EXECUTIVE SUMMARY

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The County of San Luis Obispo (County) recognizes that global climate change will have significant impacts locally and throughout California unless significant steps are taken to reduce greenhouse gas (GHG) emissions. This EnergyWise Plan (Plan) demonstrates the County's continued commitment to addressing the challenges of climate change by reducing local GHG emissions and preparing the county to adapt to a changing climate. This Plan outlines the County's approach to reducing GHG emissions through a number of goals, measures, and actions that provide a road map to achieving the County's GHG reduction target of 15% below baseline levels by 2020.

EnergyWise Plan Purpose & Scope

This EnergyWise Plan is required by the Conservation and Open Space Element (COSE) of the General Plan and is intended to facilitate the goals of the COSE, though implementation of the reduction measures contained in this plan will require action by the Board of Supervisors. This Plan builds upon the goals and strategies of the COSE to reduce local GHG emissions. It identifies how the County will achieve the GHG emissions reduction target of 15% below baseline levels by the year 2020 in addition to other energy efficiency, water conservation, and air quality goals identified in the COSE. This Plan will also assist the County's participation in the regional effort to implement land use and transportation measures to reduce regional greenhouse gas emissions from the transportation sector by 2035.

2006 Greenhouse Gas Inventory and Forecast

In May 2010, San Luis Obispo County adopted a greenhouse gas inventory (Inventory) as part of the Conservation and Open Space Element of the General Plan. The Inventory calculates municipal and community-wide emissions caused by activities in 2006, including transportation, waste, agriculture, energy, and aircraft-related activities. The Inventory establishes a baseline against which future changes in emissions can be measured and provides

The California Air Resources Board estimates that California's GHG emissions grew 15% percent between 1990 and 2005 and will grow an additional 15% by 2020. The State has recommended to local governments that for data and accuracy purposes, reducing GHG emissions 15% below baseline levels by 2020 would be the equivalent of reaching 1990 GHG emissions levels.

Top 5 GHG Reduction Strategies:

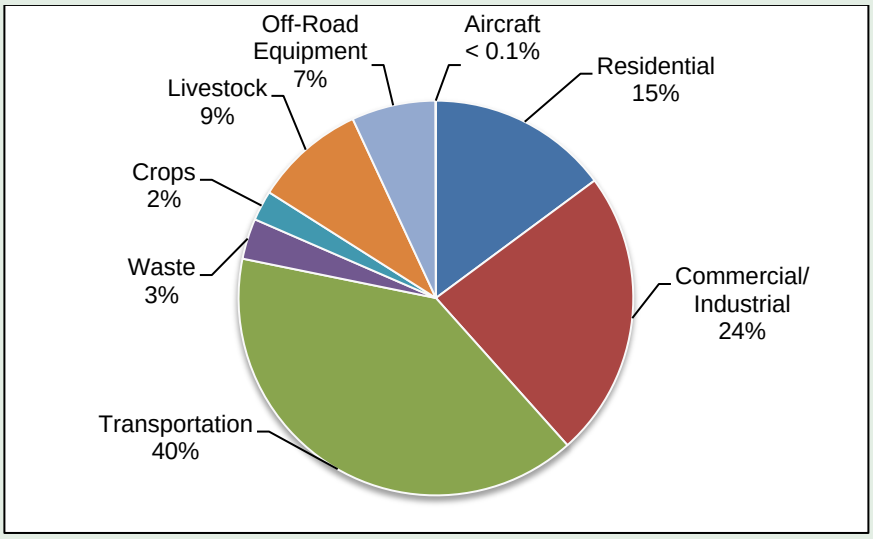
1. Countywide Energy Collaborative
2. Landfill Methane Capture
3. Energy Efficiency Financing
4. Parking Supply Limits
5. Building Energy Scores

an understanding of major sources of GHG emissions in the unincorporated county.

As part of the EnergyWise Plan development process, the 2010 Inventory was reviewed and updated. These updates incorporate new data, protocols, and best practices to ensure that this Plan is methodologically up to date.

The Inventory update found that the unincorporated San Luis Obispo community emitted 917,700 metric tons of carbon dioxide equivalent ($MTCO_2e$) in 2006. $MTCO_2e$ is a universal way to equalize the different potencies of the six greenhouse gas emissions in one comparable unit. Updated community-wide total emissions by sector are shown in **Figure ES-1.** On-road vehicles were the greatest contributor to the county's baseline emissions (40%). Commercial/industrial energy use and residential energy use were the next largest contributors, with 24% and 15% of overall emissions, respectively.

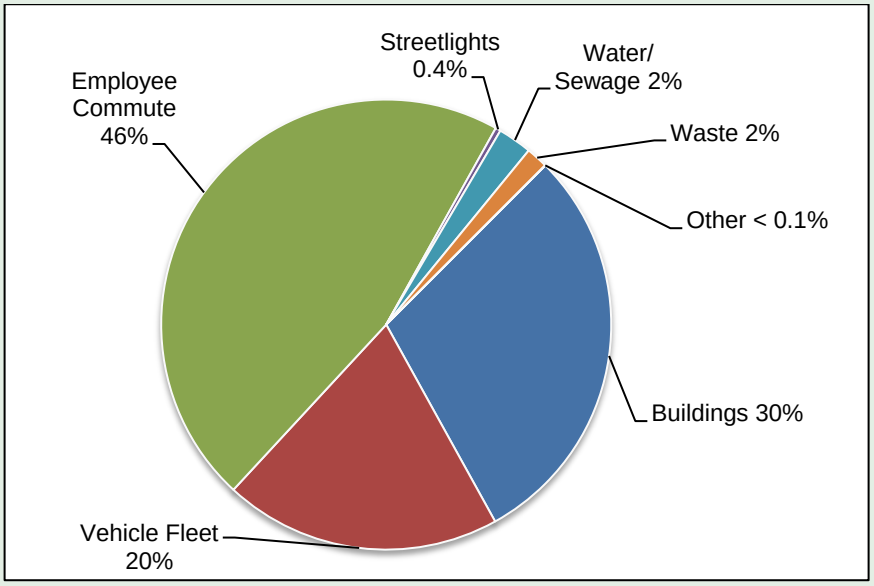
Figure ES-1. Community-Wide 2006 GHG Emissions



The Inventory also includes a separate assessment of GHG emissions from County activities. The County operations inventory with updated emissions sources provides the basis for developing the emissions reduction measures presented in this Plan. The inventory findings are presented in **Figure ES-2.**

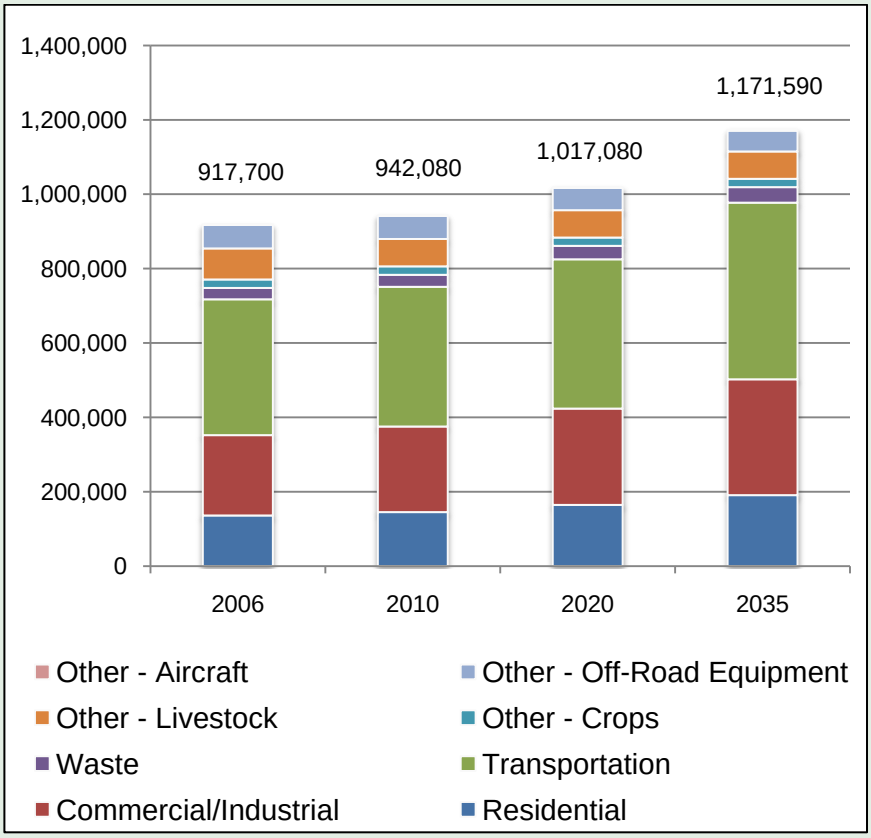
The primary contributors of GHG emissions are employee commute (46%), buildings (30%), and vehicle fleet (20%). Water/sewage (2%), waste (2%), streetlights (0.4%), and other (0.01%) make up the remaining GHG emissions from County operations. In 2006, GHG Emissions from County operations totaled 16,870 $MTCO_2e$.

Figure ES-2. County Operations 2006 GHG Emissions



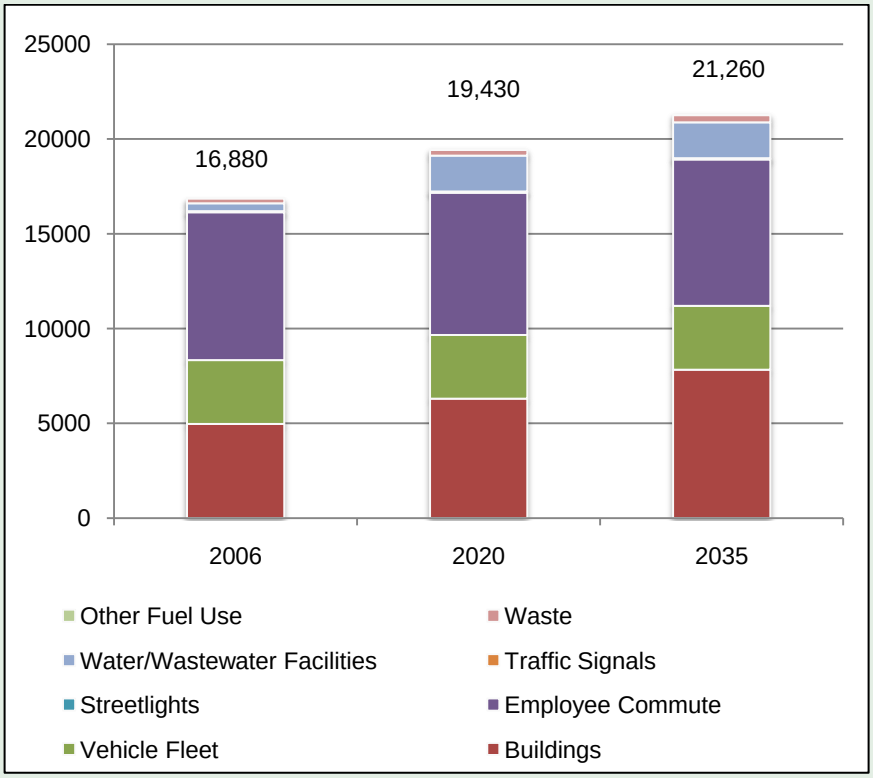
Using data from the updated 2006 baseline Inventory, the County created an estimate of how emissions will grow by 2020 and 2035 with the unincorporated county's expected population, household, and nonresidential growth. This estimate, also known as an emissions forecast or projection, demonstrates how community-wide emissions will continue to grow if regulatory or technical interventions are not put in place to reduce GHG emissions. The community-wide forecast is depicted in **Figure ES-3**.

Figure ES-3. Community-Wide GHG Emissions Forecast ($MTCO_2e$)



County government operations are more difficult to forecast by sector due to a lack of reasonable growth indicators. Without known growth indicators for each sector, the business-as-usual (BAU) projection reflects baseline year emissions through 2020 and 2035. The forecast, shown in **Figure ES-4**, reflects changes in energy and transportation sectors to show anticipated changes to energy use related to water and wastewater treatment and distribution and changes to the County's employment.

Figure ES-4. County Operations GHG Emissions Forecast



The County General Services Agency has retrofitted 25 County buildings through the Energy Watch Partnership resulting in savings of:

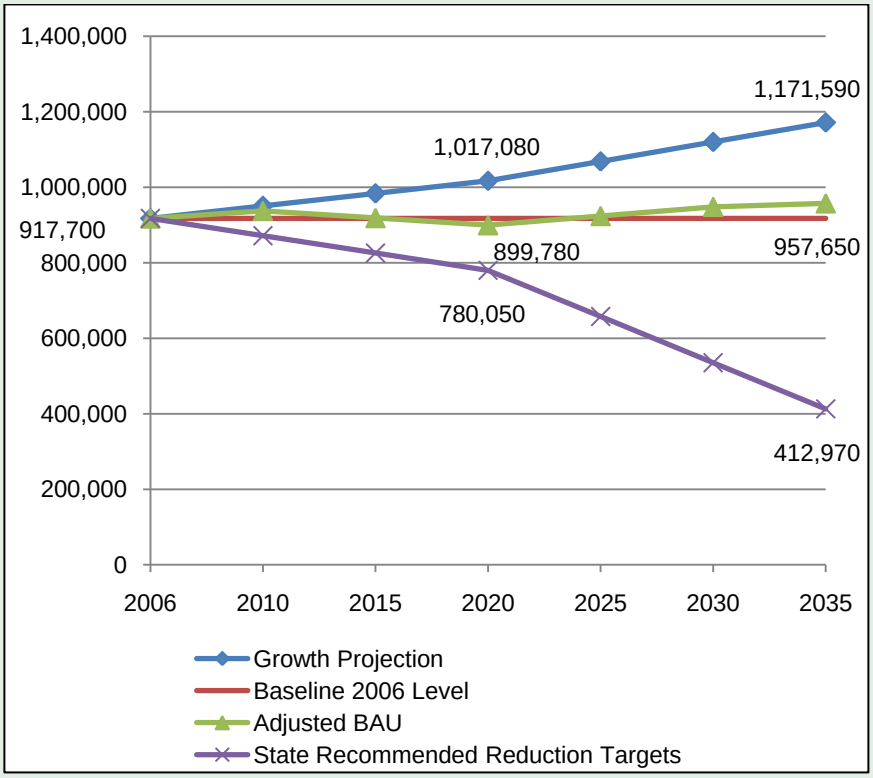
- 69,000 kWh per year
- $30,400 per year

Adjusted BAU Forecast

An adjusted business as usual (ABAU) utilizes the BAU forecast and incorporates State policies and programs that will affect local GHG emissions. The ABAU forecast accounts for state and federal actions such as mandated fuel efficiency standards, renewable electricity standards, California's green building code, CALGreen, and federal vehicle efficiency standards. Accounting for these actions provides a more accurate picture of future emissions growth and the responsibility and ability of local governments versus the state to reduce greenhouse gas emissions. The Adjusted BAU, shown in **Figure ES-5,** reduces emissions below 2006 baseline levels by 2020**.** The figure also shows the state-recommended reduction target of 15% below 2006 levels by 2020 and reductions continuing through 2035, consistent with Governor's Executive Order (EO) S-03-05 to reduce emissions by an additional 80% by 2050. The objective of this Plan is to bridge the gap between the

county's growth forecast and the state's recommended reduction targets.

Figure ES-5. Comparison of Forecast to Baseline and Reduction Target ($MTCO_2e$)



GHG Reduction Strategies

Community-Wide GHG Reduction Strategies

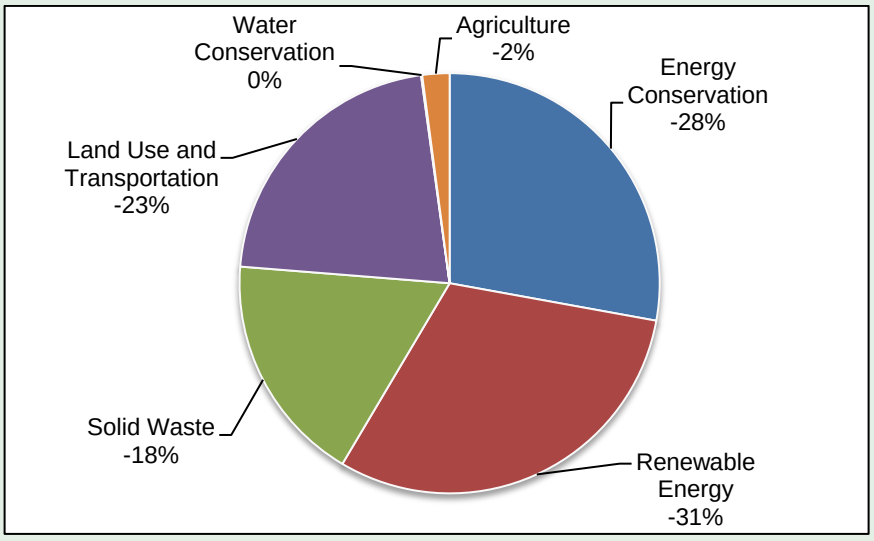
To achieve the community-wide GHG emissions reduction target of 15% below 2006 baseline levels by 2020, the County will need to implement a variety of GHG reduction measures. Reduction measure program topics include energy conservation, renewable energy, solid waste, land use and transportation, water conservation, and agriculture. The GHG emissions reductions from these strategies are summarized in **Table ES-1**.

Table ES-1. Community-Wide GHG Emissions Reduction Summary by Goal

Goal	2010 $MTCO_2e/yr$	2020 $MTCO_2e/yr$	2035 $MTCO_2e/yr$
Energy Conservation	-1,100	-37,500	-73,670
Renewable Energy	-450	-41,290	-57,920
Solid Waste	0	-23,880	-31,750
Land Use and Transportation	0	-29,020	-40,170
Water Conservation	-10	-120	-250
Agriculture	0	-2,810	-5,270
Total	-1,560	-134,620[1]	-209,030[1]

1. Due to rounding of decimals, the sum of all values may not equal the total.

Figure ES-6. 2020 Community-Wide GHG Emissions Reduction Summary by Goal



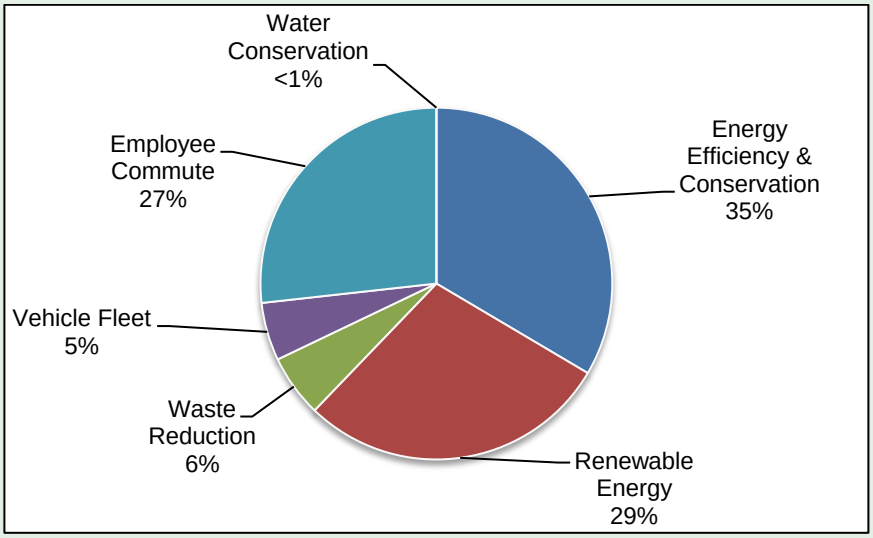
In addition to implementing strategies for reducing GHG emissions from community-wide activities, the County will implement strategies to reduce GHG emissions from County operations 15% below 2006 baseline levels by 2020. Reduction measure program topics include energy efficiency & conservation, renewable energy, waste reduction, vehicle fleet, employee commute, and water

conservation. The GHG emissions reductions from these strategies are summarized in **Table ES-2.**

Table ES-2. County Government Operations GHG Emissions Reduction Summary by Goal

	2010 $MTCO_2e/yr$	2020 $MTCO_2e/yr$	2035 $MTCO_2e/yr$
Energy Efficiency & Conservation	-90	-820	-1,360
Renewable Energy	-120	-700	-820
Waste Reduction	-10	-140	-270
Vehicle Fleet	-5	-120	-240
Employee Commute	-290	-660	-990
Water Conservation	n/a	n/a	n/a
Total Reductions	**-515**	**-2,440**	**-3,680**

Figure ES-7. County Government Operations 2020 GHG Emissions Reduction Summary by Goal



Adaptation

The County anticipates that some degree of climate change will occur regardless of existing and future GHG reduction and mitigation efforts. As a result, the County will need to understand the potential impacts of climate change and take steps to adapt to or manage potential changes to the local environment or socioeconomic system in an effort to reduce risks and increase resilience. Chapter 7 identifies the potential impacts that climate change may have in San Luis Obispo County and identifies options to address those impacts to protect the County's residents, economy, and ecosystems.

Implementation

The Implementation Program (Program) provides a strategy for action with specific measures and steps to achieve the identified reduction targets. The Program identifies responsible departments, potential costs to the County and community, cost savings, time frames for action, and the indicators that will be used to measure progress. The Program for community-wide measures notes the applicability of each measure to new or existing development and identifies the co-benefits that will occur in addition to reducing GHG emissions. The Program provides detailed matrices to identify the costs, savings, responsible department, and necessary actions required for the successful implementation of each measure.

Differences between adaptation strategies and mitigation measures

The IPCC Fourth Assessment Report defines mitigation and adaptation as follows:

Mitigation (Reduction Measures) – Implementing policies to reduce greenhouse gas emissions and enhance sinks.

Adaptation – Initiatives and measures to reduce the vulnerability of natural and human systems against actual or expected climate change effects.