4 Implementation and Benchmarks

INTRODUCTION

Yolo County acknowledges that climate change is an important global challenge. This Climate Action Plan (CAP) implements the Yolo County General Plan by identifying the County's efforts as one step toward addressing this issue. To achieve the greenhouse gas (GHG) reductions described in this CAP, the vision and guidance provided must be translated into actions that result in positive effects which can be measured. This chapter describes how the County will implement CAP measures, and consists of the following four sections:

- Measure Implementation- This section discusses how County staff will implement the CAP measures and actions, and the role of progress indicators and timeframes.
- Plan Evaluation and Evolution- This section describes the need to evaluate, update, and amend the CAP over time to ensure that the plan remains effective and current.
- Funding Sources and Financing- This section generally describes funding sources, strategies, and financing available to implement CAP measures and actions.
- Relationship to the California Environmental Quality Act- This section describes the relationship between the CAP and the California Environmental Quality Act, and documents the County's reliance on the General Plan EIR to provide clearance for GHG emissions for all projects consistent with the General Plan and the CAP.

MEASURE IMPLEMENTATION

Ensuring that the measures translate to on-the-ground results is critical to the success of the CAP. To facilitate this, each measure described in Chapter 3 contains a table identifying specific actions the County will implement. The table also identifies responsible departments and establishes an implementation timeframe for each action.

The second section of each table provides performance targets for both 2020 and 2030 that enable staff, the Board of Supervisors, and the public to track measure implementation and monitor overall CAP progress. These indicators are suitable benchmarks to monitor implementation progress and evaluate if a measure is achieving the necessary GHG reductions. Table 4-1 provides a summary of this information for easy reference. The list also indicates whether the measure is mandatory or voluntary, and if the measure applies to new or existing development, or both.

Identified County departments will be responsible for implementing assigned actions upon adoption of the CAP. Key staff in each department will facilitate and oversee action implementation. CAP implementation meetings will occur regularly to assess the status of County efforts. Some actions will require inter-departmental or inter-agency cooperation and appropriate partnerships will need to be established accordingly.

TABLE 4-1: SUMMARY OF CAP PERFORMANCE INDICATORS

Measure Number and Title		Performance Indicators	Responsibility	Timeframe	Mandatory (M) or Voluntary (V)	New (N) and/or Existing (E) Development
A-1 Reduce nitrogen fertilizer application rates	**A**	Average nitrogen fertilizer application rates reduced by 6% below current (2008) levels.	**Agricultural Commissioner**	**2020**	**V**	**E**
	B	Average nitrogen fertilizer application rates reduced by 15% below current (2008) levels.		**2030**	**V**	**E**
A-2 Reduce fossil fuel consumption in field equipment	**A**	Fuel efficiency improved by 6% in 5% of farm equipment through operation and maintenance improvements.	**Agricultural Commissioner**	**2030**	**V**	**E**
	B	Fuel efficiency improved by 5% in 25% of farm equipment through improvements to equipment (e,g., conversion to Tier IV engines or better).		**2020**	**V**	**E**
	C	Fuel efficiency improved by 5% in 75% of farm equipment through improvements to equipment (e,g., conversion to Tier IV engines or better).		**2030**	**V**	**E**

TABLE 4-1: SUMMARY OF CAP PERFORMANCE INDICATORS

Measure Number and Title		Performance Indicators	Responsibility	Timeframe	Mandatory (M) or Voluntary (V)	New (N) and/or Existing (E) Development
A-3 Reduce energy use in agricultural irrigation pumping	**A**	40% of tailwater-return pumps switched to solar electric energy source providing 50% of pumping energy.	**Planning and Public Works Department** **Agricultural Commissioner**	**2020**	**V**	**E**
	B	90% of tailwater- return pumps switched to solar electric energy source providing 50% of pumping energy.		**2030**	**V**	**E**
	C	10% of groundwater pumps improve pump bowl efficiency for an average 33% reduction in energy (electricity or diesel) consumed.		**2020 & 2030**	**V**	**E**
A-4 Reduce confined livestock manure methane emissions	**A**	Reduction of 90% manure methane emissions from 100% of confined livestock operations.	**Agricultural Commissioner**	**2020**	**V**	**E**
A-5 Reduce methyl bromide application	**A**	100% reduction in methyl bromide application.	**NA**	**2020 & 2030**	**M**	**E**
A-6 Sequester carbon in	**A**	1,100 acres of riparian forest restored by 2020. 2,000 acres restored by 2030.	**Agricultural Commissioner**	**2020 & 2030**	**M**	**N**

TABLE 4-1: SUMMARY OF CAP PERFORMANCE INDICATORS

Measure Number and Title		Performance Indicators	Responsibility	Timeframe	Mandatory (M) or Voluntary (V)	New (N) and/or Existing (E) Development
agricultural landscapes	B	50 miles of new hedgerow established by 2020 and 100 miles established by 2030.	**Planning and Public Works Department**	**2020 & 2030**	**M**	**N**
	C	New orchards established by 2020 (537 acres almonds, 446 acres walnuts, 1,340 acres olives).		**2020**	**V**	**N**
		New orchards established by 2030 (1,146 acres almonds, 891 acres walnuts, 2,860 acres olives).		**2030**	**V**	**N**
T-1 Reduce Vehicle Miles Traveled in New Development	A	100% of Dunnigan, 60% of Madison, 50% of Esparto, 33% of Elkhorn, and 25% of Knights Landing achieve VMT performance standards.	**Planning and Public Works Department**	**2020 & 2030**	**M**	**N**
E-1 Pursue a community choice aggregation program	A	Develop a CCA feasibility study and identify partner jurisdictions.	**County Administrator**	**2012**	**M**	**NA**
	B	Develop a business plan and implementation strategy for the CCA.		**2015**	**M**	**NA**
	C	50% of consumers purchase "light green" portfolio comprised of 50% renewable sources; 25% of		**2020**	**M**	**E, N**

TABLE 4-1: SUMMARY OF CAP PERFORMANCE INDICATORS

Measure Number and Title		Performance Indicators	Responsibility	Timeframe	Mandatory (M) or Voluntary (V)	New (N) and/or Existing (E) Development
		consumers purchase "deep green" portfolio comprised of 100% renewable sources; 25% of consumers stay with PG&E portfolio.				
	D	75% of consumers purchase "light green" portfolio comprised of 50% renewable sources; 25% of consumers purchase "deep green" portfolio comprised of 100% renewable sources.		**2030**	**M**	**E, N**
E-2 Reduce energy consumption in existing residential and non-residential buildings	**A**	20% of residential units complete an energy efficiency retrofit, with an average energy efficiency improvement of 15%.	**County Administrator** **Planning and Public Works Department**	**2020**	**V**	**E**
	B	10% of non-residential buildings complete an energy efficiency retrofit, with an average energy efficiency improvement of 20%.		**2020**	**V**	**E**
	C	70% of residential units complete an energy efficiency retrofit, with an average energy efficiency improvement of 15%.		**2030**	**V**	**E**
	D	30% of non-residential buildings complete an energy efficiency retrofit, with an average energy efficiency improvement of 20%.		**2030**	**V**	**E**

TABLE 4-1: SUMMARY OF CAP PERFORMANCE INDICATORS

Measure Number and Title		Performance Indicators	Responsibility	Timeframe	Mandatory (M) or Voluntary (V)	New (N) and/or Existing (E) Development
E-3 Reduce energy consumption in new residential and non-residential buildings	**A**	97.5% of new buildings (residential over 3,500 square feet of livable space [excluding affordable housing] and non-residential [after 2013]) achieve Tier 1 energy performance.	**Planning and Public Works Department**	**2020**	**M**	**N**
	B	2% of new buildings (residential and non-residential) achieve exemplary performance (Tier 2) and 0.5% of new buildings achieve zero-net energy demand.		**2020**	**V**	**N**
	C	86% of new buildings (residential over 3,500 square feet of livable space [excluding affordable housing] and non-residential [after 2013]) achieve Tier 1 energy performance.		**2030**	**M**	**N**
	D	12% of new buildings (residential and non-residential) achieve exemplary performance (Tier 2) and 2% of new buildings achieve zero-net energy demand.		**2030**	**V**	**N**
E-4 Increase on-site renewable energy generation to reduce demand for grid energy	**A**	Complete County Code amendments.	**County Administrator** **Planning and Public Works Department**	**2012**	**M**	**N**
	B	90% of new (excluding affordable housing) and 15% of existing residential units and 100% of new and 5% of		**2020**	**M (new)** **V (existing)**	**E, N**

TABLE 4-1: SUMMARY OF CAP PERFORMANCE INDICATORS

Measure Number and Title		Performance Indicators	Responsibility	Timeframe	Mandatory (M) or Voluntary (V)	New (N) and/or Existing (E) Development
		existing commercial buildings (after 2013) install solar hot water heaters.				
	C	90% of new (excluding affordable housing) and 5% of existing residential units and 100% of new commercial buildings (after 2013) and 200,000 square feet of existing commercial rooftop space installs solar PV.		**2020**	**M (new) V (existing)**	**E, N**
	D	100% of new (excluding affordable housing) and 40% of existing residential and 100% of new (after 2013) and 10% of existing commercial buildings install solar hot water heaters.		**2030**	**M (new) V (existing)**	**E, N**
	E	100% of new (excluding affordable housing) and 10% of existing residential and 100% of new commercial (after 2013) and 300,000 square feet of existing commercial rooftops install solar PV.		**2030**	**M (new) V (existing)**	**E, N**
E-5 Promote on-farm	**A**	Identify funding sources to finance investments in renewable energy for agricultural operations.	**Agricultural Commissioner**	**2012**	**V**	**NA**

TABLE 4-1: SUMMARY OF CAP PERFORMANCE INDICATORS

Measure Number and Title		Performance Indicators	Responsibility	Timeframe	Mandatory (M) or Voluntary (V)	New (N) and/or Existing (E) Development
renewable energy facilities	B	Develop a farmer-to-farmer workshop program.	**County Administrator**	**2014**	**V**	**E**
	C	Identify funding sources to finance investments in renewable energy for agricultural operations.		**2012**	**V**	**E**
	D	1-MW of renewable energy generated on farms in the unincorporated County (excluding solar water pumps).		**2020**	**V**	**E**
	E	2-MW of renewable energy generated on farms in the unincorporated County (excluding solar water pumps).		**2030**	**V**	**E**
E-6 Reduce water consumption in existing buildings through increased plumbing fixture	A	100% of residential units built prior to 1994 improve fixture and fixture fitting water efficiency by 15%.	**County Administrator** **Planning and Public Works Department**	**2020**	**M**	**E**
	B	40% of existing residential units and commercial buildings reduce water consumption by 6% through water leak repair.		**2020**	**V**	**E**

The County will evaluate plan performance over time and make recommendations to alter or amend the plan if it is not achieving the proposed reduction targets.

TABLE 4-1: SUMMARY OF CAP PERFORMANCE INDICATORS

Measure Number and Title	Performance Indicators		Responsibility	Timeframe	Mandatory (M) or Voluntary (V)	New (N) and/or Existing (E) Development
efficiency	C	100% of residential units built prior to 1994 improve fixture and fixture fitting water efficiency by 20%.		2030	M	E
E-7 Promote weather-based irrigation systems and water efficient turf management	A	Complete County Code amendments.	Planning and Public Works Department	2012	M	N
	B	2% of residential (single-family and multi-family) units reduce landscape water consumption by 20%.		2020	V	E
	C	5% of commercial buildings reduce landscape water consumption by 20%.		2020	V	E
	D	25% of residential (single-family and multi-family) units reduce landscape water consumption by 20%.		2030	V	E
	E	50% of commercial buildings reduce landscape water consumption by 20%.		2030	V	E
WR-1 Expand landfill methane capture systems	A	Achieve 90% methane capture (control efficiency) at the Yolo County Central Landfill.	Integrated Waste Management	2020	M	E

Note: All figures listed in this table are inclusive, not exclusive. In other words, figures for 2030 include figures for 2020 and are not in addition to the 2020 figures.

PLAN EVALUATION AND EVOLUTION

The CAP represents the County's best efforts to address the threat of global climate change through a well organized and comprehensive response within the unincorporated County. The CAP lays out a broad-based strategy to significantly reduce GHGs and improve sustainability. County staff will evaluate plan performance over time and make recommendations to alter or amend the plan if it is not achieving the proposed reduction targets.

Plan Evaluation

There are two important types of performance evaluation: evaluation of the CAP as a whole and evaluation of the individual measures. Subsequent communitywide GHG emission inventories provide the best indication of CAP effectiveness, and will allow actual growth to be reconciled with growth projected by the General Plan and CAP. Conducting periodic inventories will allow comparison to the 1990 baseline and will demonstrate the CAP's ability to achieve proposed reduction targets.

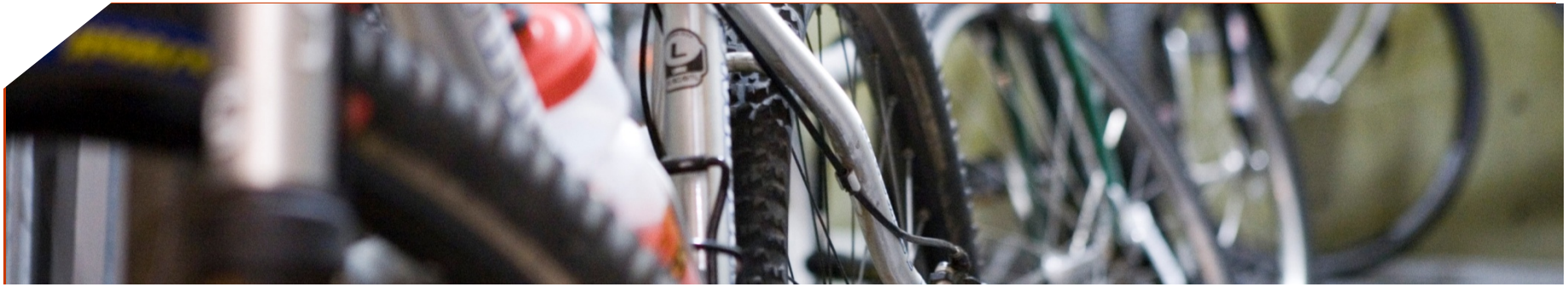
The Planning Division will coordinate community inventories every three to five years beginning in 2015 to measure performance and progress towards achieving emission reduction targets.

While inventories provide information about overall emission reductions, it is also important to understand the efficacy of individual measures. Evaluating the emission reduction capacity, cost, and benefit of individual measures improves County staff and decision makers' ability to manage and implement the CAP.

Evaluating CAP measure performance requires monitoring the level of community participation and the GHG reduction capacity. The progress indicators, provided within each quantified measure, indentify the level of participation and performance required to achieve the estimated level of GHG reduction. By evaluating whether the implementation of a measure is on track to achieve its progress indicators, the County can identify successful measures and reevaluate or replace under-performing ones.

CEQA Guidelines Section 15183.5(b)(1)(E) requires that the County amend the CAP if it finds that the plan is not achieving the adopted GHG reduction target. The Planning and Public Works Department will evaluate measures every two years beginning in 2013, and will summarize progress toward meeting the GHG reduction target at that time in a report to the Board of Supervisors that describes:

- Estimated annual GHG reductions (compared to 1990, 2008, and subsequent inventory years)
- Achievement of progress indicators
- Participation rates (where applicable)
- Implementation costs
- Community benefits realized
- Remaining barriers to implementation
- Recommendations for changes to the CAP



In addition to the biennial review of the CAP's progress, the GHG inventory will be updated every five years beginning in 2015.

Plan Evolution

The County will amend the General Plan to incorporate key components of this CAP and its measures and actions by reference. The CAP must be flexible to evolve over time and remain relevant as new information on climate change science and risk emerges, new GHG reduction technologies and innovative strategies are developed, new financing options are created, and state and federal legislation advances. By adopting the CAP as a stand-alone implementation document, it will retain the flexibility needed to respond to changing circumstances.

It is also possible that subsequent inventories will indicate that unincorporated Yolo County is not achieving established reduction targets. As part of the evaluations identified above, the County will assess the implications of new findings in the field of climate change, explore new opportunities

Climate Action Plan Monitoring and Evaluation Schedule

2011 — **Climate Action Plan Adopted**
Board of Supervisors adopts plan and staff begins to implement CAP measures.

2013 — **Measure Status Review**
Planning Division reviews measure performance, provides an initial review of the status of implementation, and prepares report for presentation to the Board.

2015 — **Emission Inventory / Measure Status Review/ Plan Evaluation**
Planning Division conducts inventory of community emissions, reviews measure performance, provides an initial review of the status of implementation, makes recommended changes to the CAP should measures prove infeasible, and prepares report for presentation to Board. The report will identify ways to adapt the plan to maintain the desired reduction path.

2017, 2019 — **Measure Status Reviews**
Planning Division reviews measure performance, provides an initial review of the status of implementation, and prepares report for presentation to the Board.

2021 — **Target Year Report**
Prepare inventory and measure status review for 2020 and develop Target Year Report for presentation to Board and State agencies that summarizes achievements to date and provides recommendations for the next 10 years.

2020+ — Repeat the above process for 2020 -2030. Develop appropriate actions to meet 2040 and 2050 GHG reduction goals.

for emissions reduction and climate adaptation, respond to changes in climate legislation, and incorporate relevant changes to ensure an effective and efficient CAP.

FUNDING SOURCES AND FINANCING MECHANISMS

This section describes potential funding sources and financing mechanisms that Yolo County could pursue to offset the financial burden of implementing the CAP measures described in Part 2. Each measure is accompanied by information regarding potential funding sources, financing strategies, and partnership opportunities.

The spectrum of public and private funding options for the measures outlined in this CAP is ever-evolving. This section outlines current (2010) funding options, but these could quickly become out of date. However, there are general sources of funding that provide the most up-to-date information, including:

- U. S. Department of Energy Environmental Protection Agency
- US Department of Housing and Urban Development
- California Energy Commission California Infrastructure and Economic Development Bank
- Sacramento Area Council of Governments
- Pacific Gas & Electric
- Water Districts: Dunnigan Water District, Knights Landing Ridge Drainage District, Yolo County Flood Control & Water Conservation District, and Yolo-Zamora Water District
- Water Resouces Association of Yolo County
- Yolo-Solano Air Quality Management District

Costs and Savings

In addition to the cost for the County to implement the CAP, there will be private costs borne by residents, businesses, and farmers to comply with its requirements. In recognition of this, a costs and savings analysis was performed for selected, high impact measures to evaluate the potential costs and savings to residents, businesses, or farmers, as applicable. This analysis was summarized in Chapter 3, and analytical background information is provided in Appendix E. However, there are also costs that the County will bear that were not assessed as part of the CAP. Generally, the implementation costs to the County for the creation of programs, which consist primarily of initial start-up costs and ongoing administration and enforcement costs, range considerably from negligible to several hundred thousand dollars.

Measures also vary in the distribution of costs. Some measures require only funding from the County or other public entities, whereas others will result in increased costs for residents, businesses, and farmers. In nearly all measures that require some investment by residents, business owners, or farmers, there are substantial long-term savings that will allow recuperation of initial investments. Many measures can be paid for through various government programs and require no private investment, but will generate savings for the resident, business owner, or farmer.

The County will pursue a variety of funding strategies including federal, State, and regional grants and partnerships with Yolo County cities, jurisdictions agencies, and businesses.

Funding Strategy

The CAP will require strategic public funding by the County, regional government agencies, and the State for capital projects, incentives, outreach/education, and new regulations necessary to achieve the plan's objectives. To decrease costs and improve the plan's efficiency, actions should be pursued concurrently whenever possible. For example, the County will pursue land use and transportation-related actions together during development of specific plans. The County will also look to address water- and waste-related measures with the related utilities and agencies (e.g., WRA, Water Districts, and Yolo County Integrated Waste Management Division). Also, the County will need to partner with various agricultural extension and research organizations in the area to reach out to the agricultural community to implement some CAP measures. Inter-organization collaboration will be paramount to successful implementation of the CAP.

Specific funding sources and financing mechanisms have not been identified for all measures; however, numerous federal, State, and regional grants are available to provide funding. Which funding sources the County decides to pursue and which financing mechanisms the County develops and administers will be addressed through more detailed implementation. Additional detail on these and other programs follows in the subsequent sections.

Additionally, the County should partner with Yolo County cities and jurisdictions to administer joint programs when feasible. As many businesses in the greater Sacramento region are leaders in resource efficiency, renewable energy, and green infrastructure, potential opportunities exist to partner with the private sector to decrease implementation costs. Finally, many of the measures and actions have the potential to be self-financing if properly designed and implemented.

ENERGY INCENTIVE PROGRAMS

Many of the financing and incentive programs related to the CAP concern energy infrastructure and conservation. Some of these programs are tied to the American Recovery and Reinvestment Act (ARRA) economic stimulus package enacted by Congress in February 2009. Access to these funds will be available for a limited period, and the County should seek the most up-to-date information regarding the programs listed below.

Energy Upgrade California

www.energyupgradecalifornia.com/

Energy Upgrade California is part of the State Energy Program (SEP), which is administered by the Calfiornia Energy Commission. The purpose of the program is to create jobs and stimulate the economy through promoting energy retrofits in existing residential buildings. The retrofit program is designed to:

- Establish sets of verifiable retrofit standards for energy efficiency and other green improvements that are easy for building owners and contractors to understand
- Train contractors to implement these standards in their retrofit projects

- Create quality assurance procedures to help ensure that retrofit work meets program requirements and performance expectations
- Offer financing for eligible improvements through CaliforniaFIRST
- Bundle potential rebates and other incentives to make them more accessible to property owners
- Conduct a countywide marketing and public outreach campaign to get the word out to property owners and building industry contractors about best practices for energy efficiency and green retrofits, as well as financing and incentives.

Flex Your Power

www.fypower.org

Initiated in 2001, Flex Your Power is a partnership of California's utilities, residents, businesses, institutions, government agencies and nonprofit organizations working to save energy. The campaign includes a comprehensive website, an electronic newsletter and blog, and educational materials. The website provides regularly updated information on financial incentives and technical assistance for energy-efficient appliances, equipment, lighting and buildings. This information is available to residential, commercial, industrial and institutional consumers.

As existing programs evolve and new programs are created, Flex Your Power is a useful clearinghouse for information. Current incentives relevant to Yolo County include:

- The Enhanced Automation Initiative (EAI) pays large commercial and institutional customers to improve energy efficiency of existing building automation systems or energy management systems.
- PG&E's Savings by Design program provides design assistance and financial incentives to commercial, industrial, institutional and agricultural building owners and design teams to promote energy efficient design and construction practices.

California Solar Initiative

www.gosolarcalifornia.org/csi/index.php

The California Solar Initiative (CSI) is the solar rebate program for California consumers who are customers of investor-owned utilities, such as PG&E. The CSI Program pays solar consumers an incentive based on system performance. This program funds both solar photovoltaics (PV), as well as other solar thermal generating technologies for existing homes, and existing or new commercial, agricultural, government, and non-profit buildings. This program also funds solar hot water systems. An additional rebate is available for single-family homes owned by low-income residents or multi-family affordable housing.

The CSI solar incentives differ by customer segment and size, and are intended to encourage high performing systems. Two types of incentives are available through the CSI program: Expected Performance-Based Buydown (EPBB) and Performance-based Incentives (PBI). EPBB is a one time, up-front payment based on an estimate of the system's future performance. For solar projects with a system larger than 30-kW, PBI are monthly payments for five years based on actual performance (output) of

The California Energy Commission offers low-interest loans for public institutions to finance energy-efficient projects that have proven energy or capacity savings.

the system. The incentive rate is based on the incentive type—EPBB or PBI, and the relevant customer segment—residential, commercial or government/non-profit.

The CSI solar thermal hot water program will run for eight years, ending on December 31, 2017.

California Feed-In Tariff

www.cpuc.ca.gov/PUC/energy/Renewables/hot/feedintariffs.htm

The California feed-in tariff allows eligible customer-generators to enter into 10-, 15- or 20-year standard contracts with their utilities to sell the electricity produced by small renewable energy systems -- up to 3 megawatts (MW) -- at time-differentiated market-based prices. Time-of-use adjustments will be applied by each utility and will reflect the increased value of the electricity to the utility during peak periods and its lesser value during off-peak periods. These tariffs are not available for facilities that have participated in the CSI program, Self-Generation Incentive Program (SGIP), Renewables Portfolio Standard, or other ratepayer funded generation incentive programs, including net-metering tariffs.

For customers generating renewable energy not covered by the CSI or SGIP (e.g., biomass or geothermal) the feed-in tariff is applicable. If customers prefer a long-term contract at a fixed price over a financial incentive paid in the short term, feed-in tariffs may be a beneficial financing tool.

Property Assessed Clean Energy

www1.eere.energy.gov/wip/solutioncenter/financialproducts/pace.html

A property-assessed clean energy (PACE) finance program is enabled through the AB 811 legislation[1]. A PACE program permits property owners within participating jurisdictions (including Yolo County) to finance the installation of energy and water improvements within their home or business and pay back the amount as a line item on their property tax bill. This bill allows land-secured loans for homeowners and businesses who install energy-efficiency projects and clean-energy generation systems to be paid back through assessments on individual property tax bills. If the property is sold, the outstanding loan balance is taken over by the new owner, allowing property owners to avoid up-front installation costs, while at the same time requiring little or no investment of local government general funds.

Recent legislation, AB 474, expanded the program's reach to include the financing of water efficiency projects. Eligible projects under a PACE program may include, but are not limited to: air sealing, wall and roof insulation, energy-efficient windows, tankless water heaters, solar photovoltaics, and low-flow toilets.

California Energy Commission Energy Efficiency Financing

www.energy.ca.gov/efficiency/financing/index.html

The California Energy Commission offers low-interest loans for public institutions to finance energy-efficient projects. Projects

[1] At the time of writing, the PACE program is being litigated in federal court.

with proven energy and/or capacity savings are eligible, provided they meet the eligibility requirements. Examples of projects include:

- Lighting systems
- Pumps and motors
- LED streetlights and traffic signals
- Automated energy management systems/controls
- Building insulation
- Renewable energy generation and combined heat and power projects
- Heating and air conditioning modifications
- Waste water treatment equipment

Loans for energy projects must be repaid from energy cost savings within 15 years, including principal and interest.

Only project-related costs, with invoices dated after loans are officially awarded by the Energy Commission, are eligible to be reimbursed from loan funds. The final 10% of the funds will be retained until the project is completed. Interest is charged on the unpaid principal computed from the date of each disbursement. The repayment schedule is up to 15 years and will be based on the annual projected energy cost savings from the aggregated projects.

Infrastructure State Revolving Fund Program

www.ibank.ca.gov/infrastructure_loans.htm

The Infrastructure State Revolving Fund Program provides direct low-cost loans for local governmental public infrastructure projects, including:

- County streets
- County highways
- Environmental mitigation measures
- Parks and recreational facilities
- Public transit
- Solid waste collection and disposal

Yolo County can consider applying for these low-interest loans to implement a wide range of CAP measures. Though some eligible projects would be considered public projects, other eligible projects are pertinent to specific measures in this CAP. In particular, the transportation- and waste-related measures could seek financing through this program. Loans are available in amounts ranging

from $250,000 to $10 million per applicant for Tier 1 loans, and $250,000 to $2.5 million per applicant for Tier 2 loans (the tier system is based on evaluation of project impact; the greater the project impact, the higher the cap on available funds).

Self Generation Incentive Program

www.cpuc.ca.gov/PUC/energy/DistGen/sgip/

The CPUC's Self-Generation Incentive Program (SGIP) provides incentives to support existing, new, and emerging distributed energy resources. The SGIP provides rebates for qualifying distributed energy systems installed on the customer's side of the utility meter. Qualifying technologies include wind turbines, fuel cells, and corresponding energy storage systems.

ENERGY BOND FINANCING

Qualified Energy Conservation Bonds

A Qualified Energy Conservation Bond (QECB) is a tax credit bond; issuers repay principal on a regular schedule, but generally do not pay interest. Instead, the holder of a QECB receives a federal tax credit in lieu of interest, which may be applied against the bond holder's regular and alternative minimum tax liability. The tax credit amount is treated as taxable interest income to the holder of the bonds.

The proceeds of QECBs can be used for one or more qualified conservation purposes: Though some eligible projects would be considered public projects, other eligible projects are pertinent to specific measures in this CAP. In particular, the following eligible project types could have broad applicability in funding the measures in this CAP: Type II-(ii) green community programs, Type III mass commuting facilities, and Type V public education campaigns.

TRANSPORTATION INCENTIVES AND PROGRAMS

Many State and regional grant programs are available to fund transportation and infrastructure improvements. The programs listed below represent the current status of the most relevant of these programs. It is, however, important to evaluate the status of a given program before seeking funding, as availability and application processes are updated periodically.

Safe Routes to Schools

Safe Routes to Schools is an international movement focused on increasing the number of children who walk or bicycle to school by funding projects that remove barriers to doing so. These barriers include a lack of infrastructure, safety, and limited programs that promote walking and bicycling. In California, two separate Safe Routes to School programs are available: the State program referred to as SR2S, and the federal program referred to as SRTS. Both programs fund qualifying infrastructure projects.

AGRICULTURE PROGRAMS

California Department of Food and Agriculture

www.cdfa.ca.gov/

The California Department of Food and Agriculture (CDFA) provides financial resources to support GHG mitigation strategies.

The success of the CAP depends in part on collaboration between businesses, the public, and the County.

US Department of Agriculture Food, Conservation, and Energy Act

The Food, Conservation, and Energy Act, also known as the Farm Bill, is the primary agricultural and food policy tool of the federal government. The comprehensive bill is passed about every five years (most recently in 2008) by the United States Congress to address agriculture and other affairs under the purview of the USDA. The USDA and its research branch, the Economic Research Service, provide information on programs available to farmers.

OTHER CLIMATE PROGRAMS

CAL FIRE Climate Change Program

Under the authority of the Urban Forestry Act, the CAL FIRE Urban Forestry Program offers grants of over $1 million dollars per year to plant trees, and over $2.5 million for related forestry projects in urban communities throughout California.

CAL FIRE has identified five forestry strategies to reduce or mitigate GHG emissions:

- Reforestation to promote carbon sequestration
- Forestland conservation to avoid forest loss to development
- Fuel reduction to reduce wildfire emissions and utilization of those materials for renewable energy
- Urban forestry to reduce energy demand through shading, increase sequestration, and contribute biomass for energy generation
- Improved management to increase carbon sequestration benefits and protect forest health

These strategies were recognized by the Governor's Climate Action Team reports in 2006 and 2007, and by ARB in the Climate Change Scoping Plan.

PARTNERSHIPS WITH PRIVATE COMPANIES AND OTHER ORGANIZATIONS

The greater Sacramento area is home to numerous private companies who provide renewable energy or green infrastructure. The success of the CAP depends in part on collaboration between these businesses and the County and public. For example, numerous companies are involved in developing electric plug-in auto charging station infrastructure throughout the greater Sacramento area. PG&E administers energy efficiency programs that the County can leverage and promote to residents. Solar companies will also be an important asset to the CAP, as the advent of the Power Purchase Agreement (PPA) enables businesses, residents, and the County to install solar panels and access solar power at no cost. Partnering with new and existing businesses will enable the County to save money and provide the community with up-to-date green infrastructure.

Power Purchase Agreements

Renewable energy has become increasingly more accessible and cost-effective due to Power Purchase Agreements (PPAs). In a PPA, a private company or third party installs a renewable energy technology, often solar panels, at no cost to the consumer and maintains ownership of the installed panels, selling customers the power produced on a per kilowatt-hour basis at a contractually-established rate. The rate is lower than what customers pay their utility today, and increases at a fixed percentage (usually 2.5% to 4.0%) annually, which is typically lower than utility rate escalation. In addition to installing the panels, the third party monitors and maintains the systems to ensure functionality. The contract period for a PPA is typically 15 years, at which point the third party will either uninstall the panels or sign a new agreement with the building owner. These agreements are ideal for demonstration projects implemented by the County and residents or businesses with interests in reducing carbon emissions associated with energy consumption in their homes and businesses. This form of financing is becoming increasing popular in Yolo County, with a number of companies specializing in this form of financial transaction locating in the greater Sacramento area.

Energy Savings Performance Contracting

The basic concept of an Energy Savings Performance Contract (ESPC) is that an Energy Services Company (ESCO) guarantees the amount of energy saved, and further guarantees that the value of that energy would be sufficient to make the debt service payments as long as the price of energy does not fall below a stipulated floor price. The key benefits of the guaranteed savings include:

- The amount of energy saved is guaranteed
- The value of energy saved is guaranteed to meet debt service obligations down to a stipulated floor price
- The County carries the credit risk
- Tax-exempt institutions can use their legal status for much lower interest rates
- ESCO carries only the performance risk

Typically, an ESPC project would have a simple payback of 10 years or less to allow for the cost of money and other fees to be included in the overall project payback.

Energy efficiency mortgages can provide homeowners additional financing for energy efficiency improvements at discounted interest rates.

Lending institutions look for payment terms of less than 15 years for all costs including fees.

Typical projects include:

- Energy management systems
- Interior and exterior lighting
- Boiler replacement/repair of steam systems
- High-efficiency HVAC systems
- LED traffic systems
- Wastewater treatment plant pumps and motors

There are numerous ESCOs with track records in the greater Sacramento area.

Energy Efficiency Mortgages

www.hud.gov/offices/hsg/sfh/eem/energy-r.cfm

Energy Efficiency Mortgages can provide owners additional financing (whether at time-of-sale or upon refinancing) for energy efficiency improvements at discounted interest rates. Energy efficiency upgrades could be chosen that would allow owners to realize a net monthly savings. The Federal Housing Administration (FHA) offers an Energy Efficient Mortgage Loan program. This program helps current or potential homeowners significantly lower their monthly utility bills by enabling them to incorporate the cost of adding energy-efficient improvements into their new home or existing housing. This FHA program eliminates the need for homeowners who are interested in making their home more energy efficient to take out an additional mortgage to cover the cost of the improvements. Improvements can be included in a borrower's mortgage only if the total cost is less than the total dollar value of the energy that will be saved during its useful life. The program is available as part of a FHA-insured home purchase or by refinancing a current mortgage loan.

Energy Star™, a program under the DOE, offers another energy efficient mortgage option, though it is in a pilot phase and not currently available in California. This program is designed to encourage comprehensive energy efficiency improvements to new and existing homes by increasing the affordability and availability of energy efficiency mortgages for homeowners and homebuyers. These mortgages include the cost of energy efficiency investments in the loans, so that borrowers can pay for the improvements over the life of their loans, as well as deduct the interest from their federal and State income taxes. One of the key benefits of an Energy Star™ mortgage is that a borrower can finance energy-saving improvements to their home without paying more than he/she would for a typical mortgage. Following completion of the pilot phase, this program will be extended to California.

PARTNERSHIPS WITH OTHER JURISDICTIONS AND ORGANIZATIONS

Partnering with neighboring jurisdictions is a key implementation strategy supporting the CAP. Various jurisdictions within Yolo County could serve as potential partners in implementing the CAP strategies. The County should seek to partner with appropriate local governments, as identified within CAP measures. Other potential partners include:

General Plan Action IN-11 directs the County to pursue legislation seeking authority at the local level to charge fees for the implementation of climate change programs.

- Sacramento Area Council of Governments (SACOG)
- Pacific Gas & Electric (PG&E)
- Water Districts: Dunnigan Water District, Colusa Drain Mutual Water Company, Yolo County Flood Control & Water Conservation District, Yolo-Zamora Water District, Colusa County Water District, North Delta Water Agency, and Reclamation Districts
- Water Resources Association of Yolo County (WRA)
- Yolo-Solano Air Quality Management District (Yolo-Solano AQMD)
- Yolo County Resource Conservation District
- Natural Resources Conservation Service
- United States Green Building Council (USGBC) – Northern California Chapter

Yolo County Funds

Special Revenue Funds are restricted to expenditures for specific purposes. Many of these purposes are consistent with the Climate Action Plan, such as recycling awareness programs and the construction and maintenance of transit services. Sources of these funds include Federal and State grants and voter-approved taxes, fees and bonds.

County Facility Service Authorization (FSA) fees are collected to provide adequate capital facility improvements needed to serve new development within the county. These fees are allocated to specific activities as described in the County Code. They may be used to retrofit existing County buildings to improve energy efficiency and to construct new buildings consistent with LEED standards.
As proposed in some measures, mitigation fees may be used by developers to fund activities to offset the GHG emissions generated by specific projects. Such activities could include riparian forest restoration, hedgerow planting, and/or energy retrofits to existing residences.

The General Fund is the primary operating fund of the County. It is used to account for those resources traditionally associated with governments which are not required by law or administrative action to be accounted for in another fund. The General Fund is used to account for the cost of the County's current governmental operations. However, in the current economic downturn, General Fund resources are severely overstrained and cannot be relied upon to provide the sole funding for implementation of the CAP.

Self-Financing Strategies

CAP measures include a range of incentives and regulations. It is important that any fees established to implement the CAP be self-financing. Money raised through the fees would then be used to carry out those CAP measures determined to provide the best mitigation results. Yolo County will actively explore opportunities to establish self-financing strategies. In particular, Action IN-11 in the 2030 General Plan directs staff to pursue legislation seeking authority at the local level to charge fees for the implementation of climate change programs.

RELATIONSHIP TO THE CALIFORNIA ENVIRONMENTAL QUALITY ACT

Effective March 18, 2010, the State adopted numerous amendments to the California Environmental Quality Act (CEQA) Guidelines to address the potential for environmental impacts associated with GHG emissions. The County's General Plan and certified General Plan EIR anticipated those changes and the CAP is fully consistent with the applicable guidelines provisions, as described further below.

The discussion below addresses the following topics: 1) CEQA compliance for adoption of the CAP; 2) reliance on the CAP for analysis and mitigation of cumulative GHG emissions from future projects; 3) adoption of new long-term CEQA thresholds of significance for future projects; and 4) procedures for demonstrating project-level CEQA compliance.

CEQA Compliance for Adoption of the CAP

CEQA requires the County to identify the significant environmental impacts of its discretionary actions and to avoid or mitigate those impacts, where feasible. GHG emissions are a complex, global, cumulative environmental issue that requires analysis under CEQA (CEQA Guidelines Section 15064.4 and Appendix G Checklist, part VII).

Adoption of the CAP is a discretionary action subject to CEQA review. Adoption of the CAP implements Action CO-A117 of the Yolo County 2030 General Plan[2], which was analyzed in the certified General Plan EIR. Pursuant to Section 15162 of the CEQA Guidelines, when an EIR has been certified for a project, no subsequent EIR is required unless: 1) revisions to the EIR are necessary to address new or substantially more severe significant impacts that result from changes in the project or changes in the circumstances under which the project is undertaken; or 2) new information of substantial importance identifies new or substantially more severe significant effects, or identifies new or better mitigation measures or project alternatives that the County would otherwise decline to adopt. In this case, adoption of the CAP was contemplated in the General Plan and, therefore, included in the project description of the General Plan EIR. The analysis of the impacts from GHG emissions remains sound and applicable to the adoption of the CAP (see additional discussion below). Adoption of the CAP does not result in any new or substantially more severe significant impacts. Further, the CAP reflects industry best practices for mitigation strategies and calculations of reductions and the County is adopting the strategies as part of the CAP approval. Therefore, none of the situations requiring a subsequent EIR are triggered.

The General Plan EIR identified increases in GHG emissions and impacts from global climate change as significant and

[2] Referred to as Action CO-A115 in the General Plan EIR. This numbering was subsequently modified in the final General Plan.

The CAP has been developed, among other reasons, specifically to satisfy the requirements of Section 15183.5(b) of the CEQA Guidelines.

unavoidable impacts that would result from implementation of the General Plan due to associated increases in GHG emissions[3]. The General Plan EIR estimated 2008 ("existing") GHG emissions for the unincorporated County at 1,882,964 MT CO_2e/yr and projected 2030 (General Plan build-out) emissions at 2,188,332 MT CO_2e/yr[4]. This reflects an increase of approximately 305,370 MT CO_2e/yr, or 16% over existing conditions.

The detailed inventories prepared for the CAP have resulted in a much more precise estimate of actual 2008 emissions for the County of 648,252 MT CO_2e/yr. Similarly, 2030 emissions were projected at 1,385,590 MT CO_2e/yr, which reflects an increase of 737,338 MT CO_2e/yr, or 114% over existing conditions.

The difference between the General Plan emissions numbers and the CAP emissions numbers is in part a reflection of the state of the field at that time and in part a reflection of the more generalized "top down" method used to compile the General Plan estimate. For example, the General Plan work relied on standardized generic formulae that are not necessarily applicable in a rural county like Yolo, with limited development in small towns. In contrast, development of the CAP involved an extensive work effort to develop accurate inventories based on activity data and locally-specific rates of participation and/or consumption. Furthermore, the 2030 projection developed as a part of the General Plan EIR analysis assumed full build-out of the General Plan by 2030. The CAP projections are based on assumptions about the rate at which planned land uses (per the County General Plan) are likely to build-out over time, using up-to-date market and economic information generated by experts for consideration by the Board of Supervisors at the time the General Plan was adopted.

While the magnitude of the projected increase in GHG emissions is notably higher under the CAP than assumed in the General Plan EIR, the CAP 2030 projection in absolute terms is 802,742 MT CO_2e/yr (or 37%) below what was projected and analyzed in the General Plan EIR. In fact, the 2030 projection is 497,379 MT CO_2e/yr (or 26%) below the 2008 estimate analyzed in the General Plan EIR. Because the General Plan EIR's future 2030 gross emission estimate is greater than the CAP's 2030 projection, the environmental impacts of the County's GHG emissions, as reflected by the more detailed CAP methods would be less severe than the General Plan EIR estimates.

The General Plan EIR also addressed "conflict with plans and polices of other agencies" (such as the ARB Scoping Plan and AB 32) as an area of potential impact. Based on the policies and actions of the General Plan, including the requirement for the CAP, this was identified as less than significant. Through the research and analysis conducted for the CAP, the County estimates that 1990 emissions for

[3] Pages 353 through 368 of the Draft EIR Volume of the General Plan EIR.
[4] Pages 425 and 426 of the Response to Comments Volume of the General Plan EIR.

the unincorporated area were 613,651 MT CO_2e/yr. To demonstrate compliance with AB 32, the County has adopted this 1990 level of emissions as the mandatory target for 2020. Furthermore, in order to make progress towards a desired goal of 80% below 1990 levels in 2050, the County seeks to further reduce GHG emissions from the unincorporated area to 447,965 MT CO_2e/yr by the General Plan horizon year of 2030.

Implementation of the policies in the new General Plan, as compared to the 1983 General Plan, were identified in the General Plan EIR as beneficial related to global climate change effects, because they would result in more stringent environmental protection and greater accountability in the regulation of activities that cause GHG emissions. As demonstrated throughout the CAP, successful implementation will actually achieve emissions levels well below existing levels, thus exceeding the County's interim CEQA significance threshold of "no net increase", pursuant to Action CO-A118.

In short, the potential for net increases in GHG emissions associated with build-out under the General Plan were identified as significant and unavoidable in the General Plan EIR; however, successful implementation of the CAP will result in lower emissions in 2020 and 2030 than current levels. The potential for significant impact under CEQA is measured against existing conditions (CEQA Guidelines Sections 15126.2(a) and 15382). Therefore, adoption of the CAP (including the GHG reduction measures included within the plan) does not trigger any of the requirements of CEQA Section 15162 to prepare additional environmental analysis beyond the certified General Plan EIR. The certified General Plan EIR provides CEQA compliance for adoption and implementation of the CAP.

As anticipated and disclosed on page 2 of the Draft volume of the General Plan EIR, pursuant to Section 21083.3 of the Public Resources Code and Section 15183 of the CEQA Guidelines, the County will rely upon the certified General Plan EIR for the purposes of adoption of the CAP.

Reliance on the CAP for Analysis and Mitigation of Cumulative GHG Emissions
The CAP has been developed, among other reasons, specifically to satisfy the requirements of Section 15183.5(b) of the CEQA Guidelines. The CAP includes all of the recommended plan elements identified in this section including:

- Quantification of existing and projected GHG emissions for the entire unincorporated County area through 2050;

- Identification of a 2020 mandatory target for GHG emissions that is consistent with AB 32 and will achieve emissions levels below existing conditions, as well as goals for emissions levels in future years (2030, 2040, and 2050).

- Identification and analysis of GHG emissions associated with implementation of the General Plan based on calculation of the emissions resulting from types of projects that could develop within

each land use designation, as assigned geographically, based on the County's adopted Land Use diagram.

- Provision of substantial evidence in the form of substantiated analysis using best practices that demonstrates that implementation of specific measures (including performance standards) on a project by project basis will collectively achieve the adopted emission target.

- Inclusion of a monitoring program to track progress towards achieving the GHG emission target. Amendment of the plan is required if the GHG emissions target is not achieved.

A cumulative impact of concern under CEQA occurs when the net result of combined individual impacts compounds or increases other overall environmental impacts (CEQA Guidelines Section 15355). Because the target future year emissions levels adopted by the County are below existing emissions levels, by definition the adoption of the CAP would not contribute to or result in an adverse change in the environment; therefore, achievement of the County's reduced levels of emissions would not be cumulatively considerable.

As described for determining significance under Section 15064.4 and allowed for cumulative impact analysis under Section 15130 of the CEQA Guidelines, project-level contributions to cumulative effects will be considered less than cumulatively considerable if the project is consistent with the General Plan and CAP, because these plans will reduce GHG emissions overall. Therefore, consistency with the General Plan and CAP, including compliance with the applicable reduction measures, indicates that a later project is implementing its fair share of measures required to achieve the GHG target and thus fully mitigates GHG emissions impacts.

Adoption of CEQA Thresholds of Significance

As adopted on November 10, 2009, the General Plan contained interim significance thresholds for GHG emissions as follows:

Action CO-A118 – In the interim until the GHG Emissions Reduction Plan/Climate Action Plan is in effect, the following significance thresholds shall be used for project analysis:

- *Projects consistent with the General Plan and otherwise exempt under CEQA – Assumed to be de minimus.*

- *Projects consistent with the General Plan and subject to CEQA – Net zero threshold to be achieved by the applicant as follows:*

    - *Apply practical and reasonable design components and operational protocols to reduce project GHGs emissions to the lowest feasible levels;*

- *Use verifiable offsets to achieve remaining GHG reductions. To the greatest feasible extent, offsets shall be: locally based, project relevant, and consistent with other long term goals of the County;*

Adoption of this CAP includes amendment of the General Plan to incorporate a mandatory GHG emissions reduction target for 2020 and a reduction goal for 2030. Both are lower than existing conditions, thus ensuring no net increase in emissions over time.

As a part of the General Plan amendment, the interim significance thresholds are being amended to be consistent with the CAP. Consistent with Sections 15064.4 and 15064.7 of the CEQA Guidelines, new CEQA thresholds have been identified in the Yolo County General Plan as follows:

Action CO-A118 – Pursuant to and based on the CAP, the following thresholds shall be used for determining the significance of GHG emissions and climate change impacts associated with future projects:

1) *Impacts associated with GHG emissions from projects that are consistent with the General Plan and otherwise exempt from CEQA are determined to be* ***less than significant*** *and further CEQA analysis for this area of impact is not required.*

2) *Impacts associated with GHG emissions from projects that are consistent with the General Plan, fall within the assumptions of the General Plan EIR, consistent with the CAP, and not exempt from CEQA are determined to be* ***less than significant*** *or* ***mitigated to a less-than-significant level****, and further CEQA analysis for this area of impact is generally not required.*

   To be determined consistent with the CAP, a project must demonstrate that it is included in the growth projections upon which the CAP modeling is based, and that it incorporates applicable strategies and measures from the CAP as binding and enforceable components of the project.

3) *Impacts associated with GHG emissions from projects that are not consistent with the General Plan, do not fall within the assumptions of the General Plan EIR, and/or are not consistent with the CAP, and are subject to CEQA review are rebuttably presumed to be* ***significant*** *and further CEQA analysis is required. The applicant must demonstrate to the County's satisfaction how the project will achieve its fair share of the established targets including:*

- *Use of alternative design components and/or operational protocols to achieve the required GHG reductions;*

- *Use of real, additional, permanent, verifiable and enforceable offsets to achieve required GHG reductions. To the greatest feasible extent, offsets shall be locally based,*

project relevant, and consistent with other long term goals of the County;

The project must also be able to demonstrate that it would not substantially interfere with implementation of CAP strategies, measures, or actions.

Procedures for Demonstrating Project-Level CEQA Compliance

In order to demonstrate project-level compliance with CEQA relevant to GHG emissions and climate change impacts, applications for discretionary projects must include information that addresses the following:

1) Demonstrate consistency with the General Plan land use designation and applicable policies. This may be done in the form of a checklist developed by or acceptable to the County Planning Division.

2) Demonstrate consistency with the CAP, including consistency with the growth projections upon which the CAP modeling is based, and incorporation of applicable strategies and measures from the CAP as binding and enforceable components of the project.

3) Pursuant to Section 15064.4(a)(1) of the CEQA Guidelines, estimate the level of GHG emissions that would result from implementation of the project. This may be done using the County's on-line calculator or other model or methodology acceptable to the County. The calculator contains the best available information for this purpose and was specifically developed to assist in implementation of the CAP.

Upon receipt of this information, the County will verify that it is complete and acceptable, and enter the project emissions totals into a countywide database for purposes of CAP monitoring and reporting.

In conjunction with the requirements of General Plan Policy CC-4.11 for determining overall General Plan consistency and CEQA compliance, the County will determine whether or not the project requires additional analysis or environmental review. Assuming that the information provided substantiates the conclusion, a CEQA Guidelines Section 15183 Statutory Exemption or other appropriate determination will be filed and the project can be approved.