



# Chapter 18

## CLIMATE CHANGE

A place where all citizens enjoy opportunities to thrive in a safe, healthy, and productive community.  
- The Tuolumne County Vision

### Introduction

Establishing goals, policies, and programs regarding climate change and greenhouse gases, enables public officials, stakeholders, and the citizens of Tuolumne County to better evaluate future land uses and the effect on the transportation system, housing, local economy, quality of life, natural resources, and the environment. The Climate Change Element will assist in the decision-making process for future growth in the County that can guide regional and local land use and transportation decisions toward sustainability, while meeting residents' needs and providing a high quality of life for all.

### Purpose

Implement policies and programs to reduce greenhouse emissions consistent with State greenhouse targets and promote the adaptation and resiliency of local communities in a changing climate.

### Overarching Vision

OAV1. Promote development in Tuolumne County that reflects the values and vision of the community and implement the latest legal, statutory, scientific, and technical changes and advances.

OAV2. Achieve, enable and preserve maximum flexibility within the constraints of state and federal law and an ever-evolving legal, cultural and environmental landscape.

OAV3. Recognize that the County has a unique role to collaborate with special districts/stakeholders within the County to promote the delivery of efficient and cost effective public services.



## GOAL 18A:

**Reduce Greenhouse Gas (GHG) emissions from community activities and County government facilities and operations within the County to support the State's efforts under Assembly Bill 32 and other state and federal mandates to mitigate the County's GHG emissions impacts.**

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### POLICIES & IMPLEMENTATION PROGRAMS

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**Policy 18.A.1** Prepare a Climate Action Plan (CAP), or similar GHG emission reduction plan, that establishes a GHG reduction target consistent, at a minimum, with the Senate Bill (SB) 32 goal to reduce statewide GHG emissions to 40 percent below 1990 levels by 2030 and taking into consideration the Executive Order (EO) S-3-05 goal to reduce GHG emissions to 80 percent below 1990 levels by 2050. The County will first update the baseline inventory of jurisdiction-wide greenhouse gas emissions. The CAP shall identify specific measures to reduce countywide emissions consistent with the established target and will also include adaptation strategies for the County to appropriately adjust to the environmental effects of climate change. Many of the measures in the CAP will overlap with and help implement goals, policies, and implementation programs identified in this General Plan.

#### **Implementation Programs**

**18.A.a** – Include specific GHG emissions reduction measures in the CAP. Examples include, but are not limited to, the following:

- Foster land use intensity near, along with connectivity to, retail and employment centers and services to reduce vehicle miles travelled and increase the efficiency of delivery services through adoption and implementation of smart growth principles and policies;
- Improve the local jobs/housing balance to reduce vehicle miles travelled;
- Incentivize energy efficiency improvements in existing buildings;
- Require energy audits for major additions to or alterations of existing buildings;
- Require compliance with CALGreen Tier 1 Green Building standards and Tier 1 Building Energy Efficiency Standards for eligible alterations or additions to existing buildings;
- Require compliance with CALGreen Tier 1 Green Building standards and Tier 1 standards for all new construction, and phase in Zero Net Energy (ZNE) standards for new construction;
- Require new or replacement residential water heating systems to be electrically powered and/or alternatively fueled systems;
- Expand current renewable energy and green energy incentives and update local ordinances;
- Develop a program to offset project GHG emissions by retrofitting existing income-qualified homes and buildings;
- Support waste-to-energy programs at landfills;
- Increase availability and accessibility of transit information;
- Support alternatives to private vehicle travel for visitors, such as shuttles;
- Increase the supply of electric vehicle charging stations;
- Promote telecommuting at office-based businesses;
- Encourage expansion of composting programs;
- Establish a waste diversion goal that exceeds the State's 2020 75 percent target;



- Identify potential sites for renewable energy facilities and transmission lines;
- Promote recycling to reduce waste and energy consumption;
- Identify appropriate sites for waste recovery facilities to minimize escape of GHGs;
- Promote alternatives to open burning of biomass;
- Convert all stationary diesel or gas-powered irrigation pumps to electric pumps;
- Require Tier 4 equipment for all construction activity and forestry/mining operations by 2030;
- Adopt a new water conservation ordinance for commercial and residential land uses limiting outdoor watering;
- Expedite and/or reduce permit fees associated with water conservation installations in existing facilities;
- Require water audits for large new commercial or industrial projects and significant expansions of existing facilities;
- Establish targets and enhanced programs for oak woodland and coniferous forest preservation and mandatory replanting;
- Refine protection guidelines for existing riparian lands to establish a no-net-loss goal;
- Develop a program to require repurposing of usable lumber from trees removed due to land conversion to avoid wood burning;
- Promote the sale and consumption of locally-grown foods and/or products;
  
- Establish a local carbon offset program;
- Identify lands suitable for wind power generation;
- Promote alternatives to open burning of biomass, including exploring the feasibility of the development of a biomass power plant in the County;
- Provide economic incentives and creative financing for renewable energy projects;
- Pursue incentives, grants, and creative financing for projects that improve energy efficiency;
- Prepare and implement a comprehensive plan to improve energy efficiency of municipal facilities;
- Develop a program to promote forest health and enhance the carbon sequestration potential of forests in the County;
- Establish a coordinated, creative public outreach campaign, including publicizing the importance of reducing GHG emissions and steps community members can take to reduce their individual impacts;
- Install renewable energy systems at municipal facilities including solar photovoltaic systems on municipal roofs and solar water heating;
- Ensure that County staff receive appropriate training and support to implement objectives and policies to reduce GHG emissions included in the County CAP;
- Evaluate the feasibility and effectiveness of using Community Choice Aggregation as a model for providing renewable energy to meet the community's electricity needs, including potential partnerships with other jurisdictions;



