs-housing ratio listed in the General Plan Annual Report.
- Number of BMR housing units built, including SDUs.

TLU 9: Public Outreach and Education

Increase community awareness of transit options and established pedestrian and bicycle infrastructure. Inform residents and businesses about available incentives for commuting via carpool, transit and bicycle.

Program Description:
Education and outreach informs the community about safe and attractive alternative transportation options. Transportation welcome packets will include information on transit services, bicycle paths, and electric car charging stations. Additional bicycle signage is needed to direct bicyclists to the Bike Boulevard and other safe routes throughout the community.

The City will continue partnership with regional transportation organizations and seek new outreach opportunities such as Department of Motor Vehicles training on sharing the road with bicyclists. Marketing available incentives for commuting by alternative tranportation will help employers and workers stay informed about ways to reduce VMT and associated GHG emissions.

Implementation:

- ☑ TLU 9.1 Distribute informational transportation welcome packets and bus passes to new residents and businesses.
- ☐ TLU 9.2 Install additional informational bike signage.
- ☑ TLU 9.3 Continue partnership with regional organizations, including SLOCOG's Regional Rideshare and SLO County's Bicycle Coalition, on outreach and education events.
- ☐ TLU 9.4 Market incentive programs in the Bicycle Commuter Act to employers and workers in the community.

Implementation Time Frame: Near-Term

Indicators & Monitoring:

- Number of transportation welcome packets distributed annually.
- Amount of participation in commuting events and programs.

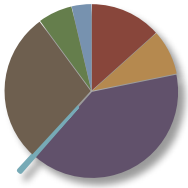
Adaptation

Climate change is projected to have a limited impact on transportation infrastructure and land use in San Luis Obispo. Impacts, including increased frequency of fires, elevated air temperatures, reduced air quality, and rising sea levels, require relatively little adaptation in terms of transportation infrastructure within the City limits.

Higher average daytime temperatures and more frequent heat waves may contribute to increases in GHG emissions and a reduction in air quality. This could cause an increase in vehicular travel as people try to reduce exposure to declining air quality and excessive temperatures. Stricter Federal and State vehicle emissions will help counteract temperature impacts on vehicle emissions. Elevated daytime temperatures can compromise the integrity of roads and railroad tracks. More severe rainstorms, although infrequent, could potentially flood streets and neighborhoods along local creeks. More frequent fires may impact traffic on roads in and surrounding the wildland-urban interface and also pose a greater risk of property damage for structures adjacent to open space areas.

Water

Goal: Reduce and reuse water consumed by the community.



0.41% of Total GHG Reductions

Reduces Water Consumption

Reduces Energy Demand

Community Savings

The bulk of water-related GHG emissions are tied to the electricity required to pump, treat, and deliver water. Strategies that will reduce emissions associated with water delivery and wastewater treatment are included in the Government Operations section. The community can help reduce water-related GHG emissions indirectly through water conservation, which reduces water demand and the amount of energy needed for delivery and treatment.

One disincentive for water conservation is that less revenue for the City is generated if customers use less water, which may lead to increased water billing rates to maintain the water distribution system. However, the City addresses this paradox by encouraging water conservation using a tiered rate structure. Users can realize water rate savings by lowering the number of water units consumed (1 water unit = 100 acre-feet).

State Reductions

The State adopted the California Green Building Standards Code (CALGreen) in 2011. CALGreen includes minimum requirements in the areas of planning and design, energy efficiency, water efficiency and conservation, material conservation, and resource efficiency. CALGreen water efficiency and conservation standards require new construction to reduce building potable water use by 20%.

Existing Actions

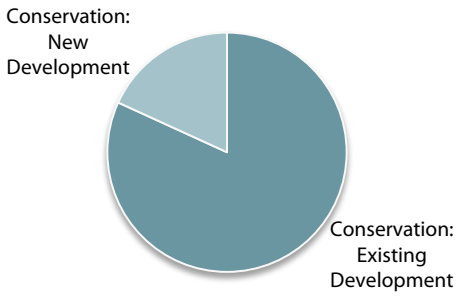
The City's Urban Water Management Plan outlines present and future water use reduction programs for the community and its residents. San Luis Obispo aims to maintain water use at or below 125 gallons per person per day. Since 2005, per capita water usage has dropped to approximately 120 gallons per person per day, while continuing to allow growth. The most effective water conservation programs for residents include three components: hardware retrofits, dynamic pricing, and public education. Past and current programs to promote water conservation include high-efficiency washer rebates, retrofit upon sale requirements, and a leak-detection program. Educational information regarding water conservation is available on the City's website, which has guides for both indoor and outdoor water conservation techniques.

The Conservation and Open Space Element recommends new development adheres to the Ahwahnee Principles, which encourage the use of greywater, recycled water, and efficient water use. The City has also implemented water-efficient landscape standards in the Zoning Regulations and Community Design Guidelines.

Water Strategies

Strategies for water conservation promote water-efficient construction and landscapes, and reuse of greywater and rainwater. Implementation of existing policies is a large part of this section since the City has numerous ongoing water conservation plans and standards already in place.

Water GHG Emissions Reductions by Strategy (-110 $MTCO_2e$)



WTR 1: Water Conservation: Existing Development

Implement Water Efficient Landscape Standards (MC 17.87) when landscape projects trigger building permit review.

-90 $MTCO_2e$

Program Description:

Applications for all landscape projects requiring building permit review need to submit a landscape documentation package that responds to required landscape and irrigation design criteria. Project review and final field inspection will include a list of any observed deficiencies and recommended correction measures. Opportunities for rainwater-harvesting or use of greywater will be identified.

Implementation:

- ☑ WTR 1.1 Require landscape projects that trigger building permit review to incorporate native and drought tolerant plant materials and minimize irrigated turf areas.
- ☑ WTR 1.2 Require landscape projects that trigger building permit review to incorporate irrigation system designs that avoid runoff, low-head drainage, and overspray.
- ☐ WTR 1.3 Encourage the use of recycled water, greywater or rainwater-harvesting systems.

Implementation Time Frame: Near-Term

Indicators & Monitoring:

- Reduction in the amount of potable water used for irrigation.
- Number of rainwater-harvesting systems installed.
- Annual increase in recycled water use.

WTR 2: Water Conservation: New Development

Implement CALGreen standards, Water Reuse Master Plan, and Water Efficient Landscape Standards to reduce potable water use in new development.

-20 $MTCO_2e$

Program Description:

Builders may comply with CALGreen requirements by installing fixtures that do not exceed maximum flow rates or by demonstrating that the building will achieve a 20% reduction in water use through alternative methods.

The City's recycled water distribution system can provide approximately 1,000 acre feet per year of recycled water. The mandatory use ordinance for recycled water adopted in 2001 allows the City to require the use of recycled water on parcels when considered feasible.

Implementation:

- ☑ WTR 2.1 Review new development projects for consistency with CALGreen water efficiency standards.
- ☑ WTR 2.2 Expand recycled water infrastructure to encourage use of greywater in new construction and landscape projects.
- ☑ WTR 2.3 Require use of native and non-invasive drought tolerant plant materials combined with conservative use of water and landscape designs that prevent run-off.

Implementation Time Frame: Near-Term

Indicators & Monitoring:

- Average water use reduction for new development.
- Annual increase in recycled water use.

WTR 3: Public Outreach and Education

Inform the community about household water usage, and ways to reduce indoor and outdoor water consumption.

Program Description:

Informed water customers may choose to reduce water consumption if household usage details are presented clearly and compared to community averages. Maintaining a database of simple do-it-yourself water conservation measures will help willing customers achieve measurable reductions.

Implementation:

- ☐ WTR 3.1 Provide a graphical history of household water usage on utility bills, and a comparison to average water usage for similar types of homes in the community.
- ☑ WTR 3.2 Maintain Utilities Department online resources and outreach materials for water saving tips, planting guides and available rebates.

Implementation Time Frame: Near-Term

Indicators & Monitoring:

- Reductions in household water usage after graphic utility bills are released.
- Number of households that take advantage of available rebates.

Adaptation

As a result of climate change, drought conditions may become more frequent and persistent in the future. San Luis Obispo is adapting to climate change by reducing per capita water use and increasing water reserves. Completion of the recent Nacimiento pipeline project increased the amount of available water, which means the City is more capable of dealing with potential drought conditions. Reducing water demand further strengthens available water supply,

making the City better prepared for drought. The reduction in demand also lowers GHG emissions, as there is less water to treat, deliver and collect.

Reusing water is one conservation measure that can serve both adaptation and GHG reduction goals. The City treats approximately 4.5 million gallons of wastewater a day, approximately 5,000 acre feet annually. This flow, except what is needed to support creek flows for endangered steelhead, can be reutilized.

WTR Adaptation 1: Recycled Water

Continue to implement the Water Reuse Master Plan.

Program Description:

Based on the City's current Recycled Water Master Plan area and its associated demand, the City's anticipates utilizing approximately 1,000 acre feet per year of recycled water for approved uses, primarily landscape irrigation. The recycled water distribution system will be expanded over time as well as the ability to store the recycled water for distribution.

The use of recycled water for non-potable needs directly reduces drinking water demand and conserves water resources. The City will continue to implement the Water Reuse Master Plan to utilize the capacity of recycled water when available.

Implementation Time Frame: Near-Term

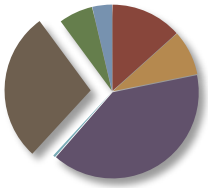
Indicators & Monitoring:

- Reduction in the amount of potable water used for irrigation purposes.
- Annual increase in recycled water use.

Solid Waste

Goal: Prevent, reduce, reuse and recycle solid waste to minimize the amount of waste being sent to the landfill.

28% of Total GHG Reductions



Education & Awareness

In 2005, San Luis Obispo sent 84,439 tons of waste to Cold Canyon Landfill, resulting in the release of 18,769 $MTCO_2e$. The decomposition of organic materials, including paper products, food waste, plant debris, wood and textiles releases methane, a greenhouse gas 21 times more potent than carbon dioxide[1]. Approximately 60% of the methane released through decomposition at Cold Canyon is captured and transferred to the Price Canyon Oil Fields, where it is used as an energy source[2]. The remaining methane emissions are released into the atmosphere. In addition, transportation-related GHG emissions occur with waste collection and transport to Cold Canyon Landfill. A community's waste diversion rate is the percentage of material diverted from the landfill, which is recycled, composted or reused. Increasing the community's waste diversion rate can reduce solid waste-related GHG emissions associated with transport and organic decomposition.

State Reductions

The California Integrated Waste Management Act of 1989, or AB 939, required all California cities and counties to achieve a 25% diversion rate by 1995 and a 50% diversion rate by 2000. It also requires all jurisdictions to improve construction and demolition recycling.

Existing Actions

The City surpasses AB 939 goals through its successful "single stream recycling" or "comingled recycling", green waste, and construction and demolition recycling programs. The community diverts approximately 63% of its waste from landfills. The single stream recycling program allow for all types of common recyclables, including glass, metals, plastics, and paper, to be collected in one bin. Switching to this type of recycling system in 1998, along with the addition of yard waste pickup, was well received by the community. San Luis Obispo also requires new development and major improvement projects larger than 1,000 square feet or greater than $50,000 in valuation to recycle 50% of construction and demolition materials.

The City contracts with Waste Connections, Inc. to provide its comingled recycling and green waste services through its franchise The San Luis Garbage Company. Waste Connections, Inc. owns and operates Cold Canyon Landfill. An expansion of Cold Canyon Landfill

[1] Intergovernmental Panel on Climate Change, 2007.

[2] San Luis Obispo County, 2006.

is expected to absorb County waste disposal needs until the year 2047. The anticipated expansion will provide opportunities for additional methane capture, commercial recyclables, additional capacity, and separate composting facilities for residential, industrial and commercial users.

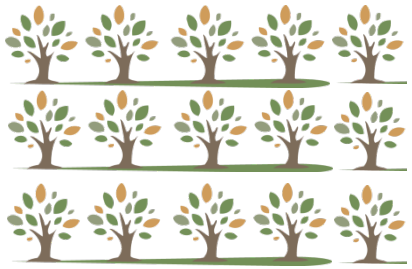
The City has a long history of proactive waste management practices that reduce waste-related GHG emissions, including:

- ☑ A purchasing policy for recycled products, including bonuses for outside contractors that use recycled products in their goods and services provided to the City.
- ☑ Curbside pickup of hard-to-recycle items twice a year.
- ☑ Support for the San Luis Obispo County Integrated Waste Management Authority's (IWMA) "SLO Take Back Program", which requires any retailer who sells mercury-containing household batteries, fluorescent tubes, and compact fluorescent light bulbs (CFLs) to recycle them at no charge.
- ☑ City government use of online electronic documents first, and printing double-sided on recycled paper second.
- ☑ Backyard composting guides on the City's webpage.
- ☑ Composting biosolids that are a byproduct of the digestion process at the City's Water Treatment Facility.

Solid Waste Strategies

The City can employ several strategies to improve its diversion rate, including community educational programs regarding proper waste management behavior, enhancing recycling programs, and adding new services such as curbside food waste pickup.

WST 1: Increased Waste Diversion



-7,440 $MTCO_2e$

Reduce the community waste stream to as close to zero waste as possible, with a 75% diversion rate by the year 2020.

Program Description:

In 2005, the City diverted approximately 61% of all waste generated. The City will work with IWMA to reach a 75% diversion rate by 2020 through reduced waste disposal, increased recycling, and composting programs at home or at the landfill.

The City currently offers four sizes of bins for residential garbage collection under a variable can system. The cost to rent a bin rises as the size increases, while recycling and green waste collection is incentivized because these cans are large and are offered at no additional cost to users.

Owners of multifamily dwellings and commercial buildings are required to provide tenants with the appropriate facilities to recycle comingled recyclables and green waste. The City will collaborate with IWMA to develop an enforcement program to address noncompliant properties. Notices will be distributed and fines may be charged to landlords and commercial property owners that do not provide recycling and green waste bins.

A compost bin for backyard use will be provided at a discounted price to households that wish to pursue home composting. This will help reduce the amount of food waste entering the City's waste

stream. The City would provide a one-time subsidy for a portion of the market price of bins. The City has previously implemented a similar program with positive results.

A feasibility study of a waste audit program will be completed. One strategy could be working with garbage haulers to carry out audits of curbside waste generated by businesses and residences. Those who fail to comply with correct disposal practices would be issued educational material. Customers who continuously mix regular garbage with recyclable materials could be subject to enforcement.

An ordinance that requires biodegradable food packaging in restaurants and other food vendors can reduce the amount of non-recyclable Styrofoam that is sent to the landfill. Successful examples in other California cities will be explored.

Implementation:

- ☑ WST 1.1 Continue to provide and incentivize recycling and green waste services for single-family residential, multi-family, and commercial customers.
- ☐ WST 1.2 Evaluate the effectiveness of a more aggressive volume-based rate schedule for waste pickup.
- ☑ WST 1.3 Enforce existing IWMA standards that require landlords and commercial businesses to provide recycling service.
- ☐ WST 1.4 Re-establish financial support for home composting.
- ☐ WST 1.5 Explore the feasibility of a waste auditing program.
- ☐ WST 1.6 Consider residential and commercial curbside food waste pickup.
- ☐ WST 1.8 Evaluate the effectiveness of a Food Packaging Ordinance that requires biodegradable containers.
- ☐ WST 1.9 Conduct a feasibility assessment of waste cooking oil collection for City-run biodiesel production and distribution.
- ☐ WST 1.10 Conduct a feasibility assessment of relocating biosolid composting closer to the City.

Implementation Time Frame: Mid-Term

Indicators & Monitoring:

- Annual waste diversion rate.
- Pounds of waste per person and per employee per day.
- Tonnages of green waste and recycling.

WST 2: Public Outreach and Education

Provide waste reduction education to the City's consumers.

Program Description:

Education and outreach should focus on recycling and composting at the household and business level. Periodic public site visits to waste facilities serving the City will help consumers realize the cumulative impact of community waste.

Implementation:

- ☐ WST 2.1 Provide the option for home and commercial waste audits to identify and educate consumers where waste production can be reduced.

- ☑ WST 2.2 Maintain Utilities Department online resources and outreach materials for recycling.
- ☐ WST 2.3 Host interactive workshops on home composting.
- ☐ WST 2.4 Explore options for landfill and Water Reclamation Facility site visits open to the public and school groups.

Implementation Time Frame: Near-Term

Indicators & Monitoring:

- Home composting workshop attendance.
- Number of waste audits.
- Number of field trips to waste facilities annually.

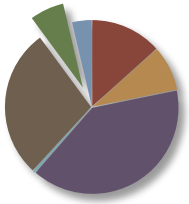
Adaptation

The City anticipates limited impacts on GHG emissions associated with solid waste disposal at Cold Canyon from climate change. Potential temperature increase may alter the amount of methane produced at Cold Canyon Landfill as decomposition of domestic refuse speeds up. An increase in methane production may strengthen the greenhouse effect, but methane can also be harvested as an alternative energy source.

Parks & Open Space

Goal: Maintain natural areas and plant trees and green spaces.

6% of Total GHG Reductions



Provides Health Benefits | Reduces Energy Demand | Adaptation Measure

San Luis Obispo has a diverse range of parks and open space, including natural landscapes, managed sports facilities, community gardens, and small neighborhood parks. These areas are important to the physical and mental well-being of residents, offering recreational opportunities, social interaction, and an enhanced sense of place. Parks and open spaces provide community benefits, but there are associated GHG emissions from park maintenance equipment (leaf blowers, trimmers, mowers and water trucks), lighting and irrigation systems.

However, the GHG emission reduction benefits of parks, open space and other urban green spaces outweigh the costs of ongoing maintenance. Trees, plants and undisturbed soil in these spaces capture carbon dioxide, known as carbon sequestration, which helps offset community-wide GHG emissions. These benefits can be increased through preservation and additional planting. Parks and open spaces also provide opportunities for non-motorized forms of recreation, such as hiking, biking and horseback riding, which do not produce GHG emissions.

Existing Actions

Parks

As of 2011, there are 21 designated parks within the City, totaling 158 acres of park landscape and 82 acres of turf. The General Plan requires annexation areas to provide parkland at the rate of 10 acres per 1,000 residents, with 5 of those acres dedicated as neighborhood parks (Parks & Recreation Element 3.13). The Subdivision Regulations require each new subdivision to dedicate 5 acres of parkland per 1,000 anticipated residents, or pay an in-lieu fee equivalent to fair market value.

The City actively works to decrease greenhouse gas emissions from parks maintenance where possible. Existing actions include:

- ☑ Use of a computerized irrigation control system for all parks that facilitates efficient monitoring and use of landscape irrigation.
- ☑ Use of water-efficient irrigation systems with long-term reliability.
- ☑ Use of recycled water to irrigate 28 acres of turf and 1.15 acres of additional landscaping.
- ☑ Use of drought-tolerant landscaping in 23 acres of parkland.
- ☑ Recycling of green waste from mowing and trimming.
- ☑ Reduction of mowing frequency during the off-season, when the focus switches to annual turf renovation.

Open Space

As of 2012, the City maintains a total of 6,765 acres of Open Space (3,513 acres in fee, and 3,252 acres in easements). Since 2005, the City has restored approximately 62 acres of open space. Of that space, 32 acres have been restored as brush or oak woodland habitats that provide carbon sequestration benefits to the community. The City has created or is in the process of creating conservation plans for the Bishop's Peak, Irish Hills, Reservoir Canyon, Johnson Ranch, Stenner Springs, and South Hills open spaces.

Urban Forest

The urban forest includes trees and woody plant vegetation that grow within the City. Existing actions that enrich the City's urban forest include:

- ☑ General Plan policy direction for a nearly continuous tree canopy in the Downtown (LUE 4.5).
- ☑ Ongoing development of a Master Street Tree list (most native) that guides plantings in front yard setbacks and the public right-of-way.
- ☑ A Tree Maintenance Program responsible for planting and maintenance of municipal trees.
- ☑ The Commemorative Grove Program, which enables citizens or community groups to plant a tree in recognition of a person or event.

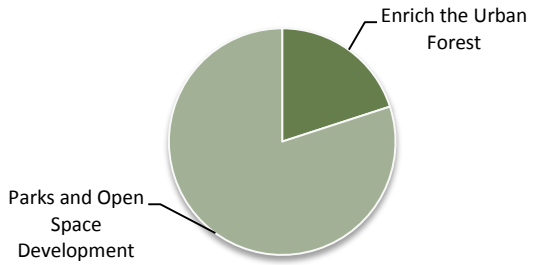
Community Gardens

General Plan policy directs the City to make community gardens available in appropriate park locations. Four community gardens are available to City residents including the recently constructed garden in Meadow Park. The City is actively looking for new infill community garden opportunities since demand exceeds available plots.

Parks and Open Space Strategies

GHG emissions reduction strategies associated with Parks and Open Space focus on carbon sequestration, water conservation, and maintenance efficiency. Open space preservation provides the biggest net benefit since carbon absorption in these areas is high while maintenance is low. Public education is required for upkeep and care of the urban forest and to foster successful community stewardship.

Parks & Open Space GHG Emissions Reductions by Strategy (-1,700 MTC0$_2$e)



PKS 1: Enrich the Urban Forest

-340 MTCO$_2$e

Increase the number of native trees along City streets, parks, and open spaces, with sensitivity to potential locations for solar energy opportunities.

Program Description:

Increasing the number of trees in the City will increase carbon sequestration and beautify outdoor spaces. An audit of existing parks and open spaces will identify and prioritize available land for additional trees. Community planting events and volunteer tree maintenance programs help enrich the urban forest and establish a sense of ownership for residents.

The City will work with Cal Poly to create an Urban Forester internship program. Students could receive training in tree maintenance and help City staff with urban forest management.

Implementation:

- ☐ PKS 1.1 Conduct an audit of parks and open space to identify and prioritize potential tree planting locations.
- ☑ PKS 1.2 Continue to expand tree planting through adopt-a-tree, commemorative plaque, and other volunteer-based planting programs.
- ☐ PKS 1.3 Establish an unpaid Urban Forester internship program with Cal Poly.

Implementation Time Frame: Mid-Term

Indicators & Monitoring:

- Number of net new trees planted per year.

PKS 2: Parks & Open Space Development

-1,360 $MTCO_2e$

Continue to develop and acquire parks and open space resources.

Program Description:

Successful parks and open space acquisition requires a mix of strategies including donations, dedications, easements, grants, and mitigation fees from projects. The City will continue to implement local conservation plans. A donation program allocated for open space preservation could be offered on utility bills and the City's website. Continued partnership with the County and others committed to expanding open spaces, such as The Land Conservancy of SLO County and The Nature Conservancy, will enable the City to realize more opportunities for land preservation.

Implementation:

- ☑ PKS 2.1 Continue to negotiate easements and land donations for conservation.
- ☑ PKS 2.2 Continue to develop and implement conservation plans for large City open space areas.
- ☐ PKS 2.3 Use conservation easements in a coordinated fashion to create trails.
- ☐ PKS 2.4 Expand donation programs for open space preservation and maintenance.
- ☑ PKS 2.5 Partner with other local organizations committed to open space preservation and parkland development.

Implementation Time Frame: Long-Term

Indicators & Monitoring:

- Acres of open space preserved, restored or rehabilitated.
- Amount of parkland created annually.
- Amount of park in-lieu fees collected annually.

PKS 3: Green Waste Recycling

Utilize green waste from trimming, mowing, and other landscaping maintenance as compost.

Program Description:

Reuse of green waste from parks maintenance will reduce GHG emissions by diverting waste going to the landfill. Residents will also benefit from a free source for compost, wood chips and firewood.

Implementation:

- ☐ PKS 3.1 Store green waste from park maintenance at established composting facilities or other park properties.
- ☑ PKS 3.2 Continue to chip larger green waste at the City's Corporation Yard and redistribute for public and private use.

Implementation Time Frame: Near-Term

Indicators & Monitoring:

- Tons of green waste stored and composted.
- Amount of firewood and wood chips recycled and distributed from the Corporation Yard.

PKS 4: Foster Local Food Production

Foster local food production by increasing the availability and sustainability of community gardens and agriculture.

Program Description:

Community gardens foster a sense of community and increase the potential for local self-reliance. Local and personal food production reduces GHG emissions by decreasing the distance that food must travel from farm to plate. The Calle Joaquin Agricultural Reserve, when under cultivation, will be a local food source. Community gardens also have the potential to educate residents about composting and the environmental and health benefits of eating locally produced food.

Implementation:

- ☑ PKS 4.1 Continue to identify suitable locations for community gardens on public and private property.
- ☐ PKS 4.2 Implement the Calle Joaquin Agricultural Reserve Master Plan.

Implementation Time Frame: Mid-Term

Indicators & Monitoring:

- Number of community garden plots.
- Annual yield from Calle Joaquin Agricultural Reserve.

PKS 5: Public Outreach and Education

Educate the community about tree planting, habitat restoration, and available resources for home landscape projects.

Program Description:

The City will collaborate with local organizations and nurseries to provide education events and publications regarding best practices for tree planting and maintenance. Parkways in between sidewalks

and residential streets are primarily maintained by the residents along the street. A more informed community will foster greater care for the ongoing survival of street trees.

Established volunteer trail work programs will continue in partnership with regional organizations dedicated to open space preservation. Information on open space stewardship, suitable plant and tree types for home and professional use, and green waste recycling will be available through City websites and publications.

Implementation:

- ☐ PKS 5.1 Continue tree planting and maintenance education programs such as Arbor Day and Downtown Foresters.
- ☐ PKS 5.2 Partner with regional organizations to create volunteer opportunities for trail work, habitat restoration and open space maintenance.
- ☐ PKS 5.3 Advertise availability of composted green waste, wood chips and firewood.

Implementation Time Frame: Near-Term

Indicators & Monitoring:

- Number of attendees at outreach and training events.
- Number of partnerships with local organizations.

Adaptation

The potential impact of climate change on parks and open space is significant and could influence wildlife habitat, public safety, and outdoor leisure and recreation opportunities. Higher temperatures and a lack of water are both likely to have a direct impact, resulting in changed ecosystem dynamics, increased wildfires, and depleted water resources. Higher temperatures increase evapo-transpiration rates from plants, soils, and open water surfaces, drying out landscaped and natural spaces. As temperatures increase, droughts will become more prevalent, yet more water will be required for upkeep of plant life. Drier conditions and hotter temperatures can also impact the size, severity, duration, and frequency of wildfires.

CALFIRE is designated to assist government agencies, universities, and the private sector in preparing for disasters and reducing the risk of disaster through local planning. The City's Safety Element calls for adequate fire services and wildland fire safety, which classifies and places rules on different vegetation types. The Local Hazard Mitigation Plan (LHMP) also addresses avoidance and mitigation of fire hazards. It identifies areas and vegetation types prone to wildfire, and existing ordinances and regulations pertaining to fire safety standards. The 2009 California Climate Adaptation Strategy also provides a number of strategies to confront issues associated with parks and open space statewide.

The City has planned for emergency wildfire events, and the Natural Resources Department will continue to implement its Best Management Practices Guidelines for Open Space Lands, which includes the following adaptation strategies.

PKS Adaptation 1: Vegetation Management

Control invasive species, erosion and sediment, re-vegetate open space with native plants and trees, and restore natural processes.

Implementation Time Frame: Near -Term

Indicators & Monitoring:

- Status of open space preservation efforts reported each year in the General Plan Annual Report.

PKS Adaptation 2: Fire Management

Monitor open space areas to determine if brush, weeds or other heavy fuel materials need to be thinned or removed.

Implementation Time Frame: Near-Term

Indicators & Monitoring:

- Status of open space preservation efforts reported each year in the General Plan Annual Report.

Government Operations

Goal: Reduce GHG emissions from government operations to 1990 levels using a mix of strategies, including: conservation, clean energy, efficiency upgrades, recycling, and alternative transportation incentives for employee commute.

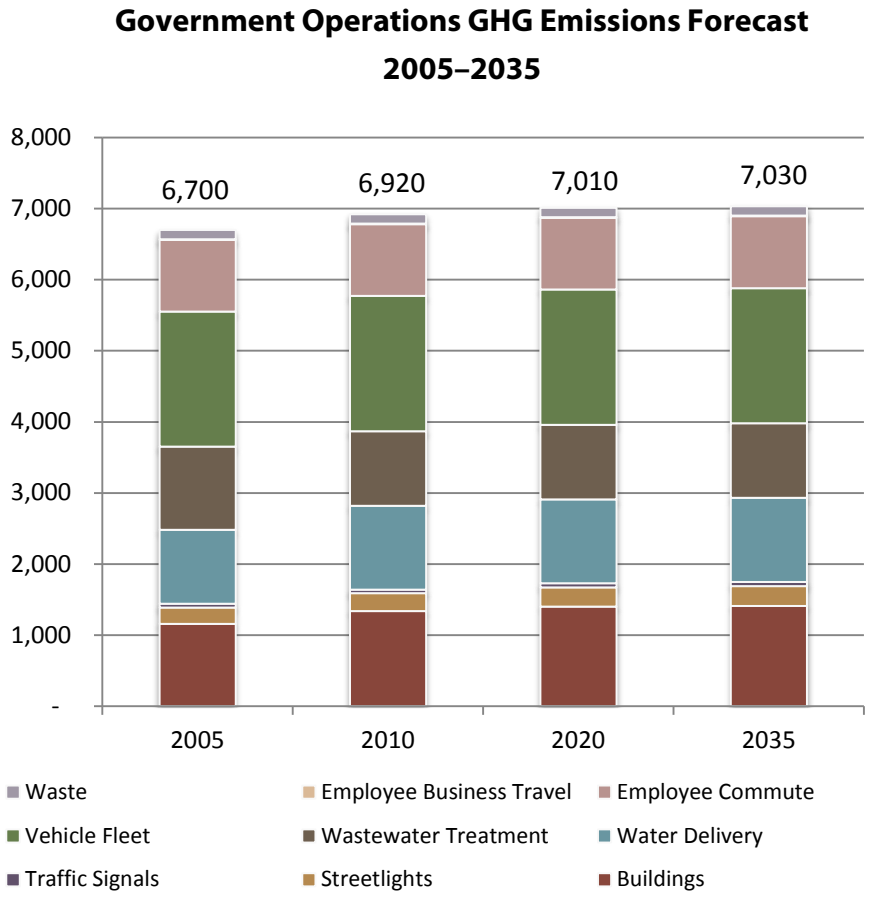
Community-wide GHG reduction strategies rely on active participation from City residents and businesses to reduce their carbon footprint. Those GHG reduction strategies that can be directly implemented by City government involve changes to the way government operates. This section focuses on Government Operations and what can be done to reduce associated GHG emissions.

GHG Emissions Forecast for Government Operations

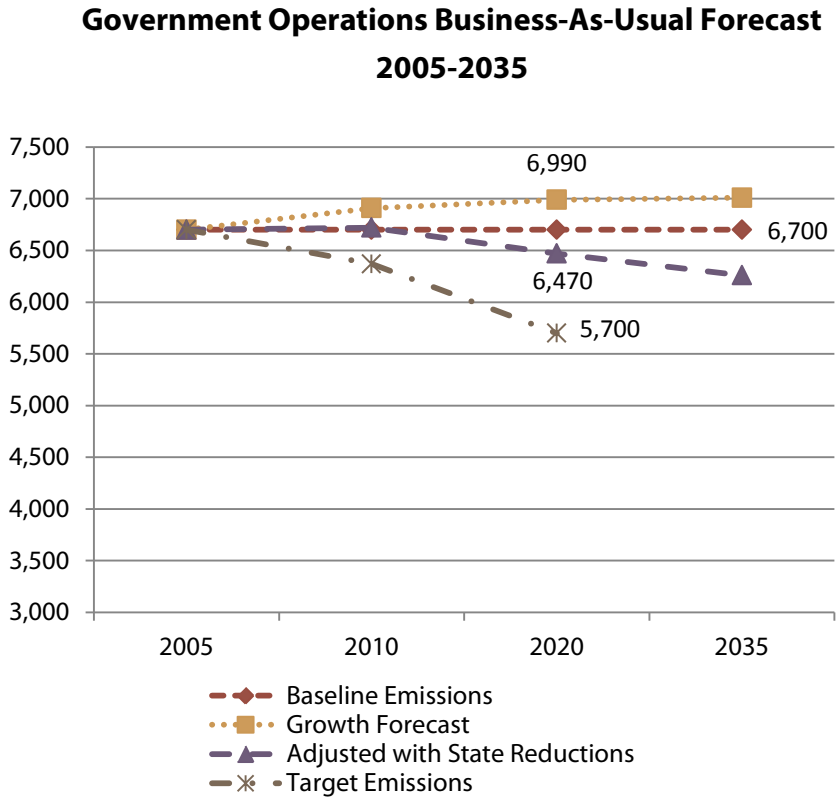
As discussed in the introduction, the City's Government Operations GHG emissions were forecast to reflect the anticipated growth in facilities and energy use. GHG emissions have been forecast for 2010, 2020, and 2035. Projected emissions for buildings, water delivery, wastewater treatment, and streetlights and traffic signals utilize actual energy use data compiled by staff.

In cases where electricity use has decreased in facilities due to a change to renewable energy source or retrofits, the forecast for that facility remains constant. In these cases, the reduction benefit will be represented in the CAP as a GHG reduction measure to clearly demonstrate the beneficial impact of the retrofit or installation. For instance, the installation of the co-generator at the Sinsheimer pool has resulted in a significant reduction in electricity use. The pool's electricity use decreased from 391,000 kWh in 2005 to just 87,000 in 2010. In the business-as-usual (BAU) forecast, the pool electricity use is forecast to stay at 2005 levels, and the reduction of 304,000 kWh is presented in reduction measure GO 2: City Renewable Energy.

The GHG forecast assumes that the number of employees will remain nearly constant over the next 25 years; therefore, GHG emissions from the City's vehicle fleet, employee commuting, waste disposal, and employee business travel will not grow beyond 2005 levels. The following graphics summarize the Government Operations GHG emissions forecast from 2005 to 2035.



The BAU forecast growth in GHG emissions is approximately a 4% increase in GHG emissions by 2020 and 5% by 2035. Similar to the community-wide forecast, the Government Operations business-as-usual forecast is adjusted for State reductions. By 2020, State legislation will reduce government operations GHG emissions by approximately 520 MTCO2e.



Government Operations GHG Reduction Target

The City government will demonstrate leadership in reducing GHG emissions through cost-effective changes to operations that help achieve the reduction target of 18% below the BAU forecast by 2020 (15% below baseline). State legislation will reduce government operations emissions by 7% below BAU, and the City will need to make up the remaining 12% reduction to achieve the target.

Existing Actions

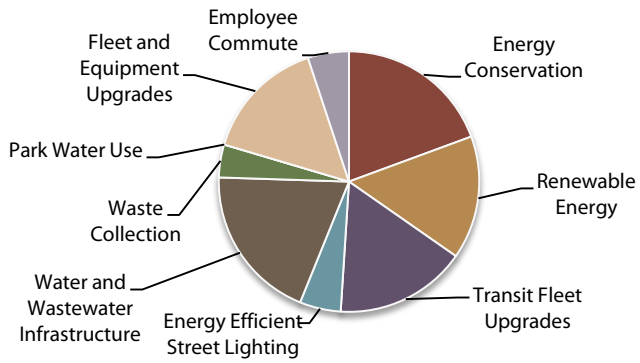
Several General Plan policies and programs in the Conservation and Open Space Element require efficient City operations that help to reduce GHG emissions (COSE 2.3, 4.3, 4.6, 5.5, 10.3). Facility retrofit highlights to date include:

- ☑ Environmental control systems and indoor and outdoor lighting system upgrades.
- ☑ Installation of photovoltaic panels on the Ludwick Community Center and the Utilities Administration Building.
- ☑ Installation of a co-generator at the Sinsheimer Swim Center.
- ☑ Upgrades at the Water Reclamation Facility including a replacement energy-efficient aeration blower and a methane gas-powered electricity generator.

Government Operations Strategies

Strategies to reduce GHG emissions from government operations include energy conservation, fleet and equipment upgrades, building and facility retrofits, water-conserving irrigation and minimizing employee commutes made by single-occupant vehicles.

Government Operations Reductions by Strategy (-980 $MTCO_2e$)



GO 1: City Energy Conservation -190 $MTCO_2e$

☑ Create and implement a City Building Retrofit Program.

Program Description:

Facilities will be prioritized based on an evaluation of potential energy-saving retrofits versus implementation cost. Retrofit program will include automatic shutoff sensors for interior lights during non-business hours to reduce energy use and related GHG emissions.

Implementation Time Frame: Near-Term

Indicators & Monitoring:

- Annual facility energy use.

GO 2: City Renewable Energy -150 $MTCO_2e$

☑ Generate renewable energy at City-owned facilities.

Program Description:

The City will continue to install renewable energy systems at appropriate facilities and will consider installing photovoltaic systems on top of City-owned parking lots and structures.

Implementation Time Frame: Long-Term

Indicators & Monitoring:

- Energy generated from renewable sources at City facilities.

GO 3: Transit Fleet Upgrades

☑ Continue to upgrade to fuel-efficient vehicles as part of fleet replacement program.

-160 $MTCO_2e$

Program Description:
The City will continue to replace buses every 12 years as federal transportation grants permit. Replacement buses will utilize the best available technology for fuel efficiency as feasible. This commitment to utilize the best available technology includes the evaluation of the feasibility of hybrid buses and other technologies, such as biodiesel or natural gas.

Implementation Time Frame: Long-Term

Indicators & Monitoring:

- Average fuel efficiency of transit fleet.

GO 4: Energy-Efficient Street Lighting

Install energy-efficient streetlights and traffic signals.

-50 $MTCO_2e$

Program Description:
LED bulbs use less electricity and need to be replaced less frequently than conventional bulbs. Existing outdoor light fixtures, including street lights, will continue to be retrofitted for efficiency.

Implementation:

☑ GO 4.1 Continue to replace traffic signal fixtures with light-emitting diode (LED) lighting.

☐ GO 4.2 Replace public streetlights with high-efficiency fixtures.

☑ GO 4.3 Continue to upgrade outdoor lighting fixtures with best available technology at City-owned facilities.

Implementation Time Frame: Mid-Term

Indicators & Monitoring:

- Percentage of streetlights and traffic signals replaced.

GO 5: Water and Wastewater Infrastructure

Continue energy-efficient upgrades to water pumping and lift stations, and processes at the Water Reclamation Facility (WRF).

-190 $MTCO_2e$

Program Description:
Implement a schedule for the replacement water and wastewater infrastructure, prioritizing the oldest and least efficient equipment, with the goal of reducing overall energy use from pumping and lift stations by 10% by 2020. Continue efficiency upgrades to the WRF including additional energy-efficient blowers and plant expansion.

Implementation:

☑ GO 5.1 Implement a schedule to prioritize replacement of water pumping and lift stations.

☑ GO 5.2 Continue implementation of the WRF energy conservation plan.

Implementation Time Frame: Long-Term

Indicators & Monitoring:

- Annual reduction in water and wastewater energy use.

GO 6: Increase Waste Diversion from City-owned Property

-40 $MTCO_2e$

Enhance recycling and composting efforts at parks, plazas, bus stops, offices and facilities.

Program Description:

Audit all City-owned property for recycling receptacles and install recycling containers where needed. Consider composting receptacles at City facilities to minimize waste sent to the landfill.

Implementation:

- ☑ GO 6.1 Ensure that all City facilities have recycling containers.
- ☐ GO 6.2 Assess the feasibility of food scrap collection and pickup in public places.

Implementation Time Frame: Long-Term

Indicators & Monitoring:

- Percentage of facilities with recycling and composting receptacles.
- Annual disposal tonnages from City facilities.

GO 7: Water Conservation

Continue implementation of General Plan policies for efficient water use (COSE 10.3).

Program Description:

Water conservation lowers operating costs and reduces GHG emissions associated with water delivery. Landscaping replaced in the City, including turf, should be water-efficient. Periodic review of irrigation systems and building plumbing systems will help reduce water waste from leaks.

Implementation:

- ☑ GO 7.1 Choose appropriately-sized plants for City landscapes that are suitable for the climate, with emphasis on use of drought-tolerant plants.
- ☐ GO 7.2 Prepare soils for water penetration and retention.
- ☑ GO 7.3 Design and operate efficient irrigation systems.
- ☑ GO 7.4 Install water-efficient fixtures and maintain leak control at City facilities.

Implementation Time Frame: Mid-Term

Indicators & Monitoring:

- Acres of landscape replaced with low-maintenance plants.
- Annual facility water use.

GO 8: Fleet and Equipment Upgrades

- ☑ Utilize best available technology for equipment and poolcar upgrades identified in the vehicle fleet replacement program.

-150 $MTCO_2e$

Program Description:
Standard gasoline-burning vehicles and maintenance equipment can be replaced with more fuel-efficient or electric equipment. Vehicles such as tractors and riding mowers can be replaced with biodiesel, natural gas, or propane powered alternatives.

Implementation Time Frame: Mid-Term

Indicators & Monitoring:

- Vehicle fleet average fuel efficiency.

GO 9: Employee Commute

☑ Continue to reduce single-occupant employee commuting through trip reduction incentives.

-50 $MTCO_2e$

Program Description:
The City currently participates in SLO Regional Rideshare's Transportation Choices Program, which provides resources for employees to utilize alternative commuting options. Employees who elect to use alternative transportation for commuting can earn additional vacation hours or a small monetary benefit. The City also allows staff to utilize an alternative work schedule, reducing VMT through one less day of commuting per two-week period. The City will explore additional programs and options to reduce employee commuting by single-occupant vehicles through additional incentives and programs.

Implementation Time Frame: Near-Term

Indicators & Monitoring:

- Percentage of total commute trips made by alternative transportation such as carpooling, bicycling, walking or transit.

GO 10: Sustainability Coordinator

☐ Allocate or hire staff to implement CAP and energy programs.

Program Description:
Staff resources are needed to secure funding, work with City staff and contractors and complete annual monitoring for CAP programs. This staff person will also act as the City's representative in regional sustainability efforts.

Implementation Time Frame: Mid-Term

Indicators & Monitoring:

- Number of CAP programs implemented through dedication of staff time.

GO 11: Public Outreach and Education

Demonstrate the City's commitment to reducing GHG emissions using outreach about CAP program implementation.

Program Description:
Updates on Climate Action Plan progress will keep the public informed. Highlighting successful programs that reduce GHG

emissions from government operations will set a good example, and lead to community support for future implementation efforts.

Implementation:

- ☑ GO 11.1 Publish information on the City's climate action planning website about successful programs aimed at reducing GHG emissions.
- ☑ GO 11.2 Participate in Earth Day activities, the County's Energy-Efficiency Month, and other regional events to educate the community about City climate action planning.

Implementation Time Frame: Long-Term

Indicators & Monitoring:

- Number of hits on the City's climate action planning website.
- Attendance at various outreach events.

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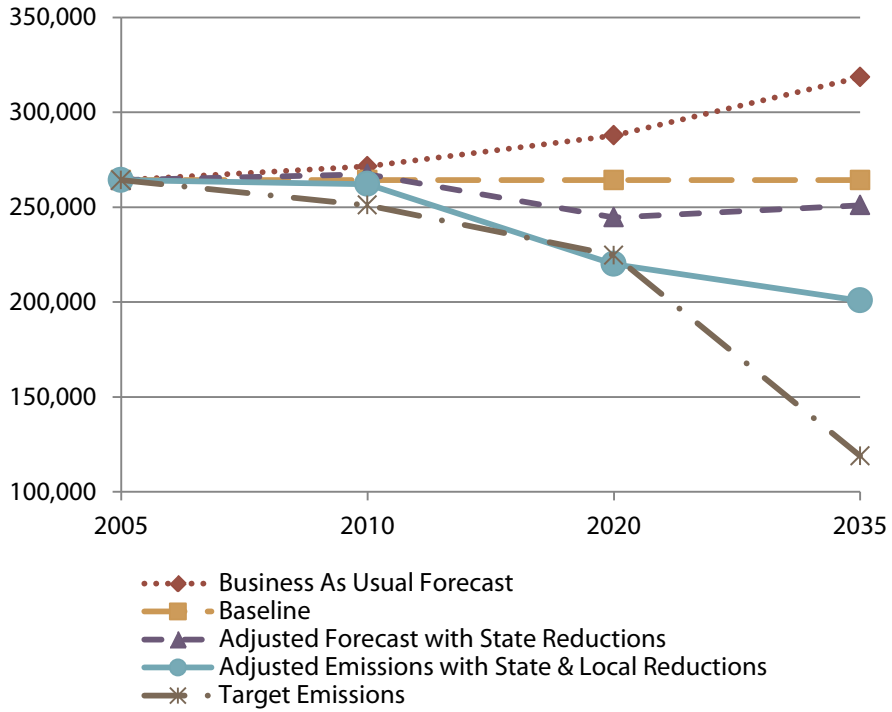
Conclusion

Climate change is a global problem that must be addressed at all levels of government. This Climate Action Plan (CAP), which represents the City of San Luis Obispo's strategies for addressing climate change, builds on actions taken at the State level to curb GHG emissions. Many of these State policies influence local GHG emissions and contribute to the City's reduction goals.

Forecast of Community GHG Emissions with Different Reductions Strategies

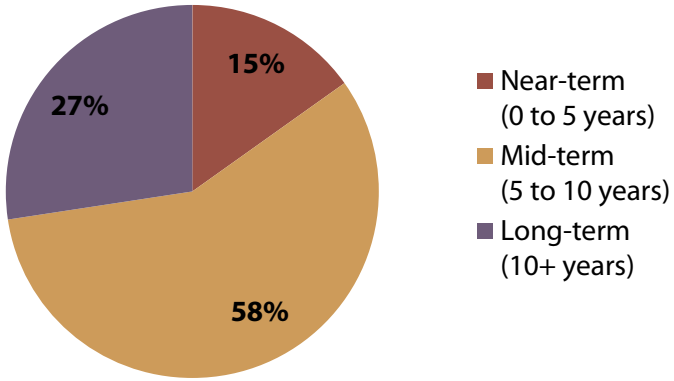


The forecast of community GHG emissions compares anticipated GHG emissions factoring in different emission reduction strategies; Business as Usual (BAU) forecast (no action), forecast with State climate action laws, and forecast with State laws and implementation of the City's CAP. It is projected that State and local actions will enable the City to meet the AB 32 reduction target with an overall reduction in community-wide GHG emissions of 22% below BAU by 2020 (15% below baseline). Timely implementation of the local strategies defined in the CAP will be required to reach this target, in addition to regular updates to the GHG Emissions Inventory.

For consistency with County and regional planning efforts, a second reduction forecast year of 2035 is included. The target emissions curve slopes dramatically downward after 2020 in response to the Governor's executive order (S-3-05) to reach a reduction in statewide emissions of 80 percent below 1990 levels by 2050. This is a laudable yet challenging goal, which will likely require significant technological innovation. The local and State reduction strategies included in this CAP will only get the City part of the way there.

Nevertheless, the path to the target in 2020, consistent with State goals in AB 32, is a measurable reality. The majority of local GHG reduction strategies have a near-term (0 to 5 years) or mid-term (5 – 10 years) implementation time frame. Assuming implementation of all strategies with near or mid-term objectives, the City will achieve approximately 73% of projected emissions reductions by the target year 2020. Implementation time frames may be adjusted over time depending upon resource availability.

Implementation Time Frame
(% of total emissions reductions)



Among local strategies aimed at 2020, the largest potential reductions are associated with waste diversion and transportation strategies. The projected GHG emissions reductions were developed by making assumptions, which are included in the Appendix.

2020 Local GHG Emissions Reductions by Issue Area

Issue Area	2020 GHG Emissions Reductions ($MTCO_2e$)
Waste	-7,440
Transportation and Land Use	-5,140
Buildings	-3,543
Renewable Energy	-2,240
Government Operations	-440
Parks and Open Space	-340
Water	-110
Total	**-19,253**

Additional details about strategy-specific reductions, implementation methods, and city costs appear in the following Local GHG Reductions Matrix. City costs are based on assumptions consistent with those used in the City's two year Financial Plan:

Low (L): Minimal staff effort and no consultant assistance will be needed to complete the analytical work and coordinate stakeholder-public outreach. While this is a qualitative assessment, this generally means that less than 80 hours of staff work and no additional budget resources will be needed to implement the program.

Medium (M): Significant staff effort, some consultant assistance or supplemental funding for operations or capital projects will be needed to complete the analytical work and coordinate stakeholder-public outreach or implement the program. Again, while this is a qualitative assessment, this generally means between 80 to 500 hours of staff work and/or up to $25,000 for added budget resources will be needed to implement the program.

High (H): Major staff effort, consultant assistance or supplemental funding for operations or capital projects will be needed to complete the analytical work, coordinate stakeholder-public outreach or implement the program. Generally, this means that more than 500 hours of staff work and/or more than $25,000 for added budget resources will be needed to implement the program.

Local GHG Reductions Matrix

#	Strategy	GHG Reductions	City Costs	Implementation Method	Responsible Department	Indicators and Monitoring		
Near-Term (0 to 5 years) GHG Reduction Strategies -4,018 $MTCO_2e$ (15%) ● 1,480 – 4,800+ staff hours ● $50,000 - $200,000+ City costs								
BLD 3	Public Outreach and Education	-1,510	Low	Regional Program	Community Development, Utilities	Number of local participants in Energy Upgrade CA	Number of hits on community web portal	Number of certified green businesses
TLU 2	Alternative Vehicles	-1,110	Medium	General Plan Update Ordinance	Community Development	Number of EV charging stations and clean vehicle parking spaces	Number of local car-share vehicles and members	Number of registered CAVs in City
TLU 6	Parking Management	-460	Medium	Fee Program Downtown Parking Access & Management Plan	Parking Public Works	On-street parking vacancy rate	Parking structure occupancy rates	Annual revenue from parking structures versus parking meters
BLD 2	New Construction Energy Conservation	-288	Low	Community Design Guidelines Building Code Changes Incentive Program	Community Development	Percentage of new construction projects that exceed Cal Green requirements	Percentage of new projects with smart grid appliances	
TLU 7	Shared Parking	-250	Medium	Zoning Code Amendment	Community Development	Average shared parking reduction for tenants in multi-use centers		
GO 1	City Energy Conservation	-190	High	City Program	Public Works, Utilities	Annual facility energy use		
WTR 1	Water Conservation: Existing Development	-90	Low	City Program	Utilities	Reduction in the amount of potable water used for irrigation	Number of rainwater-harvesting systems installed	Annual increase in recycled water use
TLU 8	Reduce the Need for Commuting	-50	Low	LUCE Update Fee Program	Community Development	Jobs-housing ratio reported each year in the General Plan Annual Report	Number of BMR housing units built, including secondary dwelling units	
GO 9	Employee Commute	-50	Medium	City Program	Parking	Percentage of total commute trips made by alternative transportation		
WTR 2	Water Conservation: New Development	-20	Low	City Program	Community Development	Average water use reduction for new development	Annual increase in recycled water use	

#	Strategy	GHG Reductions	City Costs	Implementation Method	Responsible Department	Indicators and Monitoring		
RE 3	Public Outreach and Education	Support Measure	Low	Regional Program	Community Development	Attendance at public events focused on energy	Number of projects with photovoltaic systems	
TLU 9	Public Outreach and Education	Support Measure	Medium	Regional Program	Community Development	Number of transportation welcome packets distributed annually	Amount of participation in commuting events and programs	
WTR 3	Public Outreach and Education	Support Measure	Medium	City Program	Community Development	Reductions in household water usage	Number of households that take advantage of available rebates	
WST 2	Public Outreach and Education	Support Measure	Low	City Program	Community Development	Composting workshop attendance	Number of waste audits	Number of field trips to waste facilities
PKS 5	Public Outreach and Education	Support Measure	Low	City Program	Community Development, Parks & Recreation	Number of attendees at outreach and training events	Number of partnerships with local organizations	
GO 11	Public Outreach and Education	Support Measure	Low	Regional Program	Community Development	Number of hits on the City's climate action planning website	Attendance at various outreach events	
PKS 3	Green Waste Recycling	Support Measure	Low	City Program	Public Works	Tons of green waste collected	Amount of firewood and wood chips distributed	
GO 10	Sustainability Coordinator	Support Measure	High	City Program Financial Plan Priority	Community Development, Utilities	Number of CAP programs implemented through dedication of staff time		
Mid-Term (5 to 10 years) GHG Reduction Strategies -15,235 $MTCO_2e$ (58%) ● 3,400 – 5,500+ staff hours ● $150,000 - $275,000+ City costs								
WST 1	Increased Waste Diversion	-7,440	High	Ordinance City Program Fee Program Regional Program	Utilities	Annual waste diversion rate	Pounds of waste per person and per employee per day	Tonnages of green waste and recycling
TLU 5	Land Use Diversity and Density	-2,850	High	General Plan Policy Ordinance	Community Development	Increased land use index (diversity of land uses)	Number of new mixed-use developments and area of the City rezoned for higher residential density	Mean travel time to work
RE 1	Renewable Energy Financing	-2,100	Medium	Regional Program Incentive Program	Community Development	Number and size of renewable energy projects installed	Number of residents and/or businesses in financing programs	

#	Strategy	GHG Reductions	City Costs	Implementation Method	Responsible Department	Indicators and Monitoring		
BLD 1	Energy Efficiency Improvements to Existing Buildings	-1,745	Medium	State Requirement Ordinance Historic Preservation Guidelines update City Program	Community Development, Utilities	Number of energy ratings submitted to City in exchange for nominal compensation	Number of permits issued that include energy-efficiency retrofits	Annual review of PG&E G*reen Communities* local data on residential and nonresidential energy consumption trends
TLU 1	Transit Services	-420	High	Short Range Transit Plan Fee program City Program	Public Works, Community Development	Annual transit trips	Average passengers per revenue hour	Number of discounted bus passes distributed annually
PKS 1	Enrich the Urban Forest	-340	High	City Program	Public Works	Number of net new trees planted per year		
GO 8	Fleet and Equipment Upgrades	-150	Medium	City Policy	Public Works	Vehicle fleet average fuel efficiency		
RE 2	Renewable Energy Incentives	-140	High	Ordinance Incentive program	Community Development, Utilities	Number and size of renewable energy projects installed	Number of residents and/or businesses taking advantage of incentive programs, and associated cost savings	
GO 4	Energy-Efficient Street lighting	-50	High	City Program	Public Works	Percentage of streetlights and traffic signals replaced		
PKS 4	Foster Local Food Production	Support Measure	Medium	General Plan Policy City Program Collaboration with community groups Regional Program	Parks & Recreation	Number of community garden plots	Annual yield from Calle Joaquin Agricultural Reserve	
GO 7	Water Conservation	Support Measure	Medium	City Program	Parks & Recreation Public Works	Acres of landscape replaced with low-maintenance plants	Annual park water use	

#	Strategy	GHG Reductions	City Costs	Implementation Method	Responsible Department	Indicators and Monitoring		
Long-Term (10+ years) GHG Reduction Strategies -7,269 $MTCO_2e$ (27%) ● 3,080 – 3,500+ staff hours ● $160,000 – $175,000+ City costs								
TLU 3	Bike Travel	-4,818	High	General Plan Policy Bicycle Transportation plan update Financial Plan priority City Program	Public Works, Community Development	Miles of bike lanes and bike paths installed	Number of bike trips observed in biannual bike counts	Number of Bicycle Transportation Plan projects completed
PKS 2	Parks and Open Space Development	-1,360	High	City Program Regional Program	Natural Resources	Acres of open space preserved, restored or rehabilitated	Amount of parkland created annually	Amount of in-lieu fees collected for parks.
TLU 4	Complete Streets	-551	High	General Plan Policy Ordinance Street Design Manual Regional Program	Public Works, Community Development	Completed projects that improve the balance of the City's transportation network for all users	Safe Routes to School participation rates	Adopted Downtown Pedestrian Plan
GO 5	Water and Wastewater Infrastructure	-190	High	City Program Financial Plan Priority	Utilities	Annual reduction in water and wastewater facility energy use.		
GO 3	Transit Fleet Upgrades	-160	High	City Program Financial Plan Priority	Public Works	Average fuel efficiency of transit fleet		
GO 2	City Renewable Energy	-150	High	City Program Financial Plan Priority Grant or Utility Funding	Public Works, Utilities, Community Development	Energy generated from renewable sources at City facilities		
GO 6	Increase Waste Diversion from City-owned Property	-40	Medium	City Program	Utilities, Public Works	Percentage of facilities with recycling and composting receptacles	Annual disposal tonnages from facilities	

$MTCO_2e$ – Metric Tons of Carbon Dioxide Equivalent
City Costs – Low: 0 to 80 hours, no additional budget; Medium: 80 to 500 hours, up to $25,000; High: 500+ hours, $25,000+

Technical Appendix

The technical appendix provides more detail on how GHG emissions reductions were calculated for each strategy. Policies and implementation steps are restated, followed by costs, and assumptions used to estimate the amount of GHG emissions reduced by 2020.

BLD 1: Efficiency Improvements to Existing Buildings

Implement local programs, and collaborate with the County and State, to improve energy efficiency in older building stock.

Implementation:

- ☐ BLD 1.1 Accomplish 425 residential energy-efficiency retrofits and 10,000 square feet of commercial efficiency retrofits annually, by encouraging energy ratings, offering rebates and incentives, and supporting regional education efforts such as an *EnergyWatch* energy-efficiency website.
- ☐ BLD 1.2 Encourage property owners to monitor building energy use through energy monitors, web applications and State-required energy use disclosures (AB 1103).
- ☐ BLD 1.3 Evaluate options for a local energy conservation ordinance, pursuant to pending State legislation (AB 758), that requires entry-level efficiency upgrades identified in certified energy ratings.
- ☐ BLD 1.4 Identify energy efficiency upgrades for historic structures that do not compromise the historic integrity of the building, such as interior upgrades like insulation, air sealing, and wrapping ducts.

2020 Reductions ($MTCO_2e$): -1,745

City Costs: Medium

Assumptions:

Implementation of an energy-efficiency retrofit incentive program will begin in 2013. 3,400 housing units (425 annually), and 80,000 square feet of commercial (10,000 sq. ft. annually), will be retrofitted by the end of 2020. The average electricity savings per retrofitted household is estimated to be 874 kWh, and the average natural gas savings per retrofitted household is 62 therms. The average electricity savings per retrofitted commercial square foot is estimated to be 3 kWh, and the average natural gas savings per retrofitted commercial square foot is 0.082 therms.

Smart grid integration will reduce energy demand through continuous feedback of real-time energy use. Studies have shown that the more frequently feedback is given to users on their energy use, the more significantly they alter their behaviors to reduce their energy use.

Sources:

California Energy Commission. 2010. Nonresidential Building Energy Performance Rating Disclosure Regulations. Sacramento, CA.

Earth Advantage Institute. 2011. Program Sustainability with EPS. http://www.earthadvantage.org.

EnergySavvy. 2010. Energy Audit Programs that Work: Program Comparison Data. http://www.energysavvy.com.

Zillow, Inc. 2011. San Luis Obispo Home Prices and Home Values. http://www.zillow.com/local-info/CA-San-Luis-Obispo-home-value/.

BLD 2: New Construction Energy Conservation

Encourage and incentivize new development to exceed minimum Cal Green requirements.

Implementation:

- ☐ BLD 2.1 Expand incentive program for projects that exceed Title 24 energy efficiency standards.
- ☐ BLD 2.2 Require new development to install energy-efficient appliances.
- ☐ BLD 2.3 Amend design guidelines and other documents to promote low impact development strategies such as cool roofs and cool paving surfaces.

2020 Reductions ($MTCO_2e$): -288

City Costs: Low

Assumptions:

Reduction in electricity and natural gas use from new buildings is based on average energy reductions by building type and climate zone as provided in the California Air Pollution Control Officers Association's (CAPCOA) Quantifying Greenhouse Gas Mitigation Measures. It is assumed that 10% of new projects will exceed Title 24 energy efficiency requirements by a minimum of 10% by 2020, for an average electricity savings of 0.7% to 2.6%, and an average natural gas savings of 7.2% to 9%.

Additional energy savings will be achieved through the installation of smart grid appliances that can be pre-programmed to run at off-peak energy times.

Sources:

California Air Pollution Control Officers Association. 2010. "Quantifying Greenhouse Gas Mitigation Measures."

California Building Standards Commission. 2010 California Green Building Standards Code. Sacramento, CA: California Building Standards Commission.

California Energy Commission. 2007. Impact Analysis: 2008 Update to the California Energy Efficiency Standards for Residential and Nonresidential Buildings. Sacramento, CA: California Energy Commission.

Caltrans. 2010. Highway Performance Monitoring System 2009 California Public Road Data. http://www.dot.ca.gov.

City of San Luis Obispo. 2010. Zoning Regulations.

Pike Research. 2010. Smart appliance sales to start off slow, but 118 million units will be sold worldwide by 2019. http://www.smartgridnews.com/artman/publish/.

BLD 3: Public Outreach and Education

Collaborate with local utility providers, the County and State, businesses, and community organizations to develop energy conservation campaigns and marketing for existing programs.

Implementation:

- ☐ BLD 3.1 Promote energy efficiency programs and available financing options including energy-efficiency mortgages, State energy programs, Energy Upgrade California, utility company upgrade programs, and local rebates.

- ☐ BLD 3.2 Collaborate with the County, State, and energy providers to develop a central website for streamlined access to energy efficiency resources.
- ☐ BLD 3.3 Work with local green building organizations on education and outreach programs.
- ☐ BLD 3.4 Work with the business community to establish a green business certification program.

2020 Reductions ($MTCO_2e$): -1,510

City Costs: Low

Assumptions:

Participation in energy efficiency financing programs and the average energy savings per participant are based on program evaluations and research of existing programs in other jurisdictions with 10% of owner-occupied residential units and 5% of owner-occupied nonresidential units participating by 2020.

Sources:

City of Berkeley. 2010. Berkeley FIRST Initial Evaluation. Berkeley, CA.

City of San Luis Obispo. 2010. General Plan Housing Element. San Luis Obispo, CA.

National Resources Defense Council; PACE Now; Renewable Funding LLC; The Vote Solar Initiative. 2010. Property Assessed Clean Energy Programs White Paper.

Sacramento Metropolitan Air Quality Management District. 2009. Spare the Air Control Measure Program; Revision to State Implementation Plan Staff Report. http://www.airquality.org/notices/CAPUpdate/STA-revisiontoSIP-StaffRpt23April2009.pdf.

U.S. Census Bureau. 2009. 2005–2009 American Communities Survey 5-Year Estimates. Washington, D.C. http://factfinder.census.gov.

RE 1: Renewable Energy Financing

Promote a wide range of renewable energy financing options including a renewable energy fund or loan program.

Implementation:

- ☐ RE 1.1 Support efforts to implement a revolving low-interest loan program or renewable energy fund.
- ☐ RE 1.2 Work with the County to build a collaborative network to promote and provide renewable funding and financing.
- ☐ RE 1.3 Work with the County and regional energy providers to evaluate a "feed-in tariff" program that pays property owners generating renewable energy based on the amount of energy generated.

2020 Reductions ($MTCO_2e$): -2,100

City Costs: Medium

Assumptions:

Participation in energy efficiency financing programs and the average energy savings per participant are based on program evaluations and research of existing programs in other jurisdictions.

Sources:

City of Berkeley. 2010. Berkeley FIRST Initial Evaluation. Berkeley, CA.

National Resources Defense Council; PACE Now; Renewable Funding LLC; The Vote Solar Initiative. 2010. Property Assessed Clean Energy Programs White Paper.

RE 2: Renewable Energy Incentives

Incentivize renewable energy generation in new and existing developments.

Implementation:

- ☐ RE 2.1 Incentivize renewable energy generation by streamlining review processes, reducing permit costs, and/or allowing modest density bonuses for construction projects with renewable energy installations.
- ☐ RE 2.2 Revise City policies and regulations as needed to eliminate barriers to the use of renewable energy, and implement General Plan programs that require solar power for certain residential projects (COSE 4.6.17).
- ☐ RE 2.3 Evaluate the feasibility of a regional Community Choice Aggregation program to procure electricity from renewable resources.

2010 Reductions ($MTCO_2e$): **0**

2020 Reductions ($MTCO_2e$): **-140**

2035 Reductions ($MTCO_2e$): **-280**

City Costs: **Low**

Assumptions:

This measure quantifies the GHG reduction benefit of installing renewable energy on new residential development. The State of California has developed the New Solar Homes Partnership, requiring new developments to have a solar option for all new home purchases. The California Energy Commission has estimated that the average solar system size would be 2 kW and that approximately 20% of new homes would include a solar photovoltaic system at the time of purchase.

Sources:

California Energy Commission. 2010. New Solar Homes Partnership, Third Edition. Sacramento, CA: California Energy Commission.

RE 3: Public Outreach and Education

Increase community awareness of renewable energy programs. Educate professionals about benefits of integrating renewable technologies in project design.

Implementation:

- ☐ RE 3.1 Educate the community about renewable energy programs using various methods, such as the City's website, TV channel, flyers in reception areas, and public events.
- ☐ RE 3.2 Consider results of the SLO-RESCO project.
- ☐ RE 3.3 Encourage the use of photovoltaic installations whenever possible during design review process.

Supporting Measure

City Costs: **Low**

TLU 1: Transit Services

Maintain and expand transit services consistent with the City's Short Range Transit Plan.

Implementation:

- ☑ TLU 1.1 Implement the Short Range Transit Plan.
- ☑ TLU 1.2 Continue to research federal and local funding for transit service upgrade projects.

- ☐ TLU 1.3 Support the County's *EnergyWise Plan* strategy to add transit routes that provide intercity express services.
- ☑ TLU 1.4 Continue to offer a free or discounted bus pass (Downtown Pass) to residents who work in the downtown core, seniors and students.

2020 Reductions ($MTCO_2e$): -420

City Costs: Medium

Assumptions:

Since 2005, SLO Transit has seen an increase of over 200,000 transit trips per year. It is anticipated that the City's transit system will continue to carry additional riders by expanding services and through additional promotions and press. It is estimated that approximately 50% of those additional transit trips would have otherwise been made by car.

Sources:

Federal Transportation Administration. 2009. National Transit Database: City of San Luis Obispo Transportation Program Profile. http://www.ntdprogram.gov/ntdprogram/pubs/profiles/2005/agency_profiles/9156.pdf.

TLU 2: Alternative Vehicles

Promote clean-energy vehicles, and expand the network of electric car charging stations and car-sharing parking spaces.

Implementation:

- ☐ TLU 2.1 Require all new development with 50 or more parking spaces to designate a minimum 8% of parking spaces for clean air vehicles (CAV).
- ☐ TLU 2.2 Require all new development with 50 or more parking spaces to pre-wire for electric vehicle (EV) charging stations, and provide a minimum 2 percent charging spaces.
- ☐ TLU 2.3 Work with the APCD on the EV Community Readiness Plan for the Central Coast.
- ☐ TLU 2.4 Identify a network of streets appropriate for Neighborhood EV use in the SLO2035 General Plan update.
- ☐ TLU 2.5 Allow car-sharing companies to designate spaces in public parking areas and multifamily housing projects.

2020 Reductions ($MTCO_2e$): -1,110

City Costs: Medium

Assumptions:

This measure quantifies the VMT and fuel savings impacts of expanded use of CAVs, which is incentivized by additional public and private electric vehicle charging stations, and designated CAV parking areas. Implementation will occur in future development with 50 or more required parking spaces, which will likely be business park campuses in the Margarita Area (1.1 mil. sq. ft.) and Airport Area (3 mil. sq. ft.). VMT reductions may also occur through the increased participation and availability of local car-sharing programs.

Sources:

California Air Pollution Control Officers Association. 2010. Quantifying Greenhouse Gas Mitigation Measures.

City of San Luis Obispo. 2010. Zoning Regulations.

Department of Transportation. 2001. National Household Travel Survey. Washington, D.C.

Idaho National Laboratory. 2006. Full Size Electric Vehicles: Advanced Vehicle Testing Reports.

TLU 3: Bike Travel

Increase the percentage of non-recreational trips that are made by bicycle.

Implementation:

- ☐ TLU 3.1 Modify Bicycle Transportation Plan (BTP) to achieve 20% bicycle mode share by 2020.
- ☑ TLU 3.2 Develop additional funding and staff resources to implement the BTP, including cyclist safety programs and bicyclist commuter incentives.
- ☑ TLU 3.3 Research opportunities for a bike-share program near parking facilities.

2020 Reductions ($MTCO_2e$): -4,818

City Costs: High

Assumptions:

In 2005, The City's estimated bike mode share was 5.5%. The Circulation Element of the General Plan sets modal split objectives for bicycles of 14% in 2010, and 16% in 2020. The CAP sets a goal of achieving a 20% mode share by 2020 through the continued expansion of bike infrastructure, facilities and the development of a bike-share program.

Sources:

Dierkers, G., E. Silsbe, S. Stott, S. Winkelman, and M. Wubben. 2007. CCAP Transportation Emissions Guidebook. Center for Clean Air Policy. Washington, D.C. http://www.ccap.org/safe/guidebook.php. as cited in California Air Pollution Control Officers Association (CAPCOA) 2008. CEQA and Climate Change.

Nelson, Arthur C., and David Allen. 1997. If You Build Them, Commuters Will Use Them: Cross-Sectional Analysis of Commuters and Bicycle Facilities.

U.S. Census Bureau. 2009. 2005–2009 American Communities Survey 5-Year Estimates. Washington, D.C. http://factfinder.census.gov.

U.S. Department of Transportation, Federal Highway Administration. 2009. National Household Travel Survey. http://nhts.ornl.gov.

U.S. Department of Transportation; Oak Ridge National Laboratory. 2004. Summary of Travel Trends: 2001 National Household Travel Survey. http://nhts.ornl.gov/2001/pub/STT.pdf

TLU 4: Complete Streets

Modify General Plan policies in the SLO2035 update to support a balanced, multimodal transportation network.

Implementation:

- ☐ TLU 4.1 Require new and redeveloped street designs to address the needs of all users – motorists, pedestrians, bicyclists, children, persons with disabilities, seniors and users of public transit – whenever feasible.
- ☐ TLU 4.2 Develop and adopt a Downtown Pedestrian Plan.

- ☐ TLU 4.3 Collaborate with SLO Regional Rideshare to expand Safe Routes to School programs, events, and projects.
- ☐ TLU 4.4 Research traffic congestion management techniques that decrease vehicle stop rate and time, such as signal synchronization or roundabouts.

2020 Reductions ($MTCO_2e$): -551

City Costs: Medium

Assumptions:

Continuing to improve and renovate streets to accommodate all transportation user modes will provide a safer pedestrian environment and encourage residents to make trips by foot or other alternative modes instead of by car. This measure also includes the VMT reduction associated with increased participation in local Safe Routes to School programs.

Sources:

California Air Pollution Control Officers Association. 2010. "Quantifying Greenhouse Gas Mitigation Measures."

San Luis Obispo Council of Governments. 2007. SLO County Safe Routes to School Update. http://library.slocog.org.

U.S. Census Bureau. 2009. 2005–2009 American Communities Survey 5-Year Estimates. Washington, D.C. http://factfinder.census.gov.

TLU 5: Land Use Diversity and Density

Encourage compact urban form and mixed-use developments.

Implementation:

- ☑ TLU 5.1 Improve connectivity between neighborhoods and services based on opportunities identified in the SLO2035 General Plan update.
- ☑ TLU 5.2 Promote infill by amending the General Plan and Zoning Regulations to increase residential densities in suitable zones.
- ☑ TLU 5.3 Incentivize mixed-use development by reducing parking requirements, allowing alternatives to Parking and Driveway Standards, and streamlining permit review.
- ☐ TLU 5.4 Evaluate allowing mixed-use projects in the High-density residential zone in the SLO2035 General Plan update.
- ☐ TLU 5.5 Apply a Mixed-Use (MU) overlay zone to areas suitable for TOD based on the SLO2035 General Plan update.

2020 Reductions ($MTCO_2e$): -2,850

City Costs: Low

Assumptions:

The increased connectivity, density, and diversity of land uses within San Luis Obispo will decrease the distances that will need to be traveled to reach jobs, housing, services, and other amenities by approximately 2.5% by 2020. Decreased distances between land uses will not only reduce VMT, but will also make it more convenient to utilize non-auto modes of travel.

Sources:

California Air Pollution Control Officers Association. 2010. "Quantifying Greenhouse Gas Mitigation Measures."

City of San Luis Obispo. 2010. General Plan Housing Element. San Luis Obispo, CA.

City of San Luis Obispo. 2010. Zoning Regulations.

U.S. Census Bureau. 2009. 2005–2009 American Communities Survey 5-Year Estimates. Washington, D.C. http://factfinder.census.gov.

U.S. Department of Transportation. April 2010. Transportation's Role in Reducing Greenhouse Gas Emissions. Volume 1: Synthesis Report.

TLU 6: Parking Management

Motivate Downtown visitors to park once and walk or ride to multiple destinations, or use transit to get to and from downtown.

Implementation:

- ☑ TLU 6.1 Make Downtown parking structures an attractive alternative to meter parking by making on-street meter fees more expensive than structure parking.
- ☑ TLU 6.2 Locate transit stops and bicycle racks near parking structures to make alternative transportation choices Downtown more convenient.

2020 Reductions ($MTCO_2e$): -460

City Costs: Medium

Assumptions:

Higher costs for short-term parking on the street will motivate Downtown visitors to park once in less expensive parking garages and walk or ride to multiple locations.

Sources:

California Air Pollution Control Officers Association. 2010. "Quantifying Greenhouse Gas Mitigation Measures."

TLU 7: Shared Parking

Reduce VMT and associated GHG emissions by further reducing parking requirements for land uses that share the same parking lot.

Implementation:

- ☐ TLU 7.1 Amend the Zoning Regulations to increase the potential shared parking reduction from 10% to 30%.

2020 Reductions ($MTCO_2e$): -250

City Costs: Low

Assumptions:

The VMT reductions associated with this measure assume that on average a 7% shared parking reduction will occur for all new non-single-family residential developments. A 7% reduction in parking provisions will result in a 0.2% reduction in VMT.

Sources:

City of San Luis Obispo. 2010. Zoning Regulations.

TLU 8: Reduce the Need for Commuting

Increase local housing options for workers in the community that include variety in location, type, size, tenure and style of dwellings.

Implementation:

- ☑ TLU 8.1 Improve our jobs-housing balance to reduce VMT from commuting.

- ☑ TLU 8.2 Support infill housing projects that implement General Plan policies, especially BMR housing close to job opportunities.
- ☑ TLU 8.3 Continue to allow secondary dwelling unit construction and look for opportunities to reduce barriers to their production.

2020 Reductions ($MTCO_2e$): -50

City Costs: Low

Assumptions:

Maintaining an appropriate jobs-housing balance helps give residents the opportunity to live close to where they work. Supporting below-market-rate (BMR) infill housing construction, including secondary dwelling units, helps increase housing options for workers in the community with varying income levels. New BMR housing opportunities will result in a 4% decrease in household VMT per new BMR unit.

Sources:

California Air Pollution Control Officers Association. 2010. Quantifying Greenhouse Gas Mitigation Measures.

City of San Luis Obispo. 2010. General Plan Housing Element. San Luis Obispo, CA.

Nelson/Nygaard. 2005. Creating Low-Traffic Developments: Adjusting Site-Level Vehicle Trip Generation Using URBEMIS, pg. 12.

Urbemis. 2007. Version 9.2.4. Rimpo and Associates.

TLU 9: Public Outreach and Education

Increase community awareness of transit options and established pedestrian and bicycle infrastructure. Inform residents and businesses about available incentives for commuting via carpool, transit and bicycle.

Implementation:

- ☑ TLU 9.1 Distribute informational transportation welcome packets and bus passes to new residents and businesses.
- ☐ TLU 9.2 Install additional informational bike signage.
- ☑ TLU 9.3 Continue partnership with regional organizations, including SLOCOG's Regional Rideshare and SLO County's Bicycle Coalition, on outreach and education events.
- ☐ TLU 9.4 Market incentive programs in the Bicycle Commuter Act to employers and workers in the community.

Supporting Measure

City Costs: Low

WTR 1: Water Conservation: Existing Development

Implement Water Efficient Landscape Standards (MC 17.87) when landscape projects trigger building permit review.

Implementation:

- ☑ WTR 1.1 Require landscape projects that trigger building permit review to incorporate native and drought tolerant plant materials and minimize irrigated turf areas.
- ☑ WTR 1.2 Require landscape projects that trigger building permit review to incorporate irrigation system designs that avoid runoff, low-head drainage, and overspray.

- ☑ WTR 1.3 Encourage the use of greywater or rainwater-harvesting systems.

2020 Reductions ($MTCO_2e$): -90

City Costs: Low

Assumptions:

Reduced water use by the community will result in reduced energy consumption by City facilities to pump, deliver, and treat the City's water supply. It is assumed that communitywide water use will be reduced by 5% by 2020 and 10% by 2035, resulting in gallons per capita per day of 115 and 110, respectively.

Sources:

California Energy Commission. 2005. California's Water-Energy Relationship. http://www.energy.ca.gov/2005publications/CEC-700-2005-011/CEC-700-2005-011-SF.PDF.

———. 2006. Refining Estimates of Water-Related Energy Use in California. http://www.energy.ca.gov/2006publications/CEC-500-2006-118/CEC-500-2006-118.PDF.

City of San Luis Obispo. 2006. 2005 Annual Water Resources Status Report. http://www.slocity.org/utilities/

WTR 2: Water Conservation: New Development

Implement CALGreen standards, Water Reuse Master Plan, and Water Efficient Landscape Standards to reduce potable water use in new development.

Implementation:

- ☑ WTR 2.1 Review new development projects for consistency with CALGreen water efficiency standards.
- ☑ WTR 2.2 Expand recycled water infrastructure to encourage use of greywater in new construction and landscape projects.
- ☑ WTR 2.3 Require use of native and non-invasive drought tolerant plant materials combined with conservative use of water and landscape designs that prevent run-off.

2020 Reductions ($MTCO_2e$): -20

City Costs: Low

Assumptions:

Reduced water use from new buildings will result in reduced energy consumption by City facilities to pump, deliver, and treat the city's water supply. The new CALGreen requirements include standards to reduce building potable water use by 20%. This measure also quantifies the impact of the expanded use of recycled water, which is less energy intensive than potable water use. Approximately 150 acre-feet of recycled water were utilized in 2010. Recycled water use will increase to 250 acre-feet per year by 2020 and 600 acre-feet per year by 2035.

Sources:

California Air Pollution Control Officers Association. 2010. "Quantifying Greenhouse Gas Mitigation Measures."

California Building Standards Commission. 2010 California Green Building Standards Code. Sacramento, CA: California Building Standards Commission.

California Energy Commission. 2005. California's Water-Energy Relationship. http://www.energy.ca.gov/2005publications/CEC-700-2005-011/CEC-700-2005-011-SF.PDF.

———. 2006. Refining Estimates of Water-Related Energy Use in California. http://www.energy.ca.gov/2006publications/CEC-500-2006-118/CEC-500-2006-118.PDF.

City of San Luis Obispo. 2006. 2005 Annual Water Resources Status Report. http://www.slocity.org/utilities/download/annualwaterresourcereport/wrsr06.pdf.

Natural Resources Defense Council. 2004. Energy Down the Drain: The Hidden Costs of California's Water Supply.

WTR 3: Public Outreach and Education

Inform the community about household water usage, and ways to reduce indoor and outdoor water consumption.

Implementation:

- ☐ WTR 3.1 Provide a graphical history of household water usage on utility bills, and a comparison to average water usage for similar types of homes in the community.
- ☑ WTR 3.2 Maintain Utilities Department online resources and outreach materials for water saving tips, planting guides and available rebates.

Supporting Measure

City Costs: Low

WST 1: Increased Waste Diversion

Reduce the community waste stream to as close to zero waste as possible, with a 75% diversion rate by the year 2020.

Implementation:

- ☐ WST 1.1 Continue to provide and incentivize recycling and green waste services for single-family residential, multi-family, and commercial customers.
- ☐ WST 1.2 Evaluate the effectiveness of a stricter volume-based rate schedule for waste pickup.
- ☐ WST 1.3 Enforce existing IWMA standards that require landlords and commercial businesses to provide recycling service.
- ☐ WST 1.4 Re-establish financial support for home composting.
- ☐ WST 1.5 Explore the feasibility of a waste auditing program.
- ☐ WST 1.6 Consider residential and commercial curbside food waste pickup.
- ☐ WST 1.8 Evaluate the effectiveness of a Food Packaging Ordinance that requires biodegradable containers.
- ☐ WST 1.9 Conduct a feasibility assessment of waste cooking oil collection for City-run biodiesel production and distribution.
- ☐ WST 1.10 Conduct a feasibility assessment of relocating biosolid composting closer to the City.

2020 Reductions ($MTCO_2e$): -7,440

City Costs: Medium

Assumptions:

In 2005, the City diverted approximately 61% of all waste generated. It is assumed that the City will reach a 75% diversion rate by 2020

through reduced waste disposal, increased recycling, and the development of a food waste pickup program.

Sources:

California Integrated Waste Management Board. 2004. Statewide Waste Characterization Study. Sacramento, CA: California Integrated Waste Management Board.

CalRecycle. 2011. Jurisdiction Profile for San Luis Obispo County Integrated Waste Management Authority. http://www.calrecycle.ca.gov.

WST 2: Public Outreach and Education

Provide waste reduction education to the City's consumers.

Implementation:

- ☐ WST 2.1 Provide the option for home and commercial waste audits to identify and educate consumers where waste production can be reduced.
- ☑ WST 2.2 Maintain Utilities Department online resources and outreach materials for recycling.
- ☐ WST 2.3 Host interactive workshops on home composting.
- ☐ WST 2.4 Explore options for landfill and Water Reclamation Facility site visits open to the public and school groups.

Supporting Measure

City Costs: Low

PKS 1: Enrich the Urban Forest

Increase the number of native trees along City streets, parks, and open spaces, with sensitivity to potential solar energy opportunities.

Implementation:

- ☐ PKS 1.1 Conduct an audit of parks and open space to identify and prioritize potential tree planting locations.
- ☑ PKS 1.2 Continue to promote tree planting through adopt-a-tree, commemorative plaque, and other volunteer-based planting programs.
- ☐ PKS 1.3 Establish an unpaid Urban Forester internship program with Cal Poly.

2020 Reductions ($MTCO_2e$): -340

City Costs: High

Assumptions:

The City has an established tree canopy of over 18,000 trees within the public right-of-way and within City-maintained parks and facilities. The City has estimated that there are 4 trees on private property or natural spaces within San Luis Obispo for every tree maintained by the City. These assumptions have been used to calculate the carbon sequestration and climate cooling benefits of additional shade trees, which will be planted at a rate of 200 new trees per year. The calculation also incorporates the added GHG emissions from increased maintenance equipment, water use, and the decomposition of the tree at the end of its life.

Sources:

McHale, Melissa R., E. Gregory McPherson, and Ingrid C. Burke. 2007. The potential of urban tree plantings to be cost effective in carbon credit markets. Fort Collins, CO: Elsevier.

PKS 2: Parks and Open Space Development

Continue to develop and acquire parks and open space resources.

Implementation:

- ☑ PKS 2.1 Continue to negotiate easements and land donations for conservation.
- ☑ PKS 2.2 Continue to develop and implement conservation plans for large City open space areas.
- ☐ PKS 2.3 Use conservation easements in a coordinated fashion to create trails.
- ☐ PKS 2.4 Expand donation programs for open space preservation and maintenance.
- ☐ PKS 2.5 Partner with other local organizations committed to open space preservation and parkland development.

2020 Reductions (MTCO2e): -1,360

City Costs: High

Assumptions:

This measure quantifies the carbon sequestration benefit of open space and habitat restoration and re-vegetation. The GHG reduction benefit of replanting open space areas utilizes average annual sequestration rates for forestland scrub, trees, cropland, and grasslands. The total areas to be rehabilitated are based on the conservation plans created for each of the City-owned open spaces.

Sources:

California Air Pollution Control Officers Association. 2010. "Quantifying Greenhouse Gas Mitigation Measures."

PKS 3: Green Waste Recycling

Utilize green waste from trimming, mowing, and other landscaping maintenance as compost.

Implementation:

- ☐ PKS 3.1 Store green waste from park maintenance at established composting facilities or other park properties.
- ☑ PKS 3.2 Continue to chip larger green waste at the City's Corporation Yard and redistribute for public and private use.

Supporting Measure

City Costs: Low

PKS 4: Foster Local Food Production

Foster local food production by increasing the availability and sustainability of community gardens and agriculture.

Implementation:

- ☑ PKS 4.1 Continue to identify suitable locations for community gardens on public and private property.
- ☐ PKS 4.2 Implement the Calle Joaquin Agricultural Reserve Master Plan.

Supporting Measure

City Costs: Low

PKS 5: Public Outreach and Education

Educate the community about proper tree maintenance, gardening and available resources for home landscape projects.

Implementation:

- ☐ PKS 5.1 Continue tree planting and maintenance education programs such as Arbor Day and Downtown Foresters.
- ☐ PKS 5.2 Partner with regional organizations to create volunteer opportunities for trail work, habitat restoration and open space maintenance.
- ☐ PKS 5.3 Advertise availability of composted green waste, wood chips and firewood.

Supporting Measure

City Costs: Low

GO 1: City Energy Conservation

- ☑ Create and implement a City Building Retrofit Program.

2020 Reductions (MTCO2e): -190

City Costs: Medium

Assumptions:

The City has already achieved a 5% reduction in facility energy use between 2005 and 2010 through upgrades and retrofits such as indoor and outdoor lighting fixture retrofits, roof replacements, lighting sensor controls, and HVAC upgrades.

Sources:

Blair, Cheryl. 2011. Administrative Analyst, City of San Luis Obispo. Email correspondence.

Collins, Andrew. 2011. Facilities Supervisor, City of San Luis Obispo. Personal communication.

GO 2: City Renewable Energy

- ☑ Generate renewable energy at City-owned facilities.

2020 Reductions (MTCO2e): -150

City Costs: High

Assumptions:

This measure quantifies the impact of the City's renewable energy installations at the Ludwick Community Center, Utilities Administration building, and Sinsheimer Swim Center. Additionally, the opportunity to install photovoltaic panels on additional City facilities, including parking lots, has been quantified.

Sources:

Blair, Cheryl. 2011. Administrative Analyst, City of San Luis Obispo. Email correspondence.

Munds, Ron. 2011. Utilities Coordinator, City of San Luis Obispo. Personal communication.

GO 3: Transit Fleet Upgrades

- ☑ Continue to upgrade to fuel-efficient vehicles as part of fleet replacement program.

2020 Reductions (MTCO2e): -160

City Costs: Medium

Assumptions:

Incremental increases in the fuel efficiency of the City's transit vehicles will continue to occur as the City replaces the transit fleet.

The City's fleet averaged approximately 3.5 miles per gallon (MPG) in 2005 and is expected to reach 4.5 MPG by 2020.

Sources:

Webster, John. 2011. Transit Manager, City of San Luis Obispo. Email correspondence.

GO 4: Energy-Efficient Street Lighting

Install energy-efficient streetlights and traffic signals.

Implementation:

- ☑ GO 4.1 Continue to replace traffic signal fixtures with light-emitting diode (LED) lighting.
- ☐ GO 4.2 Replace public streetlights with high-efficiency fixtures.
- ☑ GO 4.3 Continue to upgrade outdoor lighting fixtures with best available technology at City-owned facilities.

2020 Reductions (MTCO2e): -50

City Costs: Medium

Assumptions:

The City will continue to retrofit the existing 682 traffic signals and 2,200 streetlights. The City has already reduced traffic signal energy use by installing LED lighting, which will also reduce maintenance and replacement costs. This measure anticipates that the City will retrofit 25% of the city's streetlights by 2020 with LED or other energy-efficient lighting, which will result in a 48% decrease in electricity use per fixture.

Sources:

Blair, Cheryl. 2011. Administrative Analyst, City of San Luis Obispo. Email correspondence.

City of Little Rock. 2003. "Conventional Vs LED Traffic Signals; Operational Characteristics and Economic Feasibility." Little Rock, AR.

U.S. Department of Energy, Pacific Gas & Electric. 2008. LED Street Lighting: U.S. DOE Solid-State Lighting Technology Demonstration Gateway Program and PG&E Emerging Technologies Program. http://apps1.eere.energy.gov/buildings/publications/pdfs/ssl/gateway_sf-streetlighting.pdf.

GO 5: Water and Wastewater Infrastructure

Continue energy-efficient upgrades to water pumping and lift stations, and processes at the Water Reclamation Facility (WRF).

Implementation:

- ☑ GO 5.1 Implement a schedule to prioritize replacement of water pumping and lift stations.
- ☑ GO 5.2 Continue implementation of the WRF energy conservation plan.

2020 Reductions (MTCO2e): -190

City Costs: High

Assumptions:

It is assumed government operations will reduce energy use related to water delivery and wastewater treatment by 10% by 2020. This will be achieved through pump upgrades, more efficient treatment

systems, and the use of more efficient equipment at the water and wastewater treatment facilities.

Sources:

City of San Luis Obispo. 2009. Baseline Greenhouse Gas Emissions Inventory.

GO 6: Increase Waste Diversion from City-owned Property

Enhance recycling and composting efforts at parks, plazas, bus stops, offices and facilities.

Implementation:

- ☐ GO 6.1 Ensure that all City facilities have recycling containers.
- ☐ GO 6.2 Assess the feasibility of food scrap collection and pickup in public places.

2020 Reductions (MTCO2e): -40

City Costs: Low

Assumptions:

The City will continue to install recycling and composting receptacles at City facilities to reduce the waste collected by the City and sent to the landfill.

Sources:

Greater Vancouver Sewerage and Drainage District. 2008. "Solid Waste Composition Study." http://www.metrovancouver.org/about/publications/Publications/SolidWasteCompositionStudyFinal-2007.pdf.

GO 7: Water Conservation

Continue implementation of General Plan policies for efficient water use (COSE 10.3).

Implementation:

- ☑ GO 7.1 Choose appropriately-sized plants for City landscapes that are suitable for the climate, with emphasis on use of drought-tolerant plants.
- ☐ GO 7.2 Prepare soils for water penetration and retention.
- ☑ GO 7.3 Design and operate efficient irrigation systems.
- ☑ GO 7.4 Install water-efficient fixtures and maintain leak control at City facilities.

Supporting Measure

City Costs: Low

GO 8: Fleet and Equipment Upgrades

- ☑ Utilize best available technology for equipment and poolcar upgrades identified in the vehicle fleet replacement program.

2020 Reductions (MTCO2e): -150

City Costs: Medium

Assumptions:

The City will continue to replace existing vehicles with the most fuel-efficient models available. The City's police fleet accounts for over 60% of the City's vehicle gasoline consumption. Since 2005, the City's police fleet has been replaced with more fuel-efficient

vehicles, and the City will continue to replace vehicles with more fuel-efficient vehicles.

Sources:

U.S. Department of Energy. 2011. FuelEconomy.gov.

GO 9: Employee Commute

- ☑ Continue to reduce single-occupant employee commuting through trip reduction incentives.

2020 Reductions (MTCO2e): -50

City Costs: Low

Assumptions:

This measure assumes that the City will continue to offer employee incentives for utilizing alternative transportation options to commute to work.

Sources:

California Air Pollution Control Officers Association. 2010. "Quantifying Greenhouse Gas Mitigation Measures."

GO 10: Sustainability Coordinator

- ☐ Allocate or hire staff to implement CAP and energy programs.

Supporting Measure

City Costs: High

GO 11: Public Outreach and Education

Demonstrate the City's commitment to reducing GHG emissions using outreach about CAP program implementation.

Implementation:

- ☑ GO 11.1 Publish information on the City's climate action planning website about successful programs aimed at reducing GHG emissions.
- ☑ GO 11.2 Participate in Earth Day activities, the County's Energy-Efficiency Month, and other regional events to educate the community about City climate action planning.

Supporting Measure

City Costs: Low