

AGENDA
REGULAR MEETING OF THE CITY OF SUISUN CITY
PLANNING COMMISSION
7:00 P.M., DECEMBER 11, 2012

COUNCIL CHAMBERS
701 CIVIC CENTER BOULEVARD
SUISUN CITY, CALIFORNIA 94585

Next Resolution No. PC12-07

1. ROLL CALL:

Chairperson Clemente
Vice-Chair Wade
Commissioner Adeva
Commissioner Harris
Commissioner Holzwarth
Commissioner Mirador
Commissioner Ramos

2. AUDIENCE COMMUNICATIONS:

This is a time for public comments for items that are not listed on this agenda. Comments should be brief. If you have an item that will require extended discussion, please request the item be scheduled on a future agenda.

3. MINUTES:

Approval of September 25, 2012, Planning Commission Minutes.

4. GENERAL BUSINESS:

- A. Administrative Draft - Energy Chapter of the Climate Action Plan**
- B. A Resolution of the City of Suisun City Planning Commission Recommending City Council Adoption of a Complete Streets Policy**
 - Adoption of Resolution PC12-____ -

5. COMMUNICATION:

- A. Staff:**
- B. Commissioners:**
- C. Agenda Forecast**

6. ADJOURN.

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MINUTES
REGULAR MEETING OF THE CITY OF SUISUN CITY
PLANNING COMMISSION
7:00 P.M., SEPTEMBER 25, 2012

COUNCIL CHAMBERS
701 CIVIC CENTER BOULEVARD
SUISUN CITY, CALIFORNIA 94585

Next Resolution No. PC12-06

1. ROLL CALL:

Chairperson Clemente
Vice-Chair Wade
Commissioner Adeva
Commissioner Harris - vacation
Commissioner Holzwarth
Commissioner Mirador
Commissioner Ramos

4. MINUTES:

Commissioner Holzwarth moved to approve the July 24, 2012, Planning Commission Minutes. Commissioner Wade seconded the motion. Motion passed 6-0.

5. PUBLIC HEARINGS:

1014 Woodlark Court - John Kearns presented the staff report, providing a brief background stating that the current owners purchased the property at 1014 Woodlark Court with a functional water well in the rear yard that was housed within a 16' x 8' shed. He further indicated that the owners replaced the fence and the shed with a smaller shed and with the cut outs in the shed as required by the manufacturer. In order to provide shelter to the well, the shed was installed 8" from the fence line.

From Mr. Kearns conversation with County Environmental Health, he stated that it appeared that the well was installed before the County started tracking well installations. He indicated that it could very well have been there since before the subdivision was constructed in the 1970's.

In order for the Planning Commission to grant a variance, according to Section 18.72 "Variances" of the SCMC, the following findings must be made:

- A. Because of special circumstances applicable to subject property, including size, shape, topography, location or surroundings, the strict application of this title is found to deprive subject property of privileges enjoyed by other properties in the vicinity and under identical zone classification.
- B. The variance granted shall not constitute a grant of special privilege inconsistent with the limitations upon other properties in the vicinity and zoning district in which the subject property is situated.

Staff believes that the required findings can be made because:

- Not allowing the well to be sheltered could lead to deterioration and loss of integrity of the well and related equipment, along with other harmful conditions.
- Since the physical location of the well is within the required setback area, it follows that the shed or any shelter provided over the well must also be located in the setback area.

The property owner has a very unique situation, due to the existing placement of the well at the time of property purchase. Staff believes that this extenuating circumstance provides justification to meet the intent and purpose of the granting of a variance.

Chairperson Clemente opened the Public Hearing.

The Commission asked the owner, James Bjork, if the foundation of the storage shed was concrete, if run-off was an issue, and what the well was used for.

Mr. Bjork stated that the shed is not on concrete and that that ground was graded and compacted.

Mr. Kearns stated that during the site visit the grading of the site did not appear to create any run-off issues.

Mr. Bjork state that the well was used for irrigation purposes only.

Hearing no further comments Chairperson Clemente closed the Public Hearing.

Commissioner Ramos moved to approve PC12-06. Commissioner Wade seconded the motion. Motion passed 6-0.

2. AUDIENCE COMMUNICATIONS:

None.

3. PRESENTATIONS:

John Kearns introduced Bruce Brubaker, Associate Principal with the Planning Center (TPC)/Design Community & Environment (DCE) who was working in conjunction with staff rom Bay Area Economics (BAE). Mr. Brubaker gave a presentation on the Focus Program Technical Assistance Grant.

Mr. Brubaker's presentation included:

1. Development Feasibility Study
 - a. New Development to the PDA
 - i. Market analysis
 - ii. Identify near-term development sites
 - iii. Provide conceptual site plans
 - iv. Test sites and concepts with active mixed-use and downtown developers
2. Case study example of mixed –use projects
 - a. Market feasible
 - b. Context-sensitive
 - c. Achieve both PDA goals and City fiscal objected for increased tax revenues
3. Summary of Study Findings
 - a. Retail Demand – 1 specialty grocer, 1 drugstore, 2 to 4+ restaurants, and other small shops
 - b. Housing Demand – 280 to 1,000+ housing units
 - c. Active Senior Housing Demand – unique and walkable downtown site
 - i. Strong site for senior assisted living
 - d. Office Demand – 39,000 to 185,000 sf
 - e. Boutique Hotel Demand – small, attractive hotel,
 - f. Sites Analysis Findings
 - i. Identified 3 sites for further conceptual site planning and developer feedback
 - ii. Challenge of current parking requirements and retail fiscal policies constrain financial feasibility to developers

4. Developer Panel Recommendations

- a. Focus on waterfront site, considered as excellent development opportunity for mixed-use, hotel, and/or senior housing
- b. Leverage key city-owned parcel to create signature project
- c. Reinforce long-term citywide retail demand through PDA development strategy to create and build a downtown destination
- d. Adjust local policies to encourage projects with less parking, more pedestrian-orientation to create unique waterfront downtown identity
- e. Explore context sensitive mixed-use projects that create small-town downtown destinations and achieve PDA intensification and City fiscal goals

There was a brief discussion by the Commission, Staff and consultant regarding the presentation.

April Wooden thanked the consultants for their work and for their understanding of Suisun City's goals.

6. GENERAL BUSINESS: Action to be taken where appropriate.

A. None

7. COMMUNICATION:

A. Staff:

- Legislative Update

April Wooden gave a brief presentation regarding new legislation governing telecommunication systems. The new legislation determines the application timeline and process, as well as whether the application must be reviewed through a ministerial or discretionary process or Planning Commission review.

The Middle Class Tax Relief Act and Job Creation Act of 2012 Section 6409(a) (Act) requires that cities approve modifications of wireless facilities which do not substantially change the facilities' physical dimensions. She stated that the Act precludes regulation by local jurisdictions of matters covered in the Act in a manner similar to the Surface Transportation Act (STA) which applies to all interstate transportation in the United States and provides that anything that is related to the operation of a railroad is exempt from local jurisdiction.

John Kearns stated that the PDA implementation strategy would be on the Commission agenda sometime in the next few months.

April Wooden reminded the Commission of the Wal-Mart sign-raising on Thursday, September 27th at 1:30pm at the Wal-Mart site.

8. ADJOURN

There being no further business the meeting was adjourned at 8:21 pm.

Anita Skinner, Commission Secretary

AGENDA TRANSMITTAL

MEETING DATE: December 11, 2012

PLANNING COMMISSION AGENDA ITEM: Administrative Draft - Energy Chapter of the Climate Action Plan

ENVIRONMENTAL REVIEW: This action is non-binding and therefore is not considered a project as defined under CEQA. Environmental review will be required when the entire Climate Action Plan is brought forward for adoption.

BACKGROUND: On August 17, 2010 the City Council adopted a resolution approving the submittal of a grant application by the Solano Transportation Authority (STA) under the State of California Strategic Growth Council's *Sustainable Communities Planning Grant and Incentives Program*.

On July 13, 2011, the STA Board authorized STA staff to pursue funds from the California Strategic Growth Council (SGC) for the development of a multi-agency Climate Action Plan (CAP) and CAP Implementation Strategy, subject to endorsement from the Solano City County Coordinating Council (4Cs). Subsequently, Pacific Gas and Electric Company (PG&E) contacted STA and stated that funds were available to assist STA in the development of the portion of the CAP focused on energy production and use, i.e. the Energy Chapter of the CAP (ECCAP). The ECCAP will cover the cities of Dixon, Fairfield, Rio Vista, and Suisun City; the City of Vacaville is developing a CAP as part of its General Plan update, and is coordinating its CAP contents with the STA-led effort. The cities of Benicia and Vallejo, as well as Solano County, have already adopted a CAP for these jurisdictions.

The County and STA are working together to develop the remaining non-energy chapters of the CAP, as well as an integrated CAP Implementation Plan, funded by a state Strategic Growth Council (SGC) grant. The ECCAPs will likely not move forward for City Council consideration until the SGC documents are also ready for consideration and adoption.

On November 8, 2012, the 4Cs approved release of the Administrative Draft ECCAPs for the cities of Dixon, Fairfield, Rio Vista and Suisun City. The 4Cs has requested that the Planning Commission of each of these cities hold a hearing and solicit public comment on the Administrative Draft ECCAPs.

Assembly Bill (AB) 32, the California Global Warming Solutions Act, was signed into law in 2006. This legislation focuses on achieving a reduction in the emissions of greenhouse gasses (GHG) from a broad base of emission sources. Senate Bill 375 (SB 375), enacted in 2008, is designed to help implement AB 32 by strengthening the linkage between land use and transportation planning at a regional level.

PREPARED BY:

John Kearns, Associate Planner

REVIEWED/APPROVED BY:

April Wooden, Community Development Director

STAFF REPORT: One of the initial steps in reducing a community’s GHG emissions is to develop a GHG emission inventory. All of the communities in Solano County have GHG inventories which have been developed using similar base years, measurements, and classification systems.

Once a GHG inventory is completed, the next step in the process of reducing emissions is adoption of a Climate Action Plan (CAP). Solano County and the Cities of Benicia and Vallejo have developed CAPs. The Benicia CAP was adopted in 2009, and the City is endeavoring to implement the policies it contains. The County plan was adopted in 2010 and the City of Vallejo plan was adopted in March 2012. The City of Vacaville is developing a CAP as part of its current General Plan update.

The cities of Dixon, Fairfield, Rio Vista and Suisun City are working cooperatively to develop their own CAPs. This effort is receiving general policy guidance from the Solano City County Coordinating Council – the 7 Mayors and the 5 County Supervisors. Amongst the reasons to work cooperatively in the development of the CAPs, and on a further CAP implementation plan that will involve all 7 cities and the County, are:

- To minimize the administrative burden of developing CAPs.
- To maximize the efficiency of future implementation actions by allowing multiple jurisdictions to work together on such activities as seeking grants and administering programs.
- To ensure that no jurisdiction in Solano County is put at a competitive disadvantage in regards to economic development.

While this effort does try to maximize the common elements in each community’s CAP, the documents are not expected to be identical. Instead, they will be customized based on each community’s unique characteristics. For example, the cities in the eastern portion of the county will benefit from “cool roofs” that maximize the reflection of summer heat (and thereby reduce cooling costs), while cities along the western edge, where the climate is cooler, will not see a substantial benefit from such a program.

STA’s ECCAP consultant, AECOM, met with public works, planning, and building staffs from the involved cities, and gathered energy use data from PG&E, in order to develop a profile of current and projected energy use. Measures that are already in place or that may be considered in order to reduce GHG emissions from energy production and consumption were also discussed with city staff. In addition to one-on-one meetings with city staff, monthly meetings of the ECCAP Technical Advisory Committee (TAC) were held. TAC members include city staff from each participating city, as well as STA staff, representatives from local business, the Solano College Small Business Development Center, and the Solano Economic Development Corporation.

The Administrative Draft ECCAPs utilize information regarding existing and projected emissions, potential emission reduction strategies and the impact of these strategies into a cohesive narrative which is customized for each city. While each Administrative Draft ECCAP is focused on a specific community, all share common organization. Where possible, the recommended energy-related GHG emission reduction measures are also common to all of these

cities. Having common reduction measures will reduce the potential for one community to be at a competitive disadvantage due to its ECCAP measures, and will allow for more efficient implementation of GHG reduction measures by allowing a sharing of resources. The Draft ECCAP for Suisun City is included as Attachment 1.

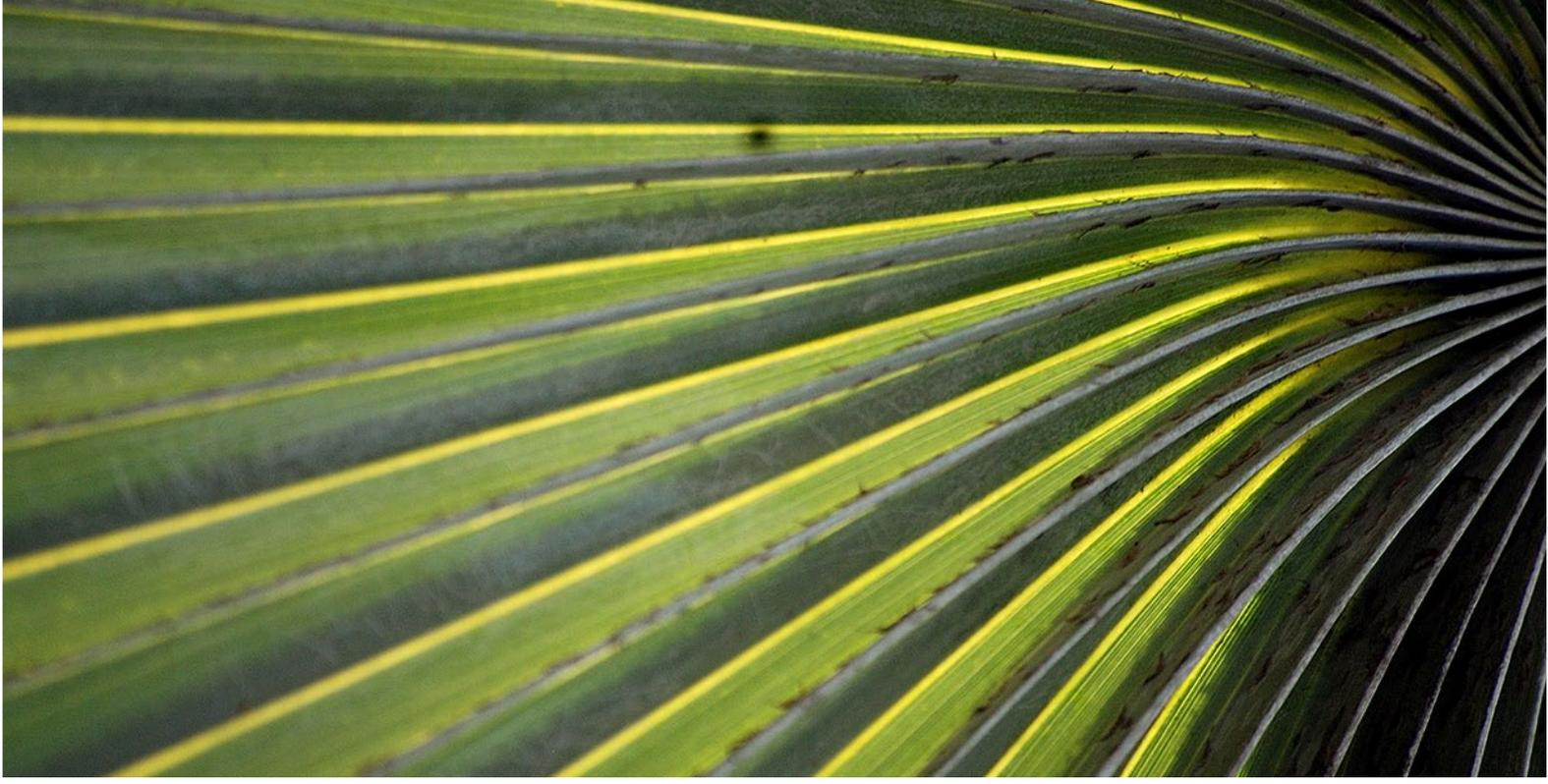
Due to restrictions on PG&E funding, by December 31, 2012, each of the participating cities is required to have an ECCAP document that is ready for City Council consideration. It is not required, however, that the Council holds a public hearing and considers the EECAP by a date certain.

Since it will be more effective if the City Council hearing includes measures from both the ECCAP and the SGC-funded work, staff is not intending to forward the EECAP to the Council prior to the completion of the SGC-funded work. The Planning Commission is asked to review the Administrative Draft ECCAP, provide comments to staff, and by means of a motion, second, and voice vote, authorize staff to forward the EECAP to the City Council when the SGC-funded work has been completed, reviewed by Planning Commission, and recommended for approval to City Council. City Council action on the ECCAP will be coordinated so that the entire CAP can be considered at a single hearing. The final CAP, which will include GHG emissions from transportation, the single highest contributor to GHGs, is expected to be ready for consideration in late 2013 or early 2014.

RECOMMENDATION: That the Planning Commission review the Administrative Draft ECCAP, provide comments to staff, and by means of a motion, second, and voice vote, authorize staff to forward the EECAP to the City Council when the SGC-funded work has been completed, reviewed by Planning Commission, and recommended for approval to City Council.

ATTACHMENTS:

1. Administrative Draft ECCCAP



City of Suisun City Climate Action Plan

Public Review Draft
Energy Efficiency Plan
November 2012



City of Suisun City **Climate Action Plan**

Public Review Draft
Energy Efficiency Plan
November 2012

Prepared for:

City of Suisun City

Consultant to the City:



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CHAPTER 1

INTRODUCTION: PLANNING FOR CLIMATE CHANGE



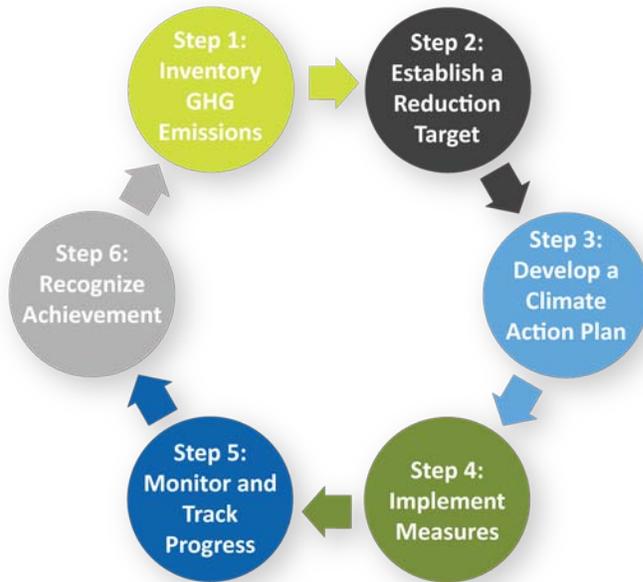
Greenhouse gas (GHG) emissions and resulting climate change impacts are considered by the state of California as a major global challenge for the 21st century. According to most climatologists the planet is starting to experience shifts in climate patterns and increased frequency of extreme weather events at both the global and local levels. At a statewide level, these impacts include reduced snow pack in the Sierra Nevada affecting California water supplies; rising sea levels threatening cities along the coast, San Francisco Bay, and Sacramento River; decreasing air quality affecting public health, particularly in the Central Valley; and, rising temperatures impacting the state's agricultural industry, including Solano County farmers and agricultural businesses.

This plan seeks to address these impacts by increasing local energy independence, improving building energy and water efficiency, and establishing a regional framework for collaboration. This framework would address energy use issues to impact climate change and reduce energy use in a manner that provides cost efficiencies in program implementation. For example, energy costs impact both household and business budgets on a daily basis. Increases in the efficiency of energy use can quickly pay for themselves, helping families stay in their homes and businesses stay in their communities. The emphasis will be on GHG emission reductions, with the understanding that steps taken to reduce GHG emissions will also improve energy efficiency while saving money.

What is a CAP?

A CAP (Climate Action Plan) is a tool that many cities in California are using to quantify their share of statewide GHG emissions and establish action steps toward achieving a local emissions reduction target. A CAP provides a set of strategies intended to guide community efforts to reduce GHG emissions, typically through a combination of statewide and local actions. Figure 1.1 shows the typical steps included in the CAP process.

Figure 1.1 – Steps in the CAP Process



A CAP contains community-specific GHG emission inventories and forecasts to establish a starting point and probable future emissions levels if no action is taken (Step 1). A reduction target is then defined to provide an aspirational goal for improvement (Step 2). Emission reduction measures and implementation programs are then written to help the city meet its goal by achieving the reduction target (Step 3). Upon adoption of the CAP, the jurisdiction takes action to implement the reduction measures (Step 4), monitor their progress towards achievement of the reduction target (Step 5), then evaluate effectiveness, celebrate their successes, and use the monitoring results to make adjustments to CAP measures to improve performance (Step 6). This CAP represents the City’s progress on Steps 1-3.

Purpose

The climate action planning process seeks to identify measures which are informed by the goals, values and priorities of the community, while at the same time contributing to the State’s climate protection efforts and complying with the local Air Quality District’s efficiency standards for GHG emissions. In addition, the climate action plan measures are intended to enhance community resilience by increasing local energy independence,

improving building energy and water efficiency, and establishing a regional framework for collaboration on climate change issues. It is anticipated there will be California Environmental Quality Act (CEQA) review streamlining benefits for development projects occurring within a jurisdiction that has an adopted CAP.

Process

The City of Suisun City prepared this CAP as part of a Solano County regional-effort, involving the cities of Dixon, Rio Vista, and Fairfield. The cities of Benicia, Vallejo, Vacaville, and the County of Solano have adopted CAPs. The intent of preparing this CAP through a regional collaborative process was to establish a common list of reduction measures so that no one jurisdiction would become economically disadvantaged through its CAP actions, and to find collaborative opportunities for plan implementation. This CAP describes how the City of Suisun City (Suisun City) will achieve GHG reductions through local actions that contribute to the statewide GHG emissions reduction target defined in Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006, CEQA guidelines, and other State guidance.

PG&E GREEN COMMUNITIES PROGRAM

The four participating cities named above, along with the City of Vacaville, received funding through the Pacific Gas & Electric Company's (PG&E's) Green Communities Program to prepare energy efficiency climate action plans. These plans included many components of a full CAP, including evaluation of baseline emissions, future energy use forecasts, target setting, and the development of energy efficiency measures. The resulting information prepared during that effort has been included throughout this CAP.

STRATEGIC GROWTH COUNCIL PLANNING GRANT

The cities of Suisun City, Rio Vista, and Fairfield also received funding from the Strategic Growth Council (SGC) to develop the remaining non energy-related components of a CAP. This included preparing emissions forecasts for the transportation, solid waste, wastewater, water, and off-road mobile sources sectors, as well as development of reduction measures targeting these sectors. This work has been combined with the energy efficiency work mentioned above to create a comprehensive CAP.

The participating cities each developed a customized CAP, relevant to their community's specific context, and have reached out to residents and businesses for public feedback and participation.

Context

Many cities in California are using CAPs to quantify their share of statewide GHG emissions and establish action steps toward achieving a local emissions reduction target. CAPs typically address emissions targets through reduced dependency on fossil fuels and nonrenewable energy sources, and through increases in the efficient use of the energy that is consumed. CAPs also provide a way to connect climate change

mitigation (GHG reduction) to climate adaptation, community resilience, and broader community goals.

In Suisun City, most GHG emissions come from energy used in buildings and gasoline burned in motor vehicles, with water and waste related emissions contributing relatively smaller proportions. Suisun City's CAP examines the communitywide activities that result in GHG emissions and establishes strategies that help reduce those emissions in future and existing development through both voluntary and mandatory actions.

Many of the strategies included in this plan, in addition to reducing GHGs, will also help make Suisun City a more attractive place to live – lowering energy and water bills through conservation, improving bike and pedestrian facilities, improving air quality, and reducing waste generation to extend the lifetime of local landfills. See the section on Benefits of Addressing GHG Emissions below.

Scope and Content of the Climate Action Plan

The CAP comprises four chapters: 1) Introduction: Planning for Climate Change; 2) Baseline Emissions Inventory, Forecasts, and Targets; 3) Emissions Reduction Measures; and 4) Benchmarks and Implementation. Appendices A through C provide additional detail on topics covered within the plan. The contents of each chapter and appendix are briefly described below:

- + **Chapter 1, Introduction: Planning for Climate Change**, describes the City's rationale for reducing GHG emissions, as well as the goals of the CAP to comply with local Air Quality Management District guidelines, as applicable. This chapter provides an overview of the topics covered in the CAP, presents conventional climate change science findings, and describes statewide actions to address climate change. This chapter also introduces the CAP's relationship to General Plan Environmental Impact Reports (EIRs), and its ability to enable a CEQA tool known as "tiering" to allow consistent future discretionary development projects to skip certain steps in the traditional CEQA process.
- + **Chapter 2, Baseline Emissions Inventory and Forecast-Inventories, Projections and Targets**, outlines key steps taken to develop the CAP, including the 2005 baseline GHG inventory, projecting future emissions in 2020 and 2035, setting a communitywide GHG reduction target for 2020 and a long-range target for 2035. This chapter also describes the emissions gap between the reduction target and statewide reductions, as well as the local reductions attributable to implementation of statewide climate change policy.
- + **Chapter 3, Emissions Reduction Measures**, addresses five main reduction strategies: energy, land use and transportation, water conservation, waste reduction, and municipal operations. The CAP provides a summary of projected reductions and a description of the reduction strategy development process. The CAP identifies the following for each reduction strategy: key elements, existing programs and accomplishments, implementation actions, performance metrics against which to measure success, and estimated GHG reductions in 2020 and 2030.

- + **Chapter 4, Benchmarks and Implementation**, describes the process to monitor the City’s progress toward achieving their GHG reduction target. This chapter identifies monitoring procedures, plan update processes and other steps to ensure successful implementation.
- + **Appendix A – BAAQMD Qualification Standards** describes how the CAP conforms to BAAQMD guidelines.
- + **Appendix B – Emissions Inventory Methodology** provides technical description of methods for the 2005 emission inventories and 2020 and 2030 projections.
- + **Appendix C – Target Setting Rationale** provides background information that describes how the 2020 and 2035 reduction targets were selected.
- + **Appendix D – Emissions Reduction Quantification Methodology** provides assumptions used to determine GHG emission reductions associated with primary CAP measures.
- + **Appendix E – Economic Analysis** presents documentation to support the measure implementation cost ranges included in Chapter 3.

Climate Change Science

The United Nations International Panel on Climate Change (IPCC), defines “climate change” as “a change in the state of the climate that can be identified (e.g. using statistical tests) by changes in the mean and/or the variability of its properties, and that persists for an extended period, typically decades or longer.”ⁱ The properties of GHGs are such that they retain heat in the atmosphere, which would otherwise escape to space. GHGs accumulate in the atmosphere when they are emitted faster than they can be naturally removed, and that accumulation prompts changes in the climate system. Once emitted into the atmosphere, GHGs influence the Earth’s energy balance for a period of decades to centuries.^{ii iii}

Trend projections indicate that atmospheric concentrations of GHG emissions will continue to increase throughout this century. If these projections become reality, climate change will threaten our economic well-being, public health, and environment.

California has an advantage in its scientific understanding of climate change. A solid body of vital data is available to assist state and local leaders to better understand how climate change is affecting us now, what is in store ahead and what we can do about it. State-sponsored research has played a major role in recent advances in our understanding of the potential impacts of climate change on California. A first assessment, published in 2006, made clear that the level of impacts is a function of global emissions of greenhouse gases and that lower emissions can significantly reduce those impacts.^{iv} The third and most recent publication, The 2012 Vulnerability and Adaptation Study, explores local and statewide vulnerabilities to climate change, highlighting opportunities for taking concrete actions to reduce climate change impacts.^v

The California legislature passed legislation (addressed below) based upon the findings of the IPCC, the U.S. Global Change Research Program, and the National Research Council of the U.S. National Academy of Sciences, together representing the most

comprehensive, advanced, and thoroughly reviewed documents on the science of climate change. The development of CAPs in California in general, and in Solano County specifically, are based upon the actions of the California legislature and its reliance on these findings. For further information on Climate Science, please visit the California Climate Change Portal at <http://www.climatechange.ca.gov/>.

BENEFITS OF ADDRESSING GHG EMISSIONS

Planning efforts intended to reduce GHG emissions through resource efficiency and conservation measures often have multiple co-benefits as well that will improve the local quality of life. While some co-benefits are qualitative, others are quantifiable improvements over current conditions.

Although the following list is in no way exhaustive of the myriad co-benefits related to climate action planning, this plan references them to illustrate the overlapping benefits of various CAP measures. Overall, these co-benefits:

- + Strengthen local economic development (e.g., CEQA streamlining/tiering, transparent development requirements)
- + Demonstrate regional sustainability leadership
- + Improve neighborhood experience
- + Support climate change adaptation strategies

Co-benefits that are applicable to specific measures are listed. The following list uses icons that will be shown with their related CAP measures in Chapter 3:

-  Improves air quality
-  Reduces energy use
-  Promotes regional smart growth
-  Reduces water use; thus extending community supply
-  Improves water quality; reduces storm water run-off
-  Improves local energy independence
-  Increases natural habitat
-  Reduces heat island effect
-  Improves public health
-  Creates jobs
-  Reduces waste
-  Provides long-term savings to residents

California Climate Change Actions

Suisun City's strategy for climate protection, as one of eight local plans in the Solano County regional climate action planning effort, must be set within the context of the Bay Area and the State, where much of the momentum for local action in the United States originates.

California has long been a sustainability leader, as illustrated by Governor Schwarzenegger signing Executive Order (EO) S-3-05 in 2005. EO S-3-05 recognizes California's vulnerability to a reduced snowpack, exacerbation of air quality problems, and potential sea-level rise due to a changing climate. To address these concerns, the governor established targets to reduce statewide GHG emissions to 2000 levels by 2010, to 1990 levels by 2020, and to 80% below 1990 levels by 2050.

In 2006, California became the first State in the country to adopt a statewide GHG reduction target through AB 32. This law codifies the EO S-3-05 requirement to reduce statewide emissions to 1990 levels by 2020. AB 32 resulted in the 2008 adoption by the California Air Resources Board (ARB) of a *Climate Change Scoping Plan* (Scoping Plan), outlining the State's plan to achieve emission reductions through a mixture of direct regulations, alternative compliance mechanisms, different types of incentives, voluntary actions, market based mechanisms, and funding. The Scoping Plan addresses similar areas to those contained in this CAP, including transportation, building energy efficiency, water conservation, waste reduction, and green infrastructure.

AB 32 engendered several companion laws that can assist Suisun City in reducing communitywide GHG emissions. These legislative actions and regulations are referred to as statewide actions throughout this plan, and represent a significant source of estimated GHG reductions. Suisun City estimated the GHG emission reductions associated with:

- + the Renewable Portfolio Standard (RPS),
- + AB 1109,
- + 2013 California Title 24,
- + AB 1493,
- + EO-S-1-07, and
- + Vehicle efficiency regulations.

As the regulatory framework surrounding AB 32 grows, it may be possible to evaluate a wider range of statewide reductions.

[RENEWABLE PORTFOLIO STANDARD](#)

SB 1078, SB 107, EO-S-14-08, and SB X1-2 have established increasingly stringent Renewable Portfolio Standard (RPS) requirements for California utilities. RPS-eligible energy sources include wind, solar, geothermal, biomass, and small-scale hydro.

- o **SB 1078** required investor-owned utilities to provide at least 20% of their electricity from renewable resources by 2020.
- o **SB 107** accelerated the SB 1078 timeframe to take effect in 2010.

- **EO-S-14-08** increased the RPS further to 33% by 2020. PG&E, Suisun City's electricity provider, delivered 12.1% of its electricity from eligible renewable sources in 2005 and 19% in 2011.
- **SB X1-2** codified the 33% RPS by 2020 requirement established by EO-S-14-08.

[AB 1109 – LIGHTING EFFICIENCY](#)

AB 1109 was signed into law in 2007. The California Lighting Efficiency and Toxics Reduction Act requires the California Energy Commission to adopt energy efficiency standards for all general purpose lights, reducing lighting energy usage in indoor residences and state facilities by no less than 50%, by 2018, as well as require a 25% reduction in commercial facilities by that same date. To achieve these efficiency levels, the California Energy Commission applied its existing appliance efficiency standards to include lighting products, as well as require minimum lumen/watt standards for different categories of lighting products. In addition, the bill prohibits the manufacturing for sale or the sale of certain general purpose lights that contain hazardous substances.

[CALIFORNIA TITLE 24](#)

Title 24 of the California Code of Regulations dictates how new buildings and major remodels are constructed in California. Title 24, Part 6 is a component of Title 24 that details energy efficiency standards for residential and non-residential development. It is updated on approximately a three-year cycle. The State will be increasing building energy conservation requirements through adoption of the [2013 Title 24 standards](#), which will go into effect beginning in 2014. It is estimated that these revisions to the current 2008 Title 24 standards will result in energy consumption reductions of 25% over the current standards.

[AB 1493 – PAVLEY I AND II](#)

AB 1493, California's mobile-source GHG emissions regulations for passenger vehicles, or California Clean Car Standards, was signed into law in 2002. AB 1493 requires ARB to develop and adopt regulations that reduce GHG emissions from passenger vehicles, light-duty trucks, and other non-commercial vehicles for personal transportation. In 2004, ARB approved amendments to the California Code of Regulations adding GHG emissions standards to California's existing standards for motor vehicle emissions.

[EO-S-1-07 – THE LOW CARBON FUEL STANDARD](#)

EO-S-01-07 reduces the carbon intensity of California's transportation fuels by at least 10% by 2020. The Low Carbon Fuel Standard (LCFS) is a performance standard with flexible compliance mechanisms that incentivizes the development of a diverse set of clean, low-carbon transportation fuel options to reduce GHG emissions.

VEHICLE EFFICIENCY REGULATIONS

ARB has adopted several regulations to reduce emissions through improved vehicle efficiency that will have local GHG emission reduction benefits in Suisun City. The following two regulations were quantified and included in as part of this CAP.

[TIRE INFLATION REGULATION](#)

On September 1, 2010, ARB's Tire Pressure Regulation took effect. The purpose of this regulation is to reduce GHG emissions from vehicles operating with under-inflated tires by inflating them to the recommended tire pressure rating. The regulation applies to

vehicles with a gross vehicle weight rating (GVWR) of 10,000 pounds or less. Under this regulation, automotive service providers must meet the following requirements:

Check and inflate each vehicle's tires to the recommended tire pressure rating, with air or nitrogen, as appropriate, at the time of performing any automotive maintenance or repair service.

- + Indicate on the vehicle service invoice that a tire inflation service was completed and the tire pressure measurements after the service were performed.
- + Perform the tire pressure service using a tire pressure gauge with a total permissible error no greater than + two (2) pounds per square inch (psi).
- + Have access to a tire inflation reference that is current within three years of publication.
- + Keep a copy of the service invoice for a minimum of three years, and make the vehicle service invoice available to the ARB, or its authorized representative upon request.

HEAVY-DUTY VEHICLE GHG EMISSION REDUCTION (AERODYNAMIC EFFICIENCY)

This regulation requires existing trucks/trailers to be retrofitted with the best available technology and/or ARB-approved technology to increase vehicle aerodynamics and fuel efficiency that will result in GHG reductions. This measure has been identified as a Discrete Early Action in the Scoping Plan, which means it must be enforceable beginning in 2010. Technologies that reduce GHG emissions and improve the fuel efficiency of trucks may include devices that reduce aerodynamic drag and rolling resistance. These requirements apply to both California-registered trucks and out-of-state registered trucks that travel to California.

SB 7x

SB 7x requires the state to achieve a 20% reduction in urban per capita water use by December 31, 2020. The state is required to make incremental progress toward this goal by reducing per capita water use by at least 10% on or before December 31, 2015. SB 7x requires each urban retail water supplier to develop both long-term urban water use targets and an interim urban water use target. SB 7x also creates a framework for future planning and actions for urban and agricultural users to reduce per capita water consumption 20% by 2020.

Relationship to the General Plan

Whether by local desire, guidance from the State of California, or both, more and more cities and counties are addressing climate change in their general plans and including policies and programs that have a co-benefit of reducing GHG emissions. The City's policy commitment includes encouraging higher density, mixed-use and infill development in appropriate locations, energy efficiency, and renewable energy development that contribute to GHG reduction strategies contained in the CAP. Since GHG emissions are a cross-cutting issue addressed by many General Plan elements, the CAP as a whole is generally considered an implementation measure for the General Plan. This structure allows the City to update the CAP on an ongoing, as-needed basis to

ensure that the City's climate protection efforts reflect both current legislation and emerging best practices.

In addition, several state agencies have provided guidance and case studies for local governments to address climate change in their general plans. For example:

- + Since 2008, the California Attorney General's office has provided guidance to local government on addressing climate change and greenhouse gas reduction through general plan policies.
- + The California Office of Planning and Research (OPR) is preparing a 2013 update to the state's *General Plan Guidelines* that will include guidance for GHG emissions reduction and climate adaptation.
- + The California Natural Resources Agency has released a Climate Adaptation Policy Guide for local governments.
- + The California Department of Housing and Community Development has released a guidance document on general plan housing elements policies and programs addressing climate change with case study examples.
- + The Office of Planning and Research prepared a guidance documents for addressing complete streets in general plans as required by AB 1358.

Relationship to the California Environmental Quality Act

Local governments may prepare a Plan for Reduction of Greenhouse Gases that is consistent with AB 32 goals. By preparing such a plan, the city can streamline CEQA review of subsequent plans and projects consistent with the GHG reduction strategies and target in the plan. To meet the standards of a qualified GHG reduction plan, Suisun City's CAP must achieve the following criteria (which parallel and elaborate upon criteria established in State CEQA Guidelines Section 15183.5[b][1]):

- + Completing a baseline emissions inventory and projecting future emissions
- + Identifying a community-wide reduction target
- + Preparing a CAP to identify strategies and measures to meet the reduction target
- + Identifying targets and reduction strategies in the General Plan and evaluating the environmental impacts of the CAP in the General Plan EIR
- + Monitoring effectiveness of reduction measures and adapting the plan to changing conditions
- + Adopting the CAP in a public process following environmental review

This approach allows jurisdictions to analyze and mitigate the significant effects of GHGs at a programmatic level, by adopting a plan for the reduction of GHG emissions. Later, as individual projects are proposed, project-specific environmental documents may tier

from and/or incorporate by reference that existing programmatic review in their cumulative impacts analysis. Project-specific environmental documents prepared for projects consistent with the General Plan and CAP may rely on the programmatic analysis of GHGs contained in an EIR that would be certified for the City's future General Plan and CAP. Chapter 4 provides a discussion of the criteria and process the City will use to determine if a future project is consistent with the CAP.

A project-specific environmental document that relies on this CAP for its cumulative impacts analysis must identify specific CAP measures applicable to the project, and how the project incorporates the measures. If the measures are not otherwise binding and enforceable, they must be incorporated as mitigation measures applicable to the project. If substantial evidence indicates that the GHG emissions of a proposed project may be cumulatively considerable, notwithstanding the project's compliance with specific measures in this CAP, an EIR must be prepared for the project.

QUALIFIED GREENHOUSE GAS REDUCTION STRATEGY

BAAQMD encourages such planning efforts and recognizes that careful early planning by local agencies is invaluable to achieving the state's GHG reduction goals. If a project is consistent with an adopted qualified GHG Reduction Strategy that addresses the project's GHG emissions, it can be presumed that the project will not have significant GHG emissions under CEQA. This CAP meets the definition of a Plan for Reduction of Greenhouse Gases under CEQA. Appendix A provides a discussion regarding how the CAP also meets BAAQMD's Plan Level Guidance (Section 4.3 of the Air District's CEQA Guidelines) for the content of a "Qualified GHG Reduction Strategy" that is consistent with AB 32 goals and CEQA Guidelines relating to GHGs. This guidance is important if a city or county desires to use a climate action plan to support tiering of future development projects for purposes of CEQA review of GHG impacts.

Notes

ⁱ Intergovernmental Panel on Climate Change. (2007). Climate Change 2007: Synthesis Report. Retrieved from: http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr.pdf

ⁱⁱ 74 Fed. Reg. 66514

ⁱⁱⁱ Section retrieved from https://en.wikipedia.org/wiki/Regulation_of_greenhouse_gases_under_the_Clean_Air_Act; October 2012

^{iv} Our Changing Climate 2012. Vulnerability & Adaptation to the Increasing Risks from Climate Change in California. A Summary Report on the Third Assessment from the Climate Change Center. July 2012. Page 1. Retrieved from: <http://www.energy.ca.gov/2012publications/CEC-500-2012-007/CEC-500-2012-007.pdf>

^v Retrieved from <http://www.climatechange.ca.gov/>; October 2012

CHAPTER 2

EMISSIONS INVENTORY, FORECASTS + TARGETS

2

This chapter examines current and projected communitywide greenhouse gas (GHG) emissions for the City of Suisun City. It outlines key steps taken to develop the CAP, including preparing the 2005 baseline GHG inventory, forecasting future emissions for 2020 and 2035, and setting a communitywide GHG reduction target for 2020 and a long-range target for 2035. Future emissions are forecast assuming no action is taken to reduce emission levels. These future emissions are based on projected activity data for each sector of the emissions inventory. This chapter also describes the emissions gap between the reduction targets and statewide reductions.

Baseline Inventory (2005)

The purpose of a baseline inventory is to provide a snapshot of communitywide GHG emissions in a given year. Even though AB 32 refers to 1990 levels as baseline, the State has determined 2005 as a viable baseline year, as long as it is on the same trajectory. The City developed a baseline emissions inventory for the 2005 operational year as part of a Countywide climate action planning effort in 2011. The City of Suisun City's inventory was calculated to be consistent with BAAQMD's GHG Plan Level Quantification Guidance.

The inventory addresses the following emission sectors: energy, transportation, solid waste, off-road equipment, wastewater, and potable water.

The baseline emissions inventory was prepared using energy consumption data from Pacific Gas and Electric Company (PG&E), solid waste data from city staff and local landfills, and vehicle travel data from the new Metropolitan Transportation Commission activity-based travel model. This empirical data was used along with emission factors to estimate Suisun City's communitywide emissions. See Appendix A for the emissions inventory methodology.

The baseline emissions inventory identified a communitywide emissions total of 120,286 metric tons of carbon dioxide equivalent emissions (MT CO₂e) in 2005. As shown in Figure 2.1 and Table 2.1, transportation is the largest contributor of GHG emissions in the city, with energy use contributing a majority of the remainder. The energy and transportation sectors account for approximately 82% of total emissions. Solid waste emissions provide around 8% of the inventory, while off-road sources and wastewater treatment provide around 9%. Potable water is the smallest contributor, making up the remaining 1% of the inventory.

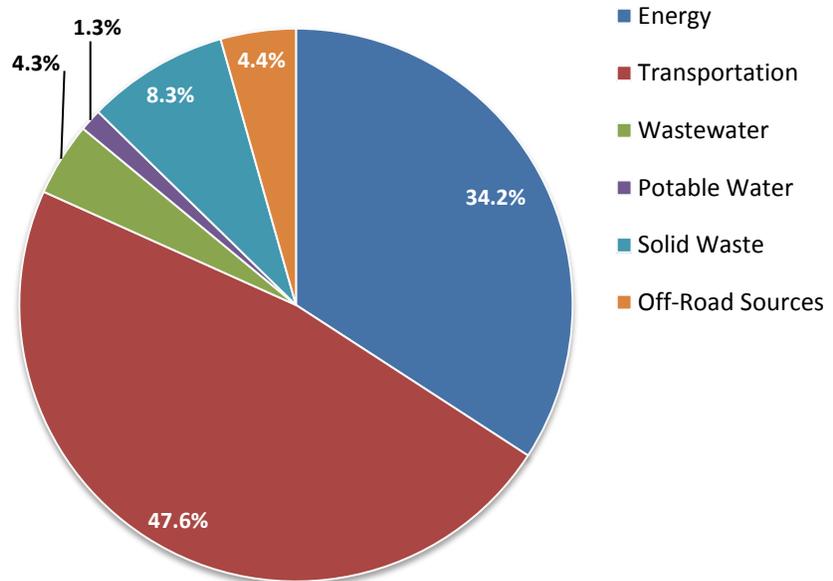
**Table 2.1
2005 Communitywide Emissions**

Emission Sector	Subsector	Emissions (MT CO ₂ e/year)	Communitywide Total (%)
Energy		41,086	34.2%
<i>Electricity Subtotal</i>		<i>18,850</i>	<i>15.7%</i>
	Residential	13,891	11.5%
	Commercial	4,959	4.1%
<i>Natural Gas Subtotal</i>		<i>22,236</i>	<i>18.5%</i>
	Residential	20,155	16.8%
	Commercial	2,081	1.7%
Transportation		57,203	47.6%
	Passenger Vehicles	52,400	43.6%
	Commercial Vehicles	4,803	4.0%
Solid Waste		9,999	8.3%
Off-Road Sources		5,268	4.4%
Wastewater	Wastewater Treatment	5,180	4.3%
Potable Water	Water Demand	1,550	1.3%
Total		120,286	100.0%

Source: AECOM 2012

Note: MT CO₂e = metric tons of carbon dioxide equivalent; Column sums may not match total shown due to rounding

Figure 2.1 – 2005 Baseline Emissions by Sector



Source: AECOM 2012

Emissions Forecasts (2020 and 2035)

The baseline inventory was used to project the communitywide GHG emissions in 2020 and 2035 under a business-as-usual (BAU) scenario. Suisun City's GHG emissions were forecast for the years 2020 and 2035, assuming that historic trends describing energy and water consumption, travel, and solid waste generation will remain the same in the future. Therefore, emissions forecasts demonstrate what emissions levels are likely to be under a scenario in which no statewide or local actions are taken to curtail emissions growth.

BAU emission forecasts provide insight regarding the scale of reductions necessary to achieve an emissions target. GHG reduction measures developed for the CAP are applied to the 2020 and 2035 emissions levels to determine if the City will achieve its GHG reduction targets.

The BAU forecasts use applicable and appropriate indicators for each sector, as well as population and employment growth assumptions established by the Bay Area Association of Governments (ABAG). The 2020 forecast year aligns with the AB 32 target year, while the 2035 forecast year aligns with the SB 375 planning horizon. These projections have been developed for planning purposes, and due to the complexity of each emissions sector, are subject to change. As 2020 approaches, the City will reevaluate its emissions projections and reduction targets to incorporate progress toward long-term GHG reductions, and will repeat this process as 2035 approaches as well. See Appendix A for the emissions forecast methodology.

Table 2.2 identifies projected communitywide emissions by sector for 2020 and 2035. Transportation and energy remain the largest emissions sectors in 2020 and 2035 (XX% and XX%, respectively), followed by solid waste, off-road mobile sources, wastewater, and potable water. Energy use accounts for the largest proportional emissions increase for both projection years (11.3% increase in 2020 and 19.5% increase in 2035).

As illustrated in Figure 2.2, communitywide emissions would increase by approximately XX MT CO₂e/yr (XX%) between 2005 and 2020, and by approximately XX MT CO₂e/yr (XX%) between 2005 and 2035. The magnitude of communitywide GHG emissions increases from 2005 to 2020 and 2035 is due primarily to anticipated future population and employment growth (and related consumption activity) in Suisun City.

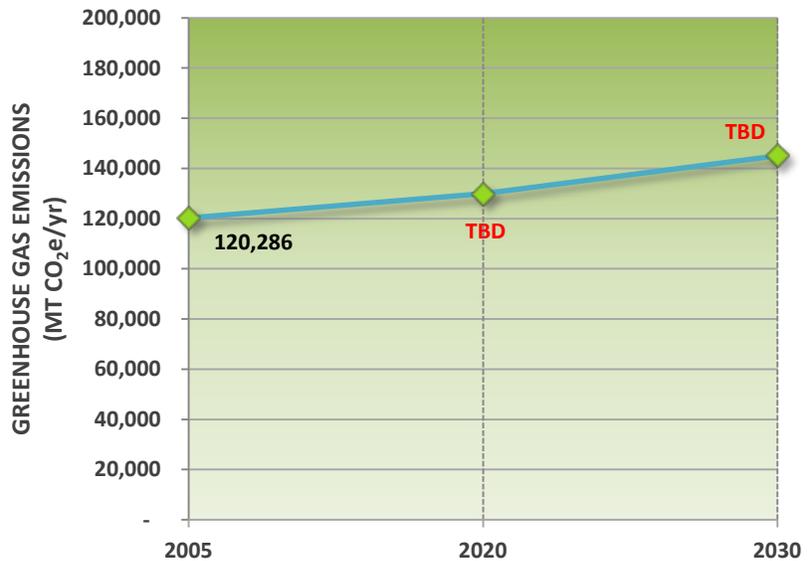
**Table 2.2
Communitywide Emissions 2005-2035**

Emission Sector	2005 Emissions (MT CO ₂ e/yr)	2020 Emissions (MT CO ₂ e/yr)	Increase from 2005 (%)	2035 Emissions (MT CO ₂ e/yr)	Increase from 2005 (%)
Energy	41,086	46,321	11.3%	51,022	19.5%
<i>Electricity Subtotal</i>	<i>18,850</i>	<i>21,251</i>	<i>11.3%</i>	<i>23,408</i>	<i>19.5%</i>
Residential	13,891	15,661	11.3%	17,250	19.5%
Commercial	4,959	5,590	11.3%	6,158	19.5%
<i>Natural Gas Subtotal</i>	<i>22,236</i>	<i>25,070</i>	<i>11.3%</i>	<i>27,614</i>	<i>19.5%</i>
Residential	20,155	22,723	11.3%	25,029	19.5%
Commercial	2,081	2,347	11.3%	2,585	19.5%
Transportation	57,203	XX	XX	XX	XX
Passenger Vehicles	52,400	XX	XX	XX	XX
Commercial Vehicles	4,803	XX	XX	XX	XX
Solid Waste	9,999	XX	XX	XX	XX
Off-Road Sources	5,268	XX	XX	XX	XX
Wastewater	5,180	XX	XX	XX	XX
Potable Water	1,550	XX	XX	XX	XX
Total	120,286	XX	XX%	XX	XX%

Source: AECOM 2012

Note: MT CO₂e/yr = metric tons of carbon dioxide equivalent per year; Column sums may not match total shown due to rounding

Figure 2.2 – Suisun City Baseline and Projected Emissions



Source: AECOM 2012

Note: MT CO₂e/yr = metric tons of carbon dioxide equivalent per year

GHG Emission Reductions from Statewide Actions

Most of Suisun City's anticipated emission reductions will likely come from statewide actions. This CAP assumes that emissions within the energy, transportation, and water sectors will be reduced through statewide efforts described in Chapter 1. This includes regulations addressing the use of renewable energy sources, energy and water efficiency, and GHG emissions from passenger cars and trucks. These actions provide important reductions that are applied toward Suisun City's communitywide emissions targets, reducing the total amount of emissions to be addressed through community actions. The City will monitor the effectiveness of state legislation to ensure that the anticipated level of reductions is achieved locally, and to ensure that all applicable statewide reductions are accounted.

The City considers locally-realized emissions reductions from:

- + SB 1078 (Renewable Portfolio Standard)
- + AB 1109 (Lighting Efficiency)
- + California Title 24
- + AB 1493 (Pavley I and II)
- + EO-S-1-07 (Low Carbon Fuel Standard)
- + Vehicle efficiency regulations
- + SB-7X

Including only these statewide initiatives towards the GHG reduction targets is considered a conservative approach because the Scoping Plan describes numerous other actions that will result in statewide emissions reductions. The actions included herein represent those for which a methodology is available to calculate Suisun City's likely share of these reductions. Other actions will provide statewide benefits, but cannot be accurately attributed to Suisun City.

Table 2.3 summarizes the anticipated reductions associated with these statewide actions in years 2020 and 2035.

Table 2.3
2020 and 2035 Emission Reductions from Statewide Actions

State or Federal Action	2020 Reduction (MT CO ₂ e/year)	2035 Reduction (MT CO ₂ e/year)
Renewable portfolio standard (33% by 2020)	5,713	7,041
AB 1109 lighting efficiency	XX	XX
2008 and 2013 California Title-24 standards	XX	XX
Pavley 1 and II	XX	XX
Low carbon fuel standard	XX	XX
Vehicle efficiency regulations	XX	XX
SB-7X	XX	XX
Total	XX	XX

Source: AECOM 2012

Note: MT CO₂e/yr = metric tons of carbon dioxide equivalent per year; Column sums may not match total shown due to rounding

GHG Emission Reduction Targets

Suisun City has established the following GHG emissions reduction targets for 2020 and 2035:

- + **2020:** 15% below 2005 emissions levels
- + **2035:** 49% below 2005 emissions levels

The targets will allow the City to contribute to State climate protection efforts described in Chapter 1, and are purposefully set at levels that are likely to provide CEQA streamlining benefits to new development projects in the community. Table 2.4 summarizes the emissions reduction targets, contributions from statewide actions, and the remaining gap for local action. See Appendix C for a description of target setting rationale.

2020 EMISSIONS REDUCTION TARGET

Based on the 2005 emissions inventory and 2020 forecasts presented in this chapter, the 2020 communitywide emissions reduction target is 102,243 MT CO₂e/yr (i.e., 15% below 2005 emissions levels). Reductions totaling XX MT CO₂e/yr in 2020 are required to achieve this target. The 2020 statewide reductions identified in Table 2.3 would contribute emissions reductions of XX MT CO₂e/yr. The remaining gap of XX MT CO₂e/yr must be addressed through local actions described in Chapter 3.

2035 LONG-RANGE EMISSIONS REDUCTION TARGET

Achieving the 2035 communitywide emissions reduction target of 61,346 MT CO₂e/yr (i.e., 49% below 2005 emissions levels) would require reductions totaling **XX** MT CO₂e/yr. Statewide reductions identified in Table 2.3 would contribute **XX** MT CO₂e/yr, leaving a reductions gap of **XX** MT CO₂e/yr to be addressed through local actions.

Chapter 3 presents proposed local actions, associated emission reductions, and progress toward the 2020 reduction and 2035 reduction targets.

Table 2.4 2020 and 2035 Emissions Reduction Targets			
	2005 (MT CO₂e/yr)	2020 (MT CO₂e/yr)	2035 (MT CO₂e/yr)
Jurisdictional Inventory and Projections	120,286	XX	XX
Reduction Target (2020 and 2035)		102,243	61,346
Reductions Needed to Achieve Target		XX	XX
Assumed Statewide Reductions		-XX	-XX
Local Action Reductions Needed to Achieve Target and Goal		XX	XX

Source: AECOM 2012

Note: MT CO₂e/yr = metric tons of carbon dioxide equivalent per year

CHAPTER 3

EMISSIONS REDUCTION MEASURES

3

This chapter describes measures and actions necessary to reduce communitywide greenhouse gas (GHG) emissions, and achieve the City's 2020 and 2035 reduction targets. Most measures are designed to achieve quantifiable GHG reductions, while others are listed as supporting measures because they cannot be accurately quantified. To ensure proper implementation, each measure is accompanied by a description providing policy background and implementation details that articulate necessary actions; City departments with primary action responsibility; and progress indicator timelines to track implementation. The City will evaluate effectiveness of CAP measures and actions every three years and propose program modifications if necessary to achieve reduction targets.

Summary of Reductions

Table 3.1 summarizes GHG emission reductions anticipated from implementation of the measures and actions presented in this chapter, and the statewide reductions described in Chapter 2. Table 3.2 shows how these anticipated reductions compare to the City's adopted emissions reduction target.

Table 3.1 Measures and Quantified Reductions			
Energy Strategy		2020 (MT CO₂e/yr)	2035 (MT CO₂e/yr)
E-1. Existing Buildings			
E-1.2	Energy Efficiency Retrofit Outreach	324	889
E-2. New Construction			
E-2.1	New Construction Energy Efficiency	18	18
E-4. Building Appliances			
E-4.1	ENERGY STAR Appliances	73	120
E-4.2	Smart Grid	167	332
E-5. Building Cooling			
E-5.1	Building Shade Trees	37	63
E-7. Renewable Energy			
E-7.1	Solar Photovoltaic Systems	1,779	4,318
E-7.2	Solar Water Heaters	77	413
E-7.4	Community Choice Aggregation	TBD	TBD
E-8. Street and Area Lighting			
E-8.1	Street Light Upgrade	76	76
E-8.2	Traffic Light Upgrade	2	2
E-8.3	Parking Lot Lighting Upgrade	8	23
E-9. Municipal Actions			
E-9.1	Municipal Building Energy Efficiency	41	50
E-9.2	Wastewater Treatment Plant Process Energy Optimization	220	220
Energy Subtotal		2,822	6,524

Solid Waste Strategy	2020 (MT CO ₂ e/yr)	2035 (MT CO ₂ e/yr)
Solid Waste Subtotal	XX	XX
Water Strategy	2020 (MT CO ₂ e/yr)	2035 (MT CO ₂ e/yr)
Water Subtotal	XX	XX
Transportation Strategy	2020 (MT CO ₂ e/yr)	2035 (MT CO ₂ e/yr)
Transportation Subtotal	XX	XX
Statewide Reductions	2020 (MT CO ₂ e/yr)	2035 (MT CO ₂ e/yr)
Renewable Portfolio Standard	5,713	7,041
2013 California Title 24 Standard	XX	XX
AB 1109 – Lighting Efficiency Program	1,499	1,592
AB 1493 – Pavley I and II	XX	XX
Low Carbon Fuel Standard	XX	XX
Vehicle Efficiency Regulations	XX	XX
SB-7X	XX	XX
Statewide Reductions Subtotal	XX	XX
CAP Measures Subtotal	XX	XX
TOTAL REDUCTIONS	XX	XX

Note: Column sums may not match subtotals and totals due to rounding.

Table 3.2
Progress Towards Emission Reduction Targets

	2005 (MT CO ₂ e/yr)	2020 (MT CO ₂ e/yr)	2035 (MT CO ₂ e/yr)
Jurisdictional Inventory and Projections	120,286	XX	XX
Reduction Target (2020 and 2035)		102,243	61,346
Reductions Needed to Achieve Target		XX	XX
Assumed Statewide Reductions		-XX	-XX
Assumed CAP Measure Reductions		-XX	-XX
Emission Reduction Gap to Achieve Targets		XX	XX
Reduction Below 2005 Target		15%	49%
Reduction Below 2005 Achieved		XX%	XX%

Source: AECOM 2012

Note: MT CO₂e/yr = metric tons of carbon dioxide equivalent per year

Emissions Reductions

PROGRESS TOWARD 2020 TARGET

The reduction measures, together with the communitywide effects of State and federal legislation in Suisun City, have the potential to reduce communitywide emissions by **XX** MT CO₂e/yr from projected 2020 levels. This progress **achieves** the City's 2020 reduction target (102,243 MT CO₂e/yr), and represents a **X.X%** reduction in emissions below 2005 conditions.

PROGRESS TOWARD 2035 TARGET

The reduction measures, together with the communitywide effects of State and federal legislation in Suisun City, have the potential to reduce communitywide emissions by **XX** MT CO₂e/yr from projected 2035 levels. This progress **falls short** of the City's 2035 reduction goal (61,346 MT CO₂e/yr), representing a **X.X %** reduction in emissions below 2005 conditions.

Measure Structure

This section of the CAP is organized according to four strategy areas: energy, transportation, water, and waste. These strategies represent the primary avenues by which to reduce communitywide GHG emissions in Suisun City. Each strategy area section begins with an introduction to the overarching concepts that tie that particular strategy to GHG emission generation and potential reductions. This strategy overview is followed by the specific measures and actions that translate the City's vision into on-the-ground implementation.

REDUCTION MEASURES

Measures define the programs, policies, and projects that the City will undertake to accomplish its GHG emission reduction goals. Each measure includes information related to GHG reduction potential, opportunities for regional implementation, sustainability co-benefits, and relative magnitude of cost, which are further described below.

REDUCTION POTENTIAL

The estimated annual emissions reduction potential of each quantifiable measure is provided for 2020 and 2035 in MT CO₂e/yr. Some measures have the same reduction potential for both horizon years because the underlying participation assumptions are held constant. Measures identified as "Supporting Measures" contribute to GHG reductions and are an important component of this CAP, but currently lack a methodology to quantify their emissions reduction potential. For example, the proposed Sustainability Coordinator position described in Measure E-9.3 is critical to the full implementation of other CAP measures, but it is not possible to accurately calculate the emissions reductions specifically related to that new staff position. Appendix D describes the methodology used to quantify emissions reductions.

ICONS

Various icons are used to indicate measures that have regional implementation opportunities, sustainability co-benefits associated with the measures, and simple cost estimates for mandatory components of measures.

Regional Efforts

Measures that would benefit from a regional implementation strategy are denoted as Regional Efforts. The four participating cities (i.e., Suisun City, Dixon, Fairfield, and Rio Vista) could collaborate on implementing these measures to reduce overhead costs associated with new program development, or could partner with other regional agencies to create a Sustainability Coordinator position to oversee CAP implementation.

Co-Benefits

As described in Chapter 1, implementation of these measures will provide additional community benefits beyond their GHG reductions. The icons listed with each measure represent only a sample of the numerous co-benefits related to individual measures.

Cost Analysis

Some CAP measures require residents and local businesses to take action or direct the City government to develop and implement additional programs. Simple cost estimates (i.e., Low, Medium, High) for these mandatory actions are provided for informational purposes to help weigh the potential costs and benefits of certain measures. Cost analysis was not performed for measures that describe current and on-going City programs and actions, or voluntary measures that rely on residents and businesses to make personal decisions regarding the importance and value of certain actions. Appendix E provides assumptions use to calculate these simple cost estimates.

MEASURE BACKGROUND

The measure background section provides information about the specifics of a measure, including descriptions of various technologies or financing mechanisms. This section also provides information on currently available rebates and other financial incentives related to the measure, and describes any actions the City has taken to date towards implementation of that measure. Additionally, some descriptions provide guidance that will be used in program implementation, such as components of the outreach plan and which segments of the community should be targeted for inclusion.

ACTIONS AND RESPONSIBILITY

Action steps and progress indicators are provided in a table following each measure description. Actions identify specific steps that the City will take to implement the measure. The table also identifies responsible departments that would be best positioned to lead or provide input for implementation of certain tasks. Measures that could be implemented by a regional Sustainability Coordinator, as described in Measure E-9.3, are identified should the participating cities secure funding for such a position. In some cases, an alternative responsible department is also listed in the event that a Sustainability Coordinator position cannot be established.

Should an adequate funding source for the Sustainability Coordinator position not be identified, the City will review the CAP measures described in this chapter to prioritize implementation based on available resources. The City will also identify new Responsible Departments at that time.

PROGRESS INDICATORS

Progress indicators describe the specific action that is being quantified to estimate the reduction potential. These indicators enable City staff, the City Council, and the public to track implementation and monitor overall CAP progress. Progress indicators are provided for both 2020 and 2035, and are specifically described when possible (e.g., 500 single family homes will install a solar hot water heater). Progress indicators are not provided for supporting measures, which do not have quantifiable emissions reductions.

Reduction Strategies

The strategies identified in this Chapter affect issues within the City's direct influence. Each strategy is subdivided into various sub-strategy headings to help organize the reduction measures. Measures were developed by (a) evaluating existing community conditions, (b) identifying emission reduction opportunities within the community, (c) reviewing best practices from other jurisdictions and organizations, and (d) incorporating State and regional laws, guidelines, and recommendations. Suisun City's measures were also developed as part of a regional conversation between the cities of Dixon, Fairfield, and Rio Vista to provide as much consistency between the four cities CAPs as possible. The adopted CAPs for Solano County and the City of Benicia were also reviewed as part of the measure development process to lay the foundation for regional implementation efforts.

The emission reduction strategies are as follows:

- + **Energy:** The Energy Strategy recommends ways to increase energy efficiency in existing buildings, enhance energy performance for new construction, and increase use of renewable energy.
- + **Transportation:** The Transportation Strategy encourages transit, carpooling, walking, and bicycling as viable transportation modes to decrease the need to drive.
- + **Water:** The Water Strategy promotes the efficient use and conservation of water in buildings and landscapes.
- + **Waste:** The Waste Strategy increases waste diversion and recycling, reducing consumption of materials that otherwise end up in landfills.

Energy Strategy

As described in Chapter 2, the consumption of electricity for appliances, lighting, and cooling, and combustion of natural gas for heating, cooking, and other processes within residential, commercial, and industrial buildings generated approximately 34 percent of Suisun City's communitywide GHG emissions in 2005. These emissions can be reduced by improving energy efficiency in new and existing buildings and increasing the amount of electricity and heat generated from renewable energy sources.

In Suisun City, approximately 42%¹ of the housing stock was built before California's energy code, Title 24 Part 6, was first adopted in 1978. Consequently, the building stock offers considerable opportunity for cost-effective energy efficiency retrofits to decrease

the use of both electricity and natural gas. The City plans to achieve building energy efficiency improvements in both existing and new buildings through a combination of possible community outreach and education, incentives, and regulations.

Pacific Gas and Electric Company (PG&E) is Suisun City's energy utility, providing both natural gas and electricity for residential, commercial, industrial, and municipal uses. PG&E provides electricity generated at hydroelectric, nuclear, renewable, natural gas, and coal facilities. As of 2011, natural gas facilities provided 25%; nuclear plants provided 22% of the total electricity supply; renewable energy facilities including solar, geothermal, and biomass provided 19%; large hydroelectric operations provided 18%; and unspecified sources provided the remainder.ⁱⁱ Under the provisions of SB 107 (2006), investor-owned utilities were required to generate 20% of their retail electricity using qualified renewable energy technologies by the end of 2010. In compliance with this mandate, PG&E will expand its renewable generation portfolio, making additional GHG-free electricity available to customers in Suisun City.

The City will encourage communitywide installation of rooftop solar photovoltaic (PV) and solar hot water systems to increase the portion of Suisun City's energy portfolio provided from renewable sources. The City will also explore installation of renewable energy facilities on municipal property to increase the generation of renewable energy in the community.

The total GHG emission reduction potential of the Energy Strategy is 2,822 MT CO₂e/yr in 2020 and 6,524 in 2035. This represents about X.X% percent of total 2020 reductions and X.X% of total 2035 reductions anticipated from CAP implementation.

E-1: Existing Buildings

MEASURE E-1.1: ENERGY EFFICIENCY ASSESSMENTS

Supporting Measure – Not Quantified

Encourage voluntary energy assessments for residential and nonresidential buildings to identify cost-effective improvements.

Measure Background

The houses in Suisun City built before adoption of California's Title 24 energy efficiency requirements are excellent candidates for energy-saving retrofits, which could be identified through energy assessments.

Building energy assessments can help identify and prioritize energy efficiency improvements by providing a building-specific list of retrofit options and their cost-effectiveness. Additionally, the California Energy Commission (CEC) developed the Statewide Home Energy Rating System (HERS) program to allow comparisons of the efficiency levels between California homes. A home's HERS rating is calculated as part of an energy assessment, and informs homeowners and renters about energy efficiency much like the MPG metric allows comparisons of vehicles. This type of rating assists in estimating the relative utility costs associated with a home so that renters and buyers can factor those costs into their decision.

The City, through the Sustainability Coordinator, will partner with the Solano Center for Business Innovation to develop a comprehensive outreach campaign that describes the

benefit of energy assessments and available rebates, incentives, and financing options, such as PG&E's no- or low-cost energy assessment programs for nonresidential customers and residential energy assessment rebates available through Energy Upgrade California. Residential assessments should be performed per the Whole House Energy Rating required by Energy Upgrade California. To help residents finance home energy assessments, the City could pursue grant funding to provide a partial rebate for residents that voluntarily perform energy assessments. Previous sources of funding have included Energy Efficiency Conservation Block Grants (EECBG) and the CEC.

As part of this outreach campaign, the City may assist in identifying neighborhoods with concentrations of older homes to help focus the outreach toward buildings that will receive the greatest energy savings. The City will also work with PG&E to identify large-energy users that would benefit from energy assessments and could be eligible for PG&E's on-bill financing to install retrofit packages identified in the assessment. For these larger energy customers, PG&E offers low- or no-cost energy assessment services that include on-site analysis of energy consuming systems and customized calculations to help create a strategic plan for implementing projects. The City should also partner with local real estate professionals to help educate home buyers about the value of energy assessments at the point of sale. Realtors should also be encouraged to include a home's HERS rating in the MLS listing.

Action	Responsibility
A Develop a comprehensive outreach campaign that describes the benefit of energy assessments and available rebates, incentives, and financing options.	Solano Center for Business Innovation; Sustainability Coordinator
B Pursue grant funding to provide a partial rebate for residents and businesses that voluntarily perform energy assessments.	Solano Center for Business Innovation; Sustainability Coordinator
C Identify neighborhoods with concentrations of older building stock to focus outreach campaign.	Community Development; Sustainability Coordinator
D Work with PG&E to identify large-energy users that would benefit from energy assessments. Leverage PG&E's on-bill financing option for nonresidential and municipal customers.	Community Development; Sustainability Coordinator
E Partner with real estate professional groups to help educate home buyers and business owners about the benefits of energy assessments at the point of sale.	Solano Center for Business Innovation; Sustainability Coordinator
F Provide links on the City website to PG&E's do-it-yourself online energy assessment program. (This information could be placed on a new Solano County Sustainability Webpage to leverage regional efforts.)	Community Development; Sustainability Coordinator

MEASURE E-1.2: ENERGY EFFICIENCY RETROFIT OUTREACH

2020 GHG Reduction Potential: **324 MT CO₂e/yr**
 2035 GHG Reduction Potential: **889 MT CO₂e/yr**

Encourage voluntary energy efficiency retrofits in residential and nonresidential buildings through promotion of local efforts.

Measure Background

Energy efficiency improvements to residential and nonresidential structures can reduce both energy bills and GHG emissions. Many residences (approximately 65 percentⁱⁱⁱ) in Suisun City are owner-occupied, and thus the financial savings of home energy efficiency retrofits are in the long term economic interest of the homeowner. As such, the City will emphasize voluntary participation in energy efficiency retrofit programs, in lieu of mandatory programs. As part of the outreach program, the City may enhance its website by linking to information on existing energy efficiency rebates and other financial incentives, including PG&E incentives to businesses for energy efficiency improvements. The website could also contain local case studies of businesses that have completed cost effective energy efficiency improvements.

To encourage participation from residential homeowners, the City will partner with the Solano Center for Business Innovation to leverage Energy Upgrade California’s educational materials and online platform that provides access to incentives, technical assistance, and qualified contractors. Typical rebates and incentives available to Solano County residents through Energy Upgrade California include PG&E’s Basic and Advanced Retrofit Packages, pool pumps and motor rebates, efficient water heaters/blankets, HVAC upgrades, furnace upgrades, and wall insulation installation. The City will also promote resources such as California Flex Alert, the Department of Energy’s (DOE) Weatherization Assistance Program for low-income households, and PG&E’s SmartEnergy Analyzer™ program, all of which link residential property owners to educational and financial resources. In addition, PG&E is working to fulfill Goal 2.2 of the CPUC *Long-Term Energy Efficiency Strategic Plan*, which states, “By 2020, 100 percent of eligible and willing customers will have received all cost-effective Low Income Energy Efficiency measures.”

Financing is critical to the success of the energy efficiency retrofit program. The City will continue to support the development of a Property Assessed Clean Energy program (see Measure E-1.3) to further promote energy efficiency retrofits. The City will also partner with local real estate professionals to inform homebuyers about the benefits of home energy assessments and the availability of energy efficiency mortgages to finance installation of retrofit packages.

Action	Responsibility
<p>A Develop and maintain a Solano County Sustainability Website with information about current energy efficiency rebates and incentives (including links to PG&E and Energy Upgrade California rebate pages) and local energy efficiency improvement case studies. Leverage Energy Upgrade California outreach and educational materials.</p>	Sustainability Coordinator
<p>B Provide training to Building Division counter staff regarding available sources of rebates/incentives and printed pamphlets or FAQ sheets.</p>	Building Division; Sustainability Coordinator
<p>C Provide targeted outreach to low-income and elderly households with information about the federal weatherization program and statewide Energy Savings Assistance Program, and how improvements can increase occupant comfort levels and reduce utility bills.</p>	Sustainability Coordinator

Progress Indicators	Year
250 single-family houses install a comprehensive retrofit package; 750 single-family houses install a basic retrofit package; 40 multi-family units are upgraded with comprehensive retrofit; 100 multi-family units are upgraded with basic retrofit package; 58,000 sqft of nonresidential area installs a comprehensive retrofit package; 166,000 sqft of nonresidential area installs a basic retrofit package	2020
750 single-family houses install a comprehensive retrofit package; 2,300 single-family houses install a basic retrofit package; 125 multi-family units are upgraded with comprehensive retrofit; 325 multi-family units are upgraded with basic retrofit package; 166,000 sqft of nonresidential area installs a comprehensive retrofit package; 500,000 sqft of nonresidential area installs a basic retrofit package	2035

MEASURE E-1.3: PACE FINANCING PROGRAM

Supporting Measure – Not Quantified

Partner with the County in its pursuit to establish the Clean Energy Solano PACE program that would provide financing options for residential and nonresidential energy efficiency upgrades to existing buildings. Work with other Solano County jurisdictions to jointly pursue bond funding for a commercial PACE program through California FIRST.

Measure Background

A property-assessed clean energy (PACE) finance program is enabled through the AB 811 legislation. This bill allows land-secured loans for homeowners and businesses who install energy efficiency projects and clean-energy generation systems. Senate Bill 555 reinforced implementation opportunities for PACE programs by expanding the scope of activities allowed within a community facilities district, as defined by the Mello-Roos Community Facilities Act of 1982. A PACE program permits property owners within participating districts to finance the installation of energy- and water-efficiency improvements in their home or business through a lien against their property that is repaid through their property tax bill. If the property is sold, payment responsibility transfers to the new owners, allowing building owners to avoid up-front installation costs while at the same time requiring little or no investment of local government general funds. In some instances, the new lender may require repayment of the existing lien, in which case the remaining PACE loan is repaid from the proceeds of the property sale.

Suisun City is a participating member of the California FIRST program which allows PACE funding for commercial and multi-family residential projects. Suisun City would also be within the boundaries of the proposed Clean Energy Solano PACE program, which would make financing available to both residential and nonresidential projects.

An initial market analysis for the proposed Clean Energy Solano program estimated 3.5% participation in the first five years from both the residential and nonresidential sectors, which would lead to local economic benefits including approximately \$19 million in state and local tax revenue, the creation of 2,700 new jobs, and the generation of 37 MW of local renewable energy. Furthermore, building owners who participate in the PACE program are not required to front the initial capital costs.

Action	Responsibility
A Opt into the County's PACE program as a participating member.	Community Development; Sustainability Coordinator; Solano EDC
B Develop an outreach program describing available PACE financing options. Work with PG&E to identify large energy users to help focus outreach efforts.	Sustainability Coordinator
C Continue to participate in California FIRST to make PACE financing available to commercial, industrial, multi-family residential (5+ units), and nonprofit-owned buildings.	Community Development; Sustainability Coordinator

E-2: New Construction

MEASURE E-2.1: NEW CONSTRUCTION ENERGY EFFICIENCY

2020 GHG Reduction Potential: **18 MT CO₂e/yr**

2035 GHG Reduction Potential: **See Statewide Reduction
2013 California Title 24 Standard**

Encourage energy-efficient new construction through promotion of energy-efficient mortgages and technical assistance programs for developers.

Measure Background

California Building Energy Efficiency Standards (Title 24, Part 6, 2008) serve as the basis for mandatory building energy efficiency standards. The California Green Building Standards Code (CALGreen), effective in 2011, also provides the City with the option of adopting an energy efficiency standard that surpasses the State's basic requirements. CALGreen outlines two options: Tier I requires a building's energy performance to exceed Title 24 requirements by 15 percent, while Tier II increases this standard to 30 percent. Revisions to the Title 24 Standards will be adopted in 2013 and will go into effect in 2015.

Although a mandatory ordinance to exceed Title 24 Standards through adoption of the Tier I or II standards will not be established at this time, the City will encourage energy efficient new construction through its technical assistance program that provides local builders with information on green building practices, specifically those which relate to energy- and water-efficient design and construction practices. PG&E also developed the Savings by Design program to encourage energy-efficient construction in new commercial buildings. The program offers a range of services to building owners and their design teams, such as design assistance, design team incentives, owner incentives, and educational resources for customized new construction projects that exceed California's Title 24 energy efficiency standards.

To further encourage new construction to participate in this program, the City will consider developing a local green building recognition program to commend building owners that voluntarily exceed Title 24 Standards. The City will also work with local real estate professional groups and area developers to provide information to home buyers about the benefits of energy efficiency mortgages, which allow homebuyers to finance the installation of energy efficient systems, such as solar photovoltaics or high-efficiency windows.

Action	Responsibility
A Partner with local developers and realtors to distribute informational brochures about energy efficient mortgages to potential new home buyers.	Sustainability Coordinator
B Provide outreach to local developers, architects, and builders on PG&E’s Savings by Design program.	Sustainability Coordinator
C Consider establishing a local green-building recognition award for exemplary projects.	Sustainability Coordinator

Progress Indicators	Year
25 new single-family residential buildings exceed 2008 Title-24 by 30%	2020

MEASURE E-2.2: SOLAR READY CONSTRUCTION

Supporting Measure – Not Quantified

Encourage builders to incorporate solar-ready design into new construction, including building orientation for maximum solar exposure, pre-wiring and pre-plumbing for solar PV and solar hot water, and roof system construction that can handle additional loads of future solar installations.

Measure Background

Increasing the use of distributed renewable energy systems (e.g., rooftop solar photovoltaic) prevents the combustion of fossil fuels to generate electricity, thereby reducing GHG emissions. Suisun City’s location and geography result in a high solar insolation rating, which makes it an excellent candidate for effective adoption of solar technologies. The City can facilitate future installation of solar technologies by encouraging new construction to be oriented for maximum solar access, pre-wired and pre-plumbed to support PV systems and solar hot water systems, and constructed to support roof loads of solar installations. These front-end additions can reduce the cost of post-construction solar installations for homeowners. The City’s technical assistance program described in Measure E-2.1 will provide information on solar-ready construction techniques.

Action	Responsibility
A Encourage developers to use the City’s technical assistance program to help implement this measure (see Measure E-2.1).	Building Division

MEASURE E-2.3: CAP PROJECT COMPLIANCE CHECKLIST

Supporting Measure – Not Quantified

Clearly state the City's sustainability requirements for new entitlements in a checklist for use by production builders and developers to demonstrate compliance with the CAP.

Measure Background

One barrier to land development can be a lack of transparency or clear understanding of how to comply with various planning documents. The Sustainability Coordinator will create a CAP compliance checklist to remove uncertainty for developers. The checklist will include features that could be incorporated into a plan prior to entitlement. The checklist could either identify mandatory features for inclusion that would guarantee entitlement, or could develop a point-based checklist that rates each feature relative to its GHG reduction potential and set a minimum score for entitlement. Checklist items could address a variety of topic areas, including community design and layout, building features, landscaping, and public infrastructure. The checklist should refer builders and developers to the City’s technical assistance program for additional information on green design. The City should also meet with local production builders to discuss the City’s GHG emissions targets and explain how to use the new checklist.

Action	Responsibility
A Develop a checklist of new construction requirements per the CAP's measure list. Identify additional, nonmandatory building and design aspects the City would like to encourage.	Sustainability Coordinator
B Consider developing a point-based checklist system whereby a project would receive expedited permitting if it achieved a certain score.	Sustainability Coordinator
C Facilitate group meeting with production builders to discuss GHG emissions targets.	Sustainability Coordinator

E-3: Financing

MEASURE E-3.1: ENERGY EFFICIENCY REBATE PROGRAM

Supporting Measure – Not Quantified

Consider establishing a City or County rebate program to encourage implementation of energy efficiency retrofits.

Measure Background

PG&E currently offers rebates for various home energy efficiency improvements. In addition to PG&E rebates, numerous programs funded by state agencies and local governments are available to Solano County residents through the Energy Upgrade California program. The Sustainability Coordinator will partner with other Solano County governments and agencies to identify gaps in existing rebate and incentive programs and jointly pursue funding to establish a local (e.g., Solano County) rebate program.

New rebates could be structured to encourage residents to buy goods or services from local businesses. For example, the City could develop an ENERGY STAR-rated appliance rebate program to supplement those currently offered through PG&E, by providing an additional \$50 rebate for appliances purchased from local vendors. Alternatively, the new rebate program could be structured to address the building improvement needs of a specific building type, such as small commercial properties or multi-family residential buildings.

Action	Responsibility
A Identify rebate/incentive gaps in PG&E- and Energy Upgrade California-sponsored programs to identify local financing needs.	Sustainability Coordinator
B Identify an outside funding source to finance rebate program (e.g., EECBG, ARRA).	Sustainability Coordinator

E-4: Building Appliances

MEASURE E-4.1: ENERGY STAR APPLIANCES

2020 GHG Reduction Potential: **73 MT CO₂e/yr**

2035 GHG Reduction Potential: **120 MT CO₂e/yr**

Encourage voluntary installation of ENERGY STAR and other high-efficiency appliances.

Measure Background

As Title 24 Standards require building shells and systems to become even more efficient, energy consumption from appliances and electronics will become an increasingly important source for reducing building energy use and residents’ utility bills. In 2009, approximately 28% of statewide residential electricity use was dedicated to appliances. Televisions, computers, and home office equipment accounted for an additional 20% of electricity use.^{iv} As big-screen televisions, smart phones, tablets, and other electricity-consuming devices become more commonplace in homes, their proportional share of home electricity use will likely increase as well. Installing ENERGY STAR appliances is one way to reduce energy use in this sector.

This measure is designed to encourage voluntary community participation to upgrade home appliances and lighting to ENERGY STAR or other energy efficient models. Successful implementation of this measure relies on leveraging the Energy Upgrade California program materials through a public outreach campaign to increase community awareness regarding energy efficient appliance choices. The ENERGY STAR rating is an internationally recognized standard for energy efficient consumer products. According to the EPA, devices that have an ENERGY STAR certification, such as office equipment, home appliances, and lighting products, generally use 20 to 30 percent less energy than required by federal standards. By promoting ENERGY STAR-rated home and business appliances, the City can help to reduce GHG emissions related to the use of lighting, refrigerators, dishwashers, clothes washers, wall air conditioning units, computers, photocopiers, lights, and other appliances.

Through Energy Upgrade California, PG&E currently offers rebates to customers who purchase ENERGY STAR dishwashers, clothes washers, refrigerators/freezers, ceiling fans, pool pumps, and room air conditioners. The City will partner with PG&E, Solano County Water District, local developers, and other relevant organizations to promote existing financial incentives and rebates for energy-efficient appliance upgrades and replacements.

Action	Responsibility
A Collaborate with PG&E, Solano County Water District, and other local organizations to promote existing financial incentive programs to encourage voluntary replacement of inefficient appliances with new ENERGY STAR appliances.	Community Development; Sustainability Coordinator
B Provide outreach to local developers regarding sources of available rebates to encourage installation of ENERGY STAR-rated major appliances in new residential construction.	Building Division; Sustainability Coordinator

Progress Indicators	Year
New residential construction installs energy-efficient appliances: 475 refrigerators; 625 clothes washers; 725 dishwashers;	2020
Existing residential units replace expired appliances with energy-efficient appliances: 2,300 refrigerators; 4,000 clothes washers; 6,000 dishwashers	
New residential construction installs energy-efficient appliances: 750 refrigerators; 1,000 clothes washers; 1,150 dishwashers;	2035
Existing residential units replace expired appliances with energy-efficient appliances: 4,000 refrigerators; 6,100 clothes washers; 7,750 dishwashers	

MEASURE E-4.2: SMART GRID

2020 GHG Reduction Potential: **167 MT CO₂e/yr**

2035 GHG Reduction Potential: **332 MT CO₂e/yr**

Encourage adoption of smart grid-compatible appliances and energy management systems to shift peak-load energy use.

Measure Background

The ‘smart grid’ is an emerging energy management system which uses information technology to significantly improve how electricity is managed and controlled. Smart meters, which use a technology that enables users to take full advantage of the smart grid, will eventually provide utility customers with access to detailed energy use and cost information, new time-of-use pricing programs based on peak-energy demand, and the ability to program home appliances and devices to respond to energy use preferences based on cost, comfort, and convenience.

Current smart meters allow for frequent remote reading of energy usage by PG&E. However, the true value of the smart meter program will be fully realized when community residents and businesses begin making more informed energy use decisions based on the two-way communication enabled by smart meters, such as when a homeowner is able to program their washing machine to run when energy prices are lowest.

All investor-owned utilities are rolling out time-of-use pricing, which offers lower utility rates to customers that switch discretionary energy use to off-peak times. Time-of-use pricing is mandatory for all commercial customers, and will eventually be offered to residential customers as well. PG&E currently offers the SmartRate pricing plan to residential customers, which offers lower prices per kWh to customers that agree to reduce electricity use on “SmartDays” when intense heat drives up air conditioning use and therefore, electricity prices. PG&E has also joined OPower, a social media

technology provider that helps customers using smart grid technology to compare their energy use with neighbors. To support use of their various pricing programs, PG&E created the Green Button Connect program to allow customers to share their energy usage data with third-party app developers that already have products to help customers track and manage their energy use. The assumption is that customer access to their own energy use trends will support behavioral changes to energy consumption, which will lower customers’ utility bills and lower PG&E’s costs to provide energy.

When estimating the potential GHG emission reductions associated with implementation of the smart grid, the City included the energy efficiency improvements gained from integrating smart grid energy management systems for control lighting, heating, ventilation, and air conditioning and other major appliances in residential and commercial buildings. According to CISCO, a world-wide leader in network technology, full integration of the smart grid will take time to realize, but energy analysts estimate it will ultimately be capable of reducing electricity-related GHG emissions by 30 percent below current levels.

Through public outreach efforts and targeted outreach to the development community, the City will encourage voluntary adoption of smart-grid technology for homes and businesses. The Sustainability Coordinator will train Building Division staff on the benefits of smart-grid integration and provide informational materials on existing rebate programs.

Action	Responsibility
A Develop an outreach program that leverages existing PG&E materials, including description of the O-Power Program. Make information available at Building Division counter.	Sustainability Coordinator
B Identify and advertise available rebates for smart-grid compatible appliances and systems on the County’s Sustainability Website.	Building Division; Sustainability Coordinator

Progress Indicators	Year
1,150 residential units install smart-grid compatible appliances and systems; 215,000 sqft of commercial area installs smart-grid compatible appliances and systems	2020
2,700 residential units install smart-grid compatible appliances and systems; 500,000 sqft of commercial area installs smart-grid compatible appliances and systems	2035

MEASURE E-4.3: PERMANENT LOAD SHIFT

Supporting Measure – Not Quantified

Encourage participation in PG&E’s Permanent Load Shift program to shift thermal cooling loads to off-peak and/or partial-peak hours.

Measure Background

PG&E’s Permanent Load Shift program, often referred to as “Shift & Save,” is to store thermal cooling capacity during off-peak hours and/or partial-peak hours in order to meet thermal cooling load in subsequent on-peak hours. The goal of this program is to

shift 3.9 megawatts of load. The program's targeted customers are bundled service, commercial, industrial, agricultural, and large residential customers in PG&E's electric service territory. PG&E is working with Cypress Ltd. and Trane USA to implement this program.

The City will partner with PG&E to identify and provide outreach to local large-energy users that could financially benefit from participation in the program. The City will partner with the Solano Center for Business Innovation and the Solano Economic Development Corporation in its outreach activities to find regional efficiencies in program expansion and application in other Solano County cities. A statewide Permanent Load Shift technology incentive program is currently under development; the City should monitor its progress to identify opportunities for local application.

Action	Responsibility
A Work with PG&E to identify large-energy users that would benefit from peak-load shifting technologies and/or strategies. Targeted customers are bundled service, commercial, industrial, agricultural, and large residential customers.	Sustainability Coordinator
B Monitor development of the statewide Permanent Load Shift program to identify opportunities for local application.	Sustainability Coordinator

E-5: Building Cooling

MEASURE E-5.1: BUILDING SHADE TREES

2020 GHG Reduction Potential: **37 MT CO₂e/yr**
 2035 GHG Reduction Potential: **63 MT CO₂e/yr**

Consider adopting a shade tree ordinance for new construction and develop a shade tree outreach campaign to encourage existing property owners to voluntarily plant shade trees.

Measure Background

Properly located trees can provide shading for residential and commercial buildings, and thereby reduce the need for air conditioning. The capacity of a tree to reduce GHG emissions is dependent on its age and species. As trees mature, their canopies increase in size and provide higher levels of shade and greater levels of building cooling in hot weather. Large, deciduous species are ideal for reducing building energy use as they provide shade in summer, but allow winter sunlight into buildings for passive solar gain in cooler weather. Additionally, trees gain carbon-capturing biomass in their trunks and roots as they absorb carbon from the air to grow.

The City will consider adopting a shade tree ordinance requiring new construction to plant trees to beneficially shade air conditioned buildings. The ordinance may allow the installation of building-integrated vegetation in lieu of shade trees. The City will also work with local organizations to promote voluntary shade tree planting at existing buildings. To facilitate proper implementation of this measure, the City may develop a shade tree planting guide to instruct home builders, developers, landscapers, building managers, and property owners on proper shade tree selection and placement to

maximize building cooling opportunities while preserving solar access on the roof. Planting guidance should describe the selection of climate-appropriate species and proper siting specifications (i.e., S, SW, or W side of buildings; no more than 20’ from the building).

Action	Responsibility
A Consider amending the City’s Development Standards per the new shade tree ordinance.	Planning Division
B Work with local environmental and conservation groups to advertise the various benefits of planting shade trees near existing buildings.	Planning Division
C Consider developing a shade tree planting guide to facilitate proper tree selection and installation.	Planning Division; Public Works

Progress Indicators	Year
2,600 new shade trees properly installed (does not include replacement trees for existing shade trees)	2020
4,400 new shade trees properly installed (does not include replacement trees for existing shade trees)	2035

MEASURE E-5.2: PARKING LOT SHADE TREES
 Supporting Measure – Not Quantified

Consider developing a parking lot shade ordinance to reduce the urban heat island effect.

Measure Background

Heat islands can affect communities by increasing summertime peak energy demand, air conditioning costs, air pollution and greenhouse gas emissions, and heat-related illness and mortality. A primary contributor to urban heat islands is unshaded asphalt pavement, including streets and parking lots. These types of surfaces absorb heat from the sun during the day and radiate that heat back to the surrounding environment throughout the day and into the night, raising local air temperatures.

The City will consider replacing its current parking lot landscaping requirements with a parking lot shade ordinance that requires shade tree or shade structure installation at multi-family and commercial properties such that 50% of the parking lot is shaded within 10 years.

Action	Responsibility
A Consider adopting a parking lot shade ordinance requiring shade tree or shade structure installation at multi-family and commercial properties; establish threshold for minimum percentage of the parking lot that will be shaded within 10 years.	Planning Division

E-6: Building Lighting

MEASURE E-6.1: INDOOR LIGHTING EFFICIENCY

2020 and 2035 GHG Reduction Potential:
See Statewide Reduction AB 1109

Encourage voluntary adoption of efficient indoor and outdoor lighting technologies in residential and nonresidential buildings.

Measure Background

According to the 2009 California Residential Appliance Saturation Study, approximately 20% of residential electricity consumption is attributed to lighting^v. In nonresidential buildings, conventional commercial lighting, including T12 fluorescent bulbs and old exit sign lights, consume more energy than new T8 lights and light-emitting diode (LED) technologies. Lighting upgrades typically provide a short payback period for their investment, and are a good source of GHG emissions reductions.

The Sustainability Coordinator will provide outreach and technical assistance to nonresidential property owners to encourage participation in PG&E’s lighting upgrade program, which includes rebates for fixtures, lamps, accent/directional lighting, controls, and signage. The City will also provide outreach to multi-family property managers regarding lighting rebates through PG&E, including CFL replacement bulbs, activity sensors and timers, and replacing T-12 lamps with magnetic ballasts. Informational materials should demonstrate the simple-payback period associated with lighting improvements (typically 2-4 years). The City will also advertise PG&E’s CFL rebate, or other lighting rebate programs, on the new sustainability website.

Action	Responsibility
A Develop lighting-efficiency informational materials that demonstrate the simple-payback period associated with lighting improvements and existing rebates. Post information on the Solano County Sustainability Webpage. Provided targeted outreach to large nonresidential building managers and multi-family property managers.	Sustainability Coordinator
B Leverage existing energy-efficient lighting rebate programs offered through Energy Upgrade California, including fixture and lamp replacements/installation, accent and directional lighting, security lighting, lighting control systems, and PG&E’s residential CFL rebate program.	Solano Center for Business Innovation; Sustainability Coordinator
C Encourage small businesses to participate in PG&E programs that provide technical assistance and access to incentives for energy efficiency upgrades (e.g., lighting).	Solano EDC

E-7: Renewable Energy

MEASURE E-7.1: SOLAR PHOTOVOLTAIC SYSTEMS

2020 GHG Reduction Potential: **1,779 MT CO₂e/yr**

2035 GHG Reduction Potential: **4,318 MT CO₂e/yr**

Facilitate the voluntary installation of solar PV systems on residential and nonresidential buildings.

Measure Background

Solar photovoltaic (PV) systems generate electrical power by converting solar radiation into direct current electricity using semiconductors. PV power generation employs solar panels composed of cells containing photovoltaic material. PV systems can be retrofitted into existing buildings, usually by mounting them on an existing roof structure or walls. Suisun City's solar potential is approximately 5.1 kWh/m²/yr, which is sufficient to support a solar PV installation that would cover a large percentage of an average home's electricity demand.^{vi} In addition to residential rooftops, commercial and industrial rooftops tend to have large, flat roofs that are often well-suited for solar photovoltaic (PV). Parking lots also provide excellent opportunities for additional solar energy generation. According to PG&E data, Suisun City contains nearly 50 residential solar PV systems installed since 2005, with a total capacity of approximately 250 kW. The City also contains nonresidential solar PV systems totaling an additional 900 kW.^{vii} However, numerous barriers may prevent widespread adoption of solar PV technology, including City regulations, up-front costs, misinformation or lack of information.

Financing is critical to the success of the solar PV program. Property owners will be able to finance their PV systems through various financing programs and rebates. As described in Measure E-1.3, the City will support the development of and participation in two PACE programs to further promote renewable energy systems for residential and nonresidential buildings. Other financing models, such as power purchase agreements (PPAs), can be used to offset the initial capital cost of installing a solar PV system. Solar PV rebates are available through the California Solar Initiative and its related programs: New Solar Homes Partnerships, Multifamily Affordable Solar Housing Program, and Single-Family Affordable Solar Housing Program. Rebate amounts vary, and are typically based on the installed system size and expected performance. Some rebate programs have variable rebate steps, which decline as PV installed capacity increases.

The City will develop a comprehensive solar PV program that encourages homeowners to install PV systems through outreach advertising available rebate and incentive programs. Outreach efforts will aim to maximize community participation from homeowners, builders, and businesses by leveraging existing educational materials and links to technical assistance and rebates and financing programs. The City will encourage homeowners to request free solar PV assessments provided by private solar financing and installation companies. The City will also consider reviewing and revising its zoning and building codes and other applicable ordinances to identify and remove regulatory barriers to solar installations (i.e., PV and solar hot water) on residential and nonresidential properties. The City will consider offering priority permitting for new solar PV systems to further reduce implementation barriers.

Action	Responsibility
A Consider reviewing/revising all applicable building, zoning, and other codes and ordinances to identify and remove potential regulatory barriers to the installation of solar PV or solar hot water systems in residential and nonresidential construction.	Planning Division; Building Division
B Consider providing priority permitting for building-scale renewable energy projects.	Building Division; Sustainability Coordinator
C Develop a comprehensive outreach campaign to increase voluntary participation in solar PV installation programs, including a directory of existing rebates/incentive programs, explanation of simple-payback calculations for solar PV systems, and technical assistance. Leverage existing solar PV informational materials from Energy Upgrade California, the California Solar Initiative, and PG&E.	Sustainability Coordinator
D Develop informational materials about the benefits of PPAs offered through independent solar service providers. Post on the Solano County Sustainability Website, and make printed copies available at the Planning Department and Building Division counters.	Sustainability Coordinator

Progress Indicators	Year
700 single-family units install 4.5kW PV system 3.0 MW capacity installed on nonresidential and multi-family buildings	2020
1,300 single-family units install 4.5kW PV system 9.2 MW capacity installed on nonresidential and multi-family buildings	2035

MEASURE E-7.2: SOLAR WATER HEATERS

2020 GHG Reduction Potential: **77 MT CO₂e/yr**
 2035 GHG Reduction Potential: **413 MT CO₂e/yr**

Promote voluntary installation of solar water heaters in new construction and building retrofits through outreach campaign.

Measure Background

The effectiveness of a solar installation is described, in part, by its solar savings fraction (solar fraction). This measurement describes the percentage of a building’s total energy demand that can be met through installation of a solar energy system. A 0% solar fraction indicates that no solar energy utilization is possible, while 100% would indicate full utilization of solar energy to meet building energy demand. Suisun City has a 65% solar fraction for low-rise buildings (i.e., 1-2 stories) and a 44% solar fraction for multistory structures (i.e., 3 or more stories), indicating good potential for solar water heater applications.^{viii}

Solar water heating systems are a simple, reliable, and cost-effective method for harnessing the sun's energy to provide for hot water needs. Solar collectors, usually placed on the roof, absorb the sun’s energy to heat water that is stored in a water tank. The State of California has recognized the value of solar hot water heaters. The California Solar Water Heating and Efficiency Act of 2007 (AB 1470), created a 10-year

program aimed at installing solar water heaters in homes and businesses. AB 1470 was designed to lower the initial costs of purchasing a system, which averages around \$3,000-\$6,000.

Solar hot water systems can also be a cost-effective replacement for inefficient water heaters. According to the California Solar Initiative (CSI), solar hot water systems can lower energy bills by meeting 50 to 80 percent of hot water needs over a year. Though the high capital cost of solar water heater upgrades can pose a financial burden to homeowners, there are a range of financing and rebate options to offset these initial investment costs.

There are a number of financing options that may be used to reduce upfront costs, such as the PACE programs mentioned in Measure E-1.4, federal tax incentives through the Energy Policy Act of 2005, and financial incentives through the CSI-Thermal Program. Similar to the CSI solar rebate programs, the CSI-Thermal Program provides rebates for solar water heaters that decline in value as installation increases.

The Solar Water Heating Pilot Program, operated through San Diego Gas and Electric from 2007-2010, identified numerous barriers to the widespread adoption of solar water heating systems. In particular, participating contractors named permitting and inspection costs and delays as a primary obstacle to widespread adoption for single-family residential buildings because non-material costs represented approximately 65% of total system costs. That means, only 35% of total costs were related to the actual system price. To help address this problem, the City will work to streamline the solar water heater permitting process.

The City will also work with PG&E to create outreach opportunities that provide information about the financial benefits of solar hot water heaters, describe existing financing options and rebate programs, and explain the City’s efforts to encourage participation.

Action	Responsibility
A Collaborate with PG&E and the California Solar Initiative - Thermal Program to develop an outreach program to maximize installation of solar hot water systems and leverage existing funding opportunities.	Community Development; Sustainability Coordinator
B Streamline permitting process (e.g., building, electric, plumbing) for solar hot water system installation.	Building Division

Progress Indicators	Year
85 single-family residential units install solar hot water system; 15 multi-family units are served by solar hot water system;	2020
450 single-family residential units install solar hot water system; 75 multi-family units are served by solar hot water system	2035

MEASURE E-7.3: COMMUNITY CHOICE AGGREGATION

2020 GHG Reduction Potential: **Quantification Pending**

2035 GHG Reduction Potential: **Quantification Pending**

Support the County in its efforts to develop a community choice aggregation program to provide Solano County residents with a choice in their energy provider.

Measure Background

Solano County included a measure in its CAP to investigate the potential for a countywide community choice aggregation program (CCA). Assembly Bill 117, which was signed into law in 2002, enables California cities and counties, either individually or collectively, to supply electricity to customers within their borders through the establishment of a CCA. Unlike a municipal utility, a CCA does not own the transmission and delivery systems, but is responsible for providing electricity to its constituent residents and businesses. The CCA may own electric generating facilities, but more often, it purchases electricity from private electricity generators.

A key benefit of a CCA is that the participating jurisdictions can determine the amount of renewable energy contained within the generation portfolio. For example, a Solano County CCA could decide to provide 50% of its electricity from renewable sources, which would exceed State requirements directing California’s utilities to provide 33% of their electricity from renewable sources by 2020.

Developing a CCA will require a detailed analysis of energy demand, efficiency opportunities, and renewable generation opportunities in Solano County. Using existing models from other counties (e.g., Marin County) is likely to reduce the initial program design costs. The program would be most effective if the City partnered with other Solano County cities and the County government to jointly pursue a CCA program.

The City will work with the County and other interested participants in the preparation of feasibility studies, outreach campaigns, and other efforts to develop a countywide CCA.

Action	Responsibility
A Work with the County to prepare necessary study reports, informational materials, and any other supporting research and/or documents to help pursue a CCA program.	Sustainability Coordinator

Progress Indicators	Year
X% of residential units use CCA Green Level (50% RPS); X% of residential units use CCA Deep Green Level (100% RPS); X% of nonresidential area uses CCA Green Level (50% RPS); X% of nonresidential area uses CCA Deep Green Level (100% RPS)	2020
X% of residential units use CCA Green Level (50% RPS); X% of residential units use CCA Deep Green Level (100% RPS); X% of nonresidential area uses CCA Green Level (50% RPS); X% of nonresidential area uses CCA Deep Green Level (100% RPS)	2035

E-8: Street and Area Lighting

MEASURE E-8.1: STREET LIGHT UPGRADE

2020 GHG Reduction Potential: **76 MT CO₂e/yr**

2035 GHG Reduction Potential: **76 MT CO₂e/yr**

Partner with PG&E to upgrade existing street lights to LED, induction, or other energy-efficient technology. Require new street lights to use energy-efficient technology.

Measure Background

Streetlights account for approximately 35% of the City’s municipal electricity use^{ix}. High-pressure sodium bulbs, commonly used in streetlights, require more energy and have a shorter lifespan than new induction and/or light-emitting diode (LED) lights. The short simple-payback period associated with lighting upgrades makes this an easy measure to implement.

The City has developed a pilot program to upgrade streetlights to LED, similar to programs underway in the Cities of Dixon and Fairfield. The City will explore funding options through PG&E and the California Energy Commission to upgrade streetlights citywide. The City will also update its streetlight standards to require energy-efficient streetlights for new and replacement installations.

Action	Responsibility
A Develop a street light upgrade program that identifies funding sources and an implementation phasing schedule.	Sustainability Coordinator
B Consider revising the City’s street lights standards to include requirements for energy-efficient technology in new and replacement lamps, where cost effective	Public Works

Progress Indicators	Year
100% of HPS bulbs are replaced with energy-efficient technology	2020 and 2035

MEASURE E-8.2: TRAFFIC SIGNAL UPGRADE

2020 GHG Reduction Potential: **2 MT CO₂e/yr**

2035 GHG Reduction Potential: **2 MT CO₂e/yr**

Develop a traffic signal upgrade pilot program to test available energy-efficient lighting technologies.

Measure Background

The City will develop a pilot program to replace the incandescent bulbs in traffic signals with LED bulbs. The City will consult with the Cities of Dixon and Fairfield on their traffic signal upgrade programs to identify best practices in technologies and financing options. Following a successful pilot program, the City will upgrade all traffic signals citywide with energy-efficient technology.

Action	Responsibility
A Consult with the Cities of Dixon and Fairfield regarding their traffic light upgrade programs for best management practice ideas.	Public Works
B Implement pilot program at selected intersections to test results of available technology. Expand program citywide following pilot program.	Public Works

Progress Indicators	Year
100% of incandescent bulbs in traffic signals are replaced with energy-efficient technology	2020 and 2035

MEASURE E-8.3: PARKING LOT LIGHTING UPGRADE

2020 GHG Reduction Potential: **8 MT CO₂e/yr**

2035 GHG Reduction Potential: **23 MT CO₂e/yr**

Consider additional parking lot lighting upgrade projects in the future.

Measure Background

High-quality parking lot lighting is necessary to provide personal safety and deter theft and vandalism. However, conventional parking lot lighting, including high-wattage metal halide and high-pressure sodium lights, consumes more energy than new light-emitting diode (LED) technologies, which provide comparable lighting quality at a fraction of the energy consumption.

The City will build upon its previous experience in parking lot lighting upgrades at municipal parking lots, and explore opportunities for additional upgrade projects. To finance future projects, the City could contract with an Energy Service Company (ESCO) to perform parking lot lighting energy assessments and identify best available retrofit improvements. In most cases, the ESCO pays up-front costs associated with retrofit installation, further reducing financial risk to the City.

The City will also work with the Solano Center for Business Innovation to provide outreach to local businesses about the simple-payback period associated with parking lot lighting upgrades. Informational materials could include financial characteristics of the City’s previously installed upgrades and potential resources for financing or rebates. PG&E’s *Lighting Rebate Catalog* provides a comprehensive source for exterior lighting rebates, including fixtures and bulbs.

Action	Responsibility
A Build upon the City's experience with their first parking lot lighting upgrade.	Public Works

Progress Indicators	Year
10% of parking lot lights are upgraded from HPS to energy-efficient technology	2020
25% of parking lot lights are upgraded from HPS to energy-efficient technology	2035

E-9: Municipal Actions

MEASURE E-9.1: MUNICIPAL BUILDING ENERGY EFFICIENCY

2020 GHG Reduction Potential: **41 MT CO₂e/yr**

2035 GHG Reduction Potential: **50 MT CO₂e/yr**

Establish a goal to reduce business-as-usual electricity use in municipal buildings by 15%.

Measure Background

Reducing municipal energy use will reduce communitywide GHG emissions, save taxpayer dollars, and set an example for the successful implementation of energy-saving technology.

The City has already completed building energy assessments to identify future potential for energy efficiency improvements. As described throughout this chapter, numerous financing options and rebate programs are available to fund energy-efficiency improvements. The City could also explore energy saving performance contracts to finance improvements. Under this type of agreement, an Energy Services Company (ESCO) completes building energy assessments to identify the most cost-effective retrofit options. The ESCO guarantees the amount of energy that will be saved under a defined retrofit package, and further guarantees that the value of energy savings would be sufficient to cover efficiency upgrade costs as long as the price of energy does not fall below a stipulated floor price. In most cases, the ESCO pays up-front costs associated with retrofit installation, further reducing financial risk to the City.

In addition to addressing building performance, the City could provide information and training to City employees on how to reduce energy consumption in the workplace. The City could conduct one campaign per year, ideally during National Energy Awareness Month in October, to educate employees about their energy consumption at work and ways to reduce consumption (e.g., turning off computers and monitors, turning off lights, using power strips). To incentivize participation, the City could consider advertising energy consumption trends during the campaign period and provide prizes for quantifiable reductions.

Action	Responsibility
A Perform energy assessments on select City buildings to identify future potential for energy efficiency improvements.	Sustainability Coordinator
B Consider hiring an ESCO to implement findings from previously completed building energy assessments.	Public Works
C Conduct City employee energy use reduction campaign and incentivize participation.	Sustainability Coordinator

Progress Indicators	Year
Municipal building energy use is reduced by 240,000 kWh/yr from 2005 business-as-usual projections	2020
Municipal building energy use is reduced by 300,000 kWh/yr from 2005 business-as-usual projections	2035

MEASURE E-9.2: WASTEWATER TREATMENT PLANT PROCESS OPTIMIZATION

2020 GHG Reduction Potential: **220 MT CO₂e/yr**
 2035 GHG Reduction Potential: **220 MT CO₂e/yr**

Continue to perform energy optimization assessments at FSSD and implement assessment results.

Measure Background

PG&E performs Integrated Energy Audits of wastewater treatment facilities to identify the most critical efficiency improvements and help sewer districts to select energy-saving projects and identify available financial incentives. PG&E helped the Fairfield Suisun Sewer District (FSSD) to save 1.3 million kWh/yr and install wind turbines with a 200 kW capacity. FSSD received \$350,000 in incentives from PG&E, contributing to a simple-payback of 2.7 years for its energy efficiency projects.^x FSSD now budgets for regular energy audits to ensure their facility is operating efficiently.

Action	Responsibility
A Continue to budget for regular Integrated Energy Audits on wastewater treatment plant operations.	FSSD

Progress Indicators	Year
Reduce energy use at FSSD by 1.3 million kWh from 2005 business-as-usual	2020 and 2035

MEASURE E-9.3: SUSTAINABILITY COORDINATOR

Supporting Measure – Not Quantified

Establish a full-time regional Sustainability Coordinator to monitor CAP implementation and promote regional sustainability efforts. Explore opportunities to partner with other Solano County governments on this effort (e.g., City of Benicia, Solano County).

Measure Background

Implementation of the measures described in this CAP will likely require an effort that surpasses the available capacity of existing City staff. Further, numerous measures are identified as “Regional Opportunities” that would benefit from collaboration among the different Solano County governments. Therefore, the City recommends creation of a regional Sustainability Coordinator position, which could oversee implementation of CAP measures that rely on regional collaboration.

The Sustainability Coordinator would act as a liaison between local governments, residents, and businesses in Solano County to implement and track progress of CAP measures and actions. A regional approach would provide implementation efficiencies on certain measures, and would also help to disseminate best practices information to the local governments regarding other measures. The Sustainability Coordinator could also act as the point of contact for various regional agencies, including STA, PG&E, the Solano EDC, and the Solano Center for Business Innovation. This would allow one person to gain experience in facilitating implementation of the various programs described

throughout this CAP, as opposed to multiple employees of each local government having to coordinate their efforts.

In recent years, several city and county governments have been able to sponsor a full-time Sustainability Coordinator position through American Reinvestment and Recovery Act (ARRA) grant funding or similar programs. The City will collaborate with other local governments to identify and pursue grant funding to establish a regional Sustainability Coordinator position.

Action	Responsibility
A Secure funding for regional Sustainability Coordinator position.	Community Development; Solano EDC
B Coordinate with other Solano cities and the County to prioritize regional sustainability issues and programs for joint implementation.	Community Development; Solano EDC

E-10: Outreach

MEASURE E-10.1: PUBLIC OUTREACH

Supporting Measure – Not Quantified

Develop coordinated outreach campaign to fulfill the public outreach components recommended throughout this CAP.

Measure Background

Community engagement and effective participation are essential to the successful implementation of this CAP. During the CAP implementation period, the City will conduct outreach programs that involve residents and businesses in various activities, assessments, and actions.

Effective public participation will increase the likelihood that the measures recommended in this plan achieve estimated participation rates. Furthermore, Suisun City will see higher participation rates if outreach and education programs are adapted over time to meet the changing needs of the community. Increased participation rates will result in increased emissions reductions.

At the start of each fiscal year, the City will work with local stakeholders to determine the outreach priorities of the community, which could be a certain segment of the community (e.g., a group of neighborhoods, the agricultural community, the retail sector) or a specific action (e.g., carpooling, biking, lighting). Outreach priorities should be related to measures described in the CAP. The City will strive to designate at least one outreach event per quarter to address the chosen priority areas. The City could also designate one week per year to conduct a high-profile energy efficiency outreach campaign targeting a specific group. The campaign week could also be used to recognize community members that have implemented major improvements.

Numerous measures described in this chapter would benefit from a website that could serve as a central source of information on resource conservation strategies, technical assistance for a variety of topics, and a clearinghouse for rebates and other financial incentives to help implement CAP strategies. The City will partner with other local

governments to develop a Solano County Sustainability Website that will be a resource for all residents and businesses in the county.

Action	Responsibility
A Work with local stakeholders to determine the CAP outreach priorities for the year.	Sustainability Coordinator
B Designate at least one outreach event per quarter to address the priority areas.	Sustainability Coordinator
C Conduct a high-profile energy efficiency outreach campaign; recognize community members that have implemented major improvements.	Sustainability Coordinator
D Partner with other Solano County governments to develop a county sustainability website.	Sustainability Coordinator

Transportation Strategy

To be developed following receipt of SGC grant funding

Water Strategy

To be developed following receipt of SGC grant funding

Waste Strategy

To be developed following receipt of SGC grant funding

Notes

ⁱ US Census, 2010. Data represents housing units constructed prior to 1980.

ⁱⁱ PG&E, 2012. Available at:

<http://www.pgecorp.com/sustainability/en03_clean_energy.jsp>

ⁱⁱⁱ US Census, 2010.

^{iv} California Energy Commission. *2009 California Residential Appliance Saturation Study*. Prepared by KEMA, October 2010.

^v California Energy Commission. *2009 California Residential Appliance Saturation Study*. Prepared by KEMA, October 2010.

^{vi} National Renewable Energy Laboratory Renewable Resource Data Center, 2011.

^{vii} PG&E. *PG&E Generation Interconnection Services Progress Report for Suisun City*. October 2012.

^{viii} California Energy Commission. *Solar Water Heating CEC 2013 Title 24 Pre-rulemaking Workshop*. June 9, 2011.

^{ix} PG&E, October 2012.

^x PG&E. *Case Study: Fairfield Suisun Sewer District Integrated Energy Management*. August 2009.

CHAPTER 4

BENCHMARKS + IMPLEMENTATION

4

This chapter describes how the City will implement CAP emissions reduction measures and actions in the following sections:

- + **Implementation and Monitoring:** Describes how City staff will implement CAP measures and related actions, and track the performance metrics identified for each measure.
- + **Program Evaluation and Evolution:** Discusses the need to evaluate, update, and amend the CAP over time, so the plan remains effective and current.

Implementation and Monitoring

Ensuring that the CAP measures translate from policy language into on-the-ground results is critical to the success of the plan. To facilitate this, each measure described in Chapter 3 contains a table that identifies specific actions that the City will carry out, and the departments or organizations responsible for each action. The table also provides performance metrics to enable City staff, the City Council, and the public to track measure implementation and monitor overall CAP progress.

The tables provide both interim (2020) and final (2035) performance metrics. Interim performance metrics are especially important, as they provide checkpoints to evaluate if a measure is on the right path to achieving its long-term GHG reductions.

The performance metrics are directly related to the estimated GHG emissions reductions. Therefore, they are written to provide a quantifiable measurement to accurately track progress toward the reduction target. For example, Measure E-7.1 encourages voluntary installation of rooftop solar photovoltaic systems. The measure's estimated GHG emissions reductions are based on numerous assumptions, including the number of residential and commercial buildings that will install solar photovoltaics between 2005 and the 2020 and 2035 target years (including those that have already installed systems since 2005). The performance metric assumes that 700 single-family residential buildings will include a 4.5 kW solar PV system by 2020 (in addition to those already existing in the 2005 baseline year). This measure also assumes that 3 MW of new solar photovoltaic capacity will be installed on multi-family and commercial buildings by 2020. If there is greater adoption of solar photovoltaics than estimated in this measure, then additional emissions reductions will occur. Likewise, if installations fall short of the estimates described here, then this measure will achieve less than its stated reductions. Participation rate assumptions are described in Appendix B.

Upon adoption of the CAP, the City departments and regional agencies identified for each measure in Chapter 3 will become responsible for implementing assigned actions. Key staff in each department or the proposed regional Sustainability Coordinator will facilitate and oversee this work. To assess the status of City efforts, CAP plan implementation meetings should take place several times a year. Some actions will require inter-departmental or inter-agency cooperation, and appropriate partnerships will need to be established.

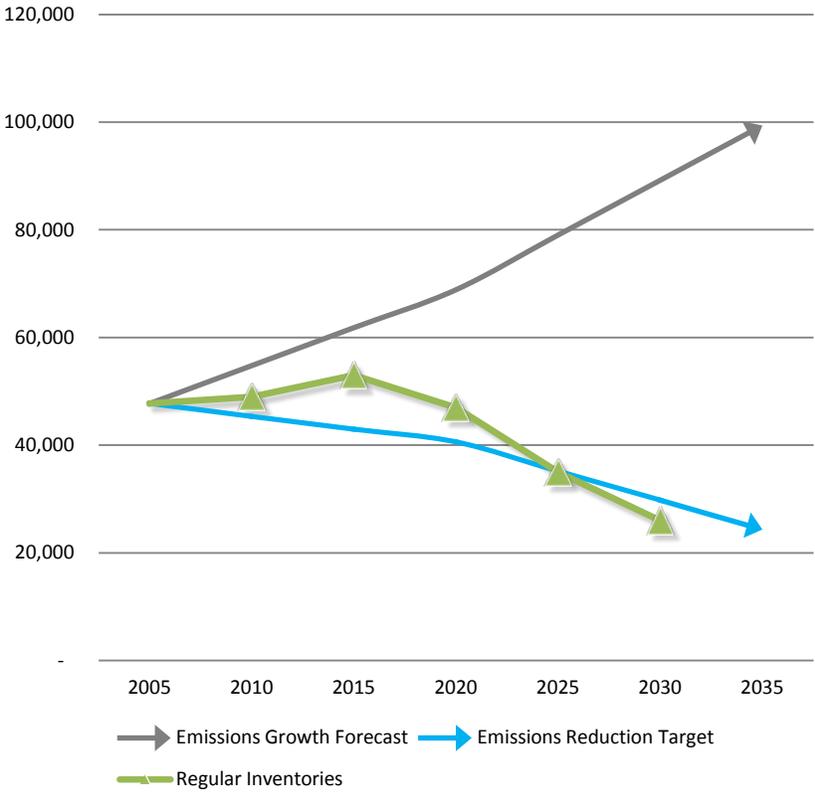
Program Evaluation and Evolution

The CAP represents the City's initial attempt to create an organized, communitywide plan to reduce GHG emissions. Staff will need to evaluate the program's performance over time and be ready to alter or amend the plan if it is not achieving its reduction target.

PROGRAM EVALUATION

Two types of performance evaluation are important: (a) evaluation of the community’s overall ability to reduce GHG emissions, and (b) evaluation of the performance of individual CAP measures. Communitywide GHG emission inventories will provide the best indication of CAP effectiveness. It will be important to reconcile actual growth in the City versus the growth projected when the CAP was developed. Conducting these inventories periodically will enable direct comparison to the 2005 baseline inventory and will demonstrate the CAP’s ability to achieve the adopted reduction target. The Community Development Department, in conjunction with the proposed Sustainability Coordinator, will prepare communitywide inventories every three to five years following adoption of the CAP to assess progress toward the GHG emissions reduction target. Figure 4.1 gives an example of how regular communitywide inventories can help track progress toward the reduction targets compared to the business-as-usual emissions forecasts. In the hypothetical scenario shown, communitywide emissions actually increase through 2015 before they start declining to achieve the long-term reduction target. This type of communitywide overview is the easiest way to determine if the CAP measures are being effectively implemented.

Figure 4.1 – Example of Future Emissions Inventory Monitoring



Source: AECOM 2012

Note: This figure is a place holder and will be revised with City-specific data for the emissions growth forecast line as soon as the complete emissions forecasts have been completed.

While communitywide inventories provide information about overall emission reductions, it will also be important to understand the effectiveness of each measure. Evaluation of the emissions reduction capacity of individual measures will improve staff and decision makers' ability to manage and implement the CAP. The City can reinforce successful measures and reevaluate or replace under-performing ones. Evaluating measure performance will require data regarding actual community participation.

Table 4.1 provides an example of a measure tracking template that could be used to monitor the efficacy of each CAP measure. The table is similar to the measure tables included in Chapter 3, but has been expanded to include Phasing and Tracking Mechanisms. The Phasing column allows each responsible department or agency to identify internal timelines for implementing specific action steps. These could be expressed as specific target years or more generally as short-, medium-, and long-term actions. The Tracking Mechanisms specify how implementation of the Progress Indicators will be monitored. Similar to the future communitywide inventories, the Progress Indicators should be evaluated regularly to ensure each measure is on track to achieve its stated emissions reductions. If during the implementation review process a measure is found to be falling short of its performance targets, then additional attention can be given to modifying the implementation strategy. If implementation review indicates that a measure will be unable to achieve its stated reduction level, then additional CAP measures could be developed to make up the difference or other measures could be enhanced to increase their reduction potential. CAP implementation should be an iterative process to reflect future changes in the community.

The proposed Sustainability Coordinator and responsible departments and agencies will evaluate measure performance on the same schedule as the communitywide inventories following adoption of the CAP, and summarize progress toward the GHG reduction target in a report that describes estimated annual GHG reductions in 2020, achievement of performance metrics, participation rates (where applicable), and remaining barriers to implementation.

The proposed Sustainability Coordinator (or Community Development Department staff) will report progress on the CAP action items to decision-makers on an annual basis. Staff will deliver this report in conjunction with the State-required annual report to the City Council regarding implementation of the City's General Plan. The progress report will include a cursory assessment of progress and implementation of individual CAP measures, including how new development projects have incorporated relevant measures. The progress report will also identify measure gaps and recommend corrections.

PROGRAM EVOLUTION

To remain relevant, the City must be prepared to adapt and transform the CAP over time. It is likely that new information about climate change science and risk will emerge, new GHG reduction technologies and innovative municipal strategies will be developed, new financing will be available, and State and federal legislation will change. It is also possible that future inventories will indicate that the community is not achieving its adopted target. As part of the evaluations identified above, the City will assess the implications of new scientific findings and technology, explore new opportunities for GHG reduction, respond to changes in climate policy, and incorporate these changes in future updates to the CAP to ensure an effective and efficient program.

Table 4.1 – Measure Implementation Tracking Template

MEASURE E-7.1 SOLAR PHOTOVOLTAIC SYSTEMS

Facilitate the voluntary installation of solar PV systems on residential and nonresidential buildings.

Action	Responsibility	Phasing
A Consider reviewing/revising all applicable building, zoning, and other codes and ordinances to identify and remove potential regulatory barriers to the installation of solar PV or solar hot water systems in residential and nonresidential construction.	Planning Division; Building Division	Establish an internal target date or timeframe for implementing each action. (e.g., Short-Term, Medium-Term, Long-Term, or specific target years)
B Consider providing priority permitting for building-scale renewable energy projects.	Building Division; Sustainability Coordinator	
C Develop a comprehensive outreach campaign to increase voluntary participation in solar PV installation programs, including a directory of existing rebates/incentive programs, explanation of simple-payback calculations for solar PV systems, and technical assistance. Leverage existing solar PV informational materials from Energy Upgrade California, the California Solar Initiative, and PG&E.	Sustainability Coordinator	
D Develop informational materials about the benefits of PPAs offered through independent solar service providers. Post on the Solano County Sustainability Website, and make printed copies available at the Planning Department and Building Division counters.	Sustainability Coordinator	

Progress Indicators	Year	Tracking Mechanisms
700 single-family units install 4.5kW PV system 3.0 MW capacity installed on nonresidential and multi-family buildings	2020	Collect information from building permit data and analyze to gauge progress towards indicator targets: How many single family homes installed PV systems in each year, and at what total new capacity?
1,300 single-family units install 4.5kW PV system 9.2 MW capacity installed on nonresidential and multi-family buildings	2035	What was the total new installed PV capacity for multi-family and nonresidential buildings in each year? What was the total new combined installed PV capacity in each year?

Project Consistency with the CAP

The CAP identifies both mandatory and voluntary GHG reduction measures that would apply to different types of future projects.

MANDATORY MEASURES

For each of the following mandatory measures, the CAP either reinforces the implementation of current codes and ordinances, or directs changes to the City's codes and ordinances that would result in GHG reductions:

- + Measure E-5.1: Building Shade Trees
- + Measure E-5.2: Parking Lot Shade Trees

All new projects would be required to comply with these codes and ordinances, as applicable.

VOLUNTARY MEASURES

The remaining measures are essentially voluntary, relying on assumed levels of community participation to create communitywide GHG reductions. These measures will be tracked to ensure assumed participation rates are reached and that the voluntary measures are being adequately applied to new and existing projects. If not, then additional, more aggressive actions will be necessary to correct shortfalls.

AGENDA TRANSMITTAL

MEETING DATE: December 11, 2012

PLANNING COMMISSION AGENDA ITEM: Resolution PC 12 - ____; A Resolution of the City of Suisun City Planning Commission Recommending City Council Adoption of a Complete Streets Policy

ENVIRONMENTAL REVIEW: The Planning Commission's action is simply a recommendation to City Council. The environmental review will be completed prior to City Council taking final action on this matter.

BACKGROUND: The term "Complete Streets" describes a comprehensive, integrated transportation network with infrastructure and design that allows safe and convenient travel along and across streets for all users, including pedestrians, bicyclists, persons with disabilities, motorists, movers of commercial goods, users and operators of public transportation, seniors, children, youth, and families.

STAFF REPORT: The Bay Area Metropolitan Transportation Commission (MTC) has adopted a policy consistent with CalTrans Directive 64 which requires the adoption of a Complete Streets Policy by each jurisdiction that seeks to receive regional or state transportation funding. MTC has required local Congestion Management Agencies (CMAs) to review transportation grant funding applications from local jurisdictions, for such funding programs as the One Bay Area Grant (OBAG) program, for compliance with this Complete Streets Policy implementation. The Solano Transportation Authority (STA) is the CMA for Solano County.

STA is requiring that each jurisdiction that intends to compete for OBAG funds must either amend or adopt a General Plan that complies with the California Complete Streets Act of 2008 or adopt a resolution that incorporates specific Complete Streets policies. The General Plan adoption/amendment or adoption of the resolution must be completed by the jurisdiction's governing body not later than January 31, 2013.

In addition to putting in place the required policies, jurisdictions are encouraged to develop the best policy that fits within the context of their local area in consultation with affected departments and stakeholders, going beyond the required elements to accommodate all users of the roadway network.

Looking beyond the current grant cycle, it is anticipated that the 2015 round of One Bay Area Grant funding will require jurisdictions to not just adopt a resolution but to update the circulation element of its general plan consistent with the Complete Streets Act to maintain eligibility for these funds. Staff anticipates that our General Plan will be updated by that date.

PREPARED BY:

John Kearns, Associate Planner

REVIEWED/APPROVED BY:

April Wooden, Community Development Director

To assist a local jurisdiction in developing its resolution, MTC has developed and provided a sample resolution of support and also supplied a copy of the City of Baldwin Park's Complete Streets Policy (Attachment 2.) as a positive example of appropriate Complete Streets policies.

RECOMMENDATION: Adopt Resolution PC12-___; A Resolution of the City of Suisun City Planning Commission Recommending City Council Adoption of a Complete Streets Policy.

ATTACHMENTS:

1. Resolution PC12-___
2. City of Baldwin Park Example

RESOLUTION NO. PC12-__

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF SUISUN CITY RECOMMENDING CITY COUNCIL ADOPTION OF A COMPLETE STREETS POLICY

WHEREAS, the term “Complete Streets” describes a comprehensive, integrated transportation network with infrastructure and design that allows safe and convenient travel along and across streets for all users, including pedestrians, bicyclists, persons with disabilities, motorists, movers of commercial goods, users and operators of public transportation, seniors, children, youth, and families; and

WHEREAS, the City of Suisun City acknowledges the benefits and value for the public health and welfare of reducing vehicle miles traveled and increasing transportation by walking, bicycling, and public transportation; and

WHEREAS, each jurisdiction that applies for funding through the One Bay Area Grant (OBAG) program must either have a General Plan that includes Complete Street Policies or have adopted a resolution incorporating Complete Street Policies; and

WHEREAS, the City of Suisun City has taken a proactive stance by regularly incorporating complete streets elements into its ongoing transportation projects; and

WHEREAS, the City of Suisun City recognizes that the planning and coordinated development of Complete Streets infrastructure provides benefits for local governments in the areas of infrastructure cost savings, public health, and environmental sustainability; and

WHEREAS, the State of California has emphasized the importance of Complete Streets by enacting the California Complete Streets Act of 2008 (also known as AB 1358), which requires that when a city or county revises general plans, it identifies how it will provide for the mobility needs of all users of the roadways, as well as through Deputy Directive 64, in which the California Department of Transportation explained that it “views all transportation improvements as opportunities to improve safety, access, and mobility for all travelers in California and recognizes bicycle, pedestrian, and transit modes as integral elements of the transportation system”; and

WHEREAS, the California Global Warming Solutions Act of 2006 (known as AB 32) sets a mandate for the reduction of greenhouse gas emissions in California and the Sustainable Communities and Climate Protection Act of 2008 (known as SB 375) requires emissions reductions through coordinated regional planning that integrates transportation, housing, and land-use policy; and

WHEREAS, significant increases in travel by public transit, bicycling, and walking will help to achieve the requirements of the mandates of AB32 and SB375; and

WHEREAS, numerous California counties, cities, and agencies have adopted Complete Streets policies and legislation in order to further the health, safety, welfare, economic vitality, and environmental well-being of their communities; and

WHEREAS, the City of Suisun City therefore, in light of the foregoing benefits and considerations, wishes to improve its commitment to Complete Streets and desires that its streets form a comprehensive and integrated transportation network promoting safe, equitable, and convenient travel for all users while preserving flexibility, recognizing community context, and using the latest and best design guidelines and standards.

NOW, THEREFORE, BE IT RESOLVED, by the Planning Commission of the City of Suisun City, State of California, as follows:

1. That the Planning Commission of the City of Suisun City recommends that the City Council of the City of Suisun City adopt the Complete Streets Policy attached hereto as Exhibit A, and made part of this Resolution.
2. That the Complete Streets policies and principles are consistent with the California Complete Streets Act of 2008 (AB 1358).
3. That the Complete Streets Policy adopted by this resolution will be incorporated in the next substantial revision of the City of Suisun City General Plan Circulation Element.

The foregoing motion was made by Commissioner _____ and seconded by Commissioner _____ and carried by the following vote:

AYES:	Commissioners:
NOES:	Commissioners:
ABSENT:	Commissioners:
ABSTAIN:	Commissioners:

WITNESS my hand and the seal of said City this 11th day of December 2012.

Anita Skinner, Commission Secretary

Exhibit A

This Complete Streets Policy was adopted by Resolution No. _____ by the City Council of the City of Suisun City on _____, 2012.

COMPLETE STREETS POLICY OF THE CITY OF SUISUN CITY

A. Complete Streets Principles.

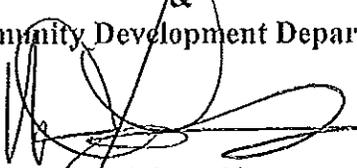
- 1. Complete Streets Serving All Users.** All transportation improvements shall be planned, designed, constructed, operated and maintained to support safe and convenient access for all users and increase mobility for walking, bicycling, and transit use, wherever possible, while promoting safe and accessible operations for all users, including pedestrians, bicyclists, persons with disabilities, motorists, movers of commercial goods, users and operators of public transportation, seniors, children, youth, and families.
- 2. Context Sensitivity.** The planning and implementation of transportation projects shall reflect conditions within and surrounding the project area, whether the area is a residential or business district, or urban, suburban, or rural. In project planning, design, and construction of Complete Streets projects, the City shall work with residents, merchants, and other stakeholders to ensure that a strong sense of place ensues.
- 3. Complete Streets Routinely Addressed by All Departments.** All relevant departments and agencies of the City of Suisun City shall work towards making Complete Streets practices a routine part of everyday operations; approach every relevant project, program, and practice as an opportunity to improve streets and the transportation network for all categories of users; and work in coordination with other departments, agencies, and jurisdictions to maximize opportunities for Complete Streets, connectivity, and cooperation. Potential Complete Streets opportunities could apply to projects such as transportation projects, road rehabilitation, new development, construction of utility infrastructure, etc.
- 4. All Projects and Phases.** This policy applies to all roadway projects, including those involving new construction, reconstruction, retrofit, repaving, rehabilitation, and changes in the allocation of pavement space on an existing roadway, as well as those that involve new privately-built roads and easements intended for public use.

B. Implementation.

- 5. Plan Consultation.** Any proposed improvements shall be evaluated for consistency with all local bicycle, pedestrian, and/or transit plans, as well as any other plans that affect the right-of-way.
- 6. Street Network/Connectivity.** The transportation system should provide a connected network of facilities accommodating all modes of travel. This includes looking for opportunities for repurposing rights-of-way to enhance connectivity for cyclists, pedestrians, and transit users. A well-connected network should include non-motorized connectivity to schools, parks, commercial areas, civic destinations and regional non-motorized networks on both publicly-owned roads/land and private development.
- 7. Bicycle and Pedestrian Advisory Committee Consultation.** Input shall be solicited from local bicycle and pedestrian advisory committees (BPACS) or similar advisory groups, in an early project-development phase to verify bicycle and pedestrian needs related to the project.
- 8. Evaluation.** The City of Suisun City shall establish a set of measures necessary to evaluate the implementation of this policy and shall develop the means to collect data necessary to perform such evaluation. All relevant departments shall use these measures and shall collect the required data in order to evaluate, on an annual basis, the implementation of this policy.

C. Exceptions.

- 9. Process for Determining Exceptions.** Written findings that a project involves only maintenance; is intended to address an immediate safety concern; that would result in cost of implementation of complete streets elements that is excessive and disproportionate in relation to the overall project cost; or that the implementation of this policy is not practically feasible or cost-effective because of adverse environmental impacts, impacts on neighboring land uses, the cost of right-of-way acquisition, or similar issues, shall be prepared and executed by the City's Public Works Director and Community Development Director for each project that cannot accommodate all provisions of this policy. These written findings shall be available for public review at least 10 days prior to the initiation of the project, except for emergency maintenance or safety activities.

<p><u>City of Baldwin Park</u> Administrative Policy # 027</p>	<p><u>Date:</u> Approved by: City Council 7/20/11</p>
<p><u>SUBJECT:</u> Complete Streets Policy</p>	<p><u>Authority:</u> Public Works Department & Community Development Department</p>  <p>Mayor, Manuel Lozano</p>

The objective of this policy is to establish guiding principles and practices so transportation improvements are planned, designed, constructed, operated and maintained to encourage walking, bicycling, and transit use while promoting safe operations for all users.

The City of Baldwin Park will create a safe and efficient transportation system that promotes the health and mobility of all Baldwin Park citizens and visitors by providing high quality pedestrian, bicycling, and transit access to all destinations throughout the city, and will design its streets for people, with beauty and amenities. The City of Baldwin Park will provide for the needs of drivers, transit users, bicyclists, and pedestrians of all ages and abilities in all planning, design, construction, reconstruction, retrofit, operations, and maintenance activities and products.

The City of Baldwin Park will enhance the safety, access, convenience, and comfort of all users of all ages and abilities. The City understands that children, seniors, and persons with disabilities will require special accommodations.

STREET NETWORK / CONNECTIVITY

(A) The City of Baldwin Park will design, operate and maintain a transportation network that provides a connected network of facilities accommodating all modes of travel.

(B) The City will actively look for opportunities to repurpose rights-of-way to enhance connectivity for pedestrians, bicyclists, and transit.

(C) The City will focus non-motorized connectivity improvements to services, schools, parks, civic uses, regional connections and commercial uses.

(D) The City will require large new developments and redevelopment projects to provide interconnected street networks with small blocks.

JURISDICTION

(A) This Complete Streets Policy is intended to cover all development and redevelopment in the public domain and all street improvement assessment districts within Baldwin Park, but will also focus on regional connectivity.

(B) Every City Department including Administration, Public Works, Community Development, Recreation and Community Services, and Police, will follow the policy.

(C) The City requires all developers and builders to obtain and comply with the City's standards.

(D) The City requires agencies that Baldwin Park has permitting authority over, including, but not limited to, water agencies, electrical utilities, gas and petroleum utilities, communications utilities, and service contractors to comply with this policy.

(E) The City will work closely with Los Angeles County, Caltrans, the Los Angeles County Metropolitan Transportation Authority, the Southern California Regional Rail Authority, and the Southern California Association of Governments to promote compliance.

(F) The City encourages agencies not under Baldwin Park's jurisdiction, including, but not limited to, the Baldwin Park Unified School District, to satisfy this policy.

PHASES

The City of Baldwin Park will apply this Complete Streets policy to all roadway projects, including those involving new construction, reconstruction, retrofits, repaving, rehabilitation, or changes in the allocation of pavement space on an existing roadway, as well as those that involve new privately built roads and easements intended for public use. Complete Streets may be achieved through single projects or incrementally through a series of smaller improvements or maintenance and operation activities over time.

EXCEPTIONS

Complete Streets principles and practices will be included in street construction, reconstruction, repaving, and rehabilitation projects, as well as other plans and manuals, except under one or more of the following conditions:

(A) A project involves only ordinary or emergency maintenance activities designed to keep assets in serviceable condition such as mowing, cleaning, sweeping, spot repair, concrete joint repair, or pothole filling, or when interim measures are implemented on temporary detour or haul routes.

(B) The City Council exempts a project due to excessive and disproportionate cost of establishing a bikeway, walkway or transit enhancement as part of a project.

(C) The Director of Public Works and the Manager of Community Development jointly determine the construction is not practically feasible or cost effective because of significant or adverse environmental impacts to waterways, flood plains, remnants of native vegetation, wetlands, or other critical areas, or due to impacts on neighboring land uses, including impact from right of way acquisitions.

(D) Unless otherwise determined by the City Council, the Director of Public Works and the Manager of Community Development jointly determine it is not practically feasible or cost effective to implement the provisions of this policy through public or private project design or manuals or other plans.

Exceptions described in (B) and (C), above, will be documented and be made available for public access at least 21 days prior to decision. Exceptions described in (A) and (D), above, will be documented.

DESIGN

Additionally, Baldwin Park's City Council declares it is the City of Baldwin Park's policy to:

(A) Adopt new Complete Streets Design Guidelines to guide the planning, funding, design, construction, operation, and maintenance of new and modified streets in Baldwin Park while remaining flexible to the unique circumstances of different streets where sound engineering and planning judgment will produce context sensitive designs.

(B) Incorporate the Complete Streets Design Guidelines' principles into all City plans, manuals, rules, regulations and programs as appropriate.

(C) Provide well-designed pedestrian accommodations on all streets and crossings. Pedestrian accommodations can take numerous forms, including but not limited to traffic signals, roundabouts, bulb-outs, curb extensions, sidewalks, buffer zones, shared-use pathways, and perpendicular curb ramps, among others.

(D) Provide well-designed bicycle accommodations along all streets. Bicycle accommodations can take numerous forms, including but not limited to the use of bicycle boulevards, striping, slow streets, low auto volume streets, traffic calming, signs, and pavement markings, among others.

(E) Where physical conditions warrant, landscaping shall be planted whenever a street is newly constructed, reconstructed, or relocated.

CONTEXT SENSITIVITY

(A) The City of Baldwin Park will plan its streets in harmony with the adjacent land uses and neighborhoods.

(B) The City will solicit input from local stakeholders during the planning process.

(C) The City will integrate natural features, such as waterways, and other topography into design of our streets.

(D) The City will design streets with a strong sense of place. We will use architecture, landscaping, streetscaping, public art, signage, etc. to reflect the community and neighborhood.

(E) The City will coordinate street improvements with merchants along retail and commercial corridors to develop vibrant and livable districts.

(F) The City will practice sustainable storm water management strategies.

PERFORMANCE MEASURES

The City will evaluate this Complete Streets Policy using the following performance measures:

1. Total miles of on-street bikeways defined by streets with clearly marked or signed bicycle accommodation
2. Total miles of streets with pedestrian accommodation (goal – all)
3. Number of missing or non-compliant curb ramps along City streets (goal – 0)
4. Number of new street trees planted along City streets
5. Percentage of new street projects that are multi-modal
6. Number and severity of pedestrian-vehicle and bicycle-vehicle crashes
7. Number of pedestrian-vehicle and bicycle-vehicle fatalities (goal – 0)
8. Track Fitnessgram data of Baldwin Park Unified School District students
9. Sales tax revenue

The City will identify funds and create a methodology to collect data related to those performance measures.

IMPLEMENTATION

(A) *Advisory Group.* The City will establish an inter-departmental advisory committee to oversee the implementation of this policy. The committee will include members of Public Works, Community Development, Recreation and Community Services, and the Police Departments from the City of Baldwin Park. The committee may include representatives from the Los Angeles County Metropolitan Transportation Authority, representatives from the bicycling, disabled, youth and elderly community, and other advocacy organizations, as relevant. This committee will meet quarterly and provide a written report to City Council evaluating the City's progress and advise on implementation.

(B) *Inventory.* The City will maintain a comprehensive inventory of the pedestrian and bicycling facility infrastructure integrated with the City's database and will prioritize projects to eliminate gaps in the sidewalk and bikeways networks.

(C) *Capital Improvement Project Prioritization.* The City will reevaluate Capital Improvement Projects prioritization to encourage implementation of bicycle, pedestrian, and transit improvements.

(D) *Revisions to Existing Plans and Policies.* The City of Baldwin Park will incorporate Complete Streets principles into: the City's Circulation Element, Transportation Strategic Plan, Transit Plan, Traffic Safety Master Plan, Specific Plans, Urban Design Element; and other plans, manuals, rules, regulations and programs.

(E) *Other Plans.* The City will prepare, implement, and maintain a Bicycle Transportation Plan, a Pedestrian Transportation Plan, a Safe Routes to School Plan, an Americans with Disabilities Act Transition Plan, and a Street Tree and Landscape Master Plan.

(F) *Storm Water Management.* The City will prepare and implement a plan to transition to sustainable storm water management techniques along our streets.

(G) *Staff Training.* The City will train pertinent City staff on the content of the Complete Streets principles and best practices for implementing the policy.

(H) *Coordination.* The City will utilize inter-departmental project coordination to promote the most responsible and efficient use of fiscal resources for activities that occur within the public right of way.

(I) *Street Manual.* The City will create and adopt a Complete Streets Design Manual to support implementation of this policy.

(J) *Funding.* The City will actively seek sources of appropriate funding to implement Complete Streets.