- Identify and remove or otherwise address barriers to renewable energy production including revisions to the County’s building and development codes, design guidelines, and zoning ordinances;
- Provide information, marketing, training and technical assistance regarding green building practices and renewable energy systems;
- Identify and remove regulatory or procedural barriers to implementing green building practices within the County, such as updating codes, guidelines, and zoning, and ensure that all plan review and building inspection staff are trained in green building materials, practices, and techniques;
- Establish menus and check-lists for developers and contractors to ensure water-efficient infrastructure and technology are used in new construction, including low-flow toilets and shower heads, moisture-sensing irrigation, and other such advances;
- Require all mitigation relying on offsets of GHG emissions to be quantifiable, enforceable, and additional to any GHG reductions that otherwise would have occurred; and
- Require that, where feasible, on-site design features will be utilized to reduce GHG emissions and VMT before a development applicant may purchase off-site mitigation credits or carbon off-sets.

**18.A.b** – Include specific adaptation strategies in the CAP. Examples include, but are not limited to the following:

- Identify critical infrastructure vulnerable to extreme heat events;
- Develop outreach programs for outdoor workers to prevent heat-related illness;
- Educate residents on heat-related illness prevention;
- Encourage installation of cool roof technologies and rooftop gardens;
- Explore options to incorporate cool pavement technology;
- Improve parking lot shading and landscaping;
- Establish an Excessive Heat Emergency Response Plan;
- Identify locations that are newly at risk or at higher risk for wildland fire hazard;
- Identify critical infrastructure vulnerable to wildland fire;
- Evaluate vulnerabilities of water supply systems and networks;
- Consider innovative options to meet future water demand;
- Promote use of rainwater catchment and storage systems;
- Collaborate with agencies to identify future water supplies and explore alternative supply sources; and
- Pursue grant funding for water resource planning projects.

**18.A.c** – Consider preparing a CAP that meets the criteria for CEQA Guidelines section 15183.5, which provides for tiering and streamlining opportunities.

**18.A.d** - Adopt and begin implementing the CAP prior to December 31, 2020.



**Policy 18.A.2** In the interim prior to adoption of the CAP, analyze and mitigate individual project’s GHG impacts consistent with CEQA and considering the goals of SB 32. Continue to implement, prior to adoption of the CAP, the *Tuolumne County Regional Blueprint Greenhouse Gas Study* (January 2012) (including any updates) to reduce GHG emissions to 1990 levels by 2020 pursuant to Assembly Bill 32. The 2012 Greenhouse Gas Study will be considered superseded by the CAP once it is adopted.

**Policy 18.A.3** Continue to implement the policies and strategies identified in the *2016 Final Regional Transportation Plan*, including the Rural Sustainable Strategies.

**Policy 18.A.4** Recognize that climate change may affect air quality and water quality creating health and safety hazards.

**Implementation Programs**

**18.A.e-** Adopt local policies and programs and seek funding and support efforts by local, regional, State and Federal agencies and others to develop policies and manage programs that allow the County to adapt to extreme climate change effects, such as prolonged drought and flooding.

**18.A.f** - Prepare for potential climate change effects on water resources, such as prolonged drought and flooding, by working with water agencies to implement measures to reduce water consumption, expand water storage capacity, protect water quality, and explore and promote more diverse sources of water.

**18.A.g** - Prepare for potential climate change effects on water resources by working to implement measures to reduce water consumption, expand emergency water storage capacity, protect water quality, and explore and promote more diverse sources of water.

**18.A.h** - Participate in inter-agency and/or inter-jurisdictional meetings and planning activities to identify and periodically reassess regional climate change vulnerabilities.

**18.A.i** - Collaborate with community-based organization partners, such as health care providers, mental health providers and public health advocates, to disseminate climate change health impact information, promote good health, and public preparedness and emergency response.

**Policy 18.A.5** Promote energy efficiency and alternative energy while reducing energy demand.

**Implementation Programs**

**18.A.j** - Facilitate voluntary energy efficient retrofits in existing structures by connecting home and business-owners with technical and financial assistance, such as Federal, State, and utility rebates, and tax credits, through the County's or Tuolumne County Transportation Council's website.

**18.A.k** - Work with Pacific Gas and Electric Company and other electric utility providers to promote voluntary upgrades to energy-efficient technology and products through campaigns targeted at residents and local businesses, ENERGY STAR® appliance change-out programs, and incentives, such as give-a-ways or Federal/State/utility rebates.

**18.A.l** - Work with Pacific Gas and Electric Company and other electric utility providers to encourage local businesses and public agencies to install energy conserving technologies, such as occupancy sensors, and implement energy conserving policies, such as "lights out at night".



**18.A.m** - Reduce the energy demand of public facilities and conserve electricity through the following: a) retrofitting County owned or operated street, traffic signal, and other outdoor lights with energy efficient light emitting diode (LED) lamps; b) retrofitting heating and cooling systems to optimize efficiency, such as replacing HVAC systems; and c) replacing old appliances and technologies with ENERGY STAR® products. Obtain funding for and install renewable energy technologies on public property.

**18.A.n** - Work with Pacific Gas and Electric Company and other electric utility providers to educate residents and businesses about Smart Meters, how to monitor electricity use, and the potential benefits associated with Smart Meters.

**18.A.o** - Work with Pacific Gas and Electric Company and other electric utility providers to promote the use of financial incentives, such as Federal/State/utility rebate and, tax credits, for the voluntary installation of "cool roofs" on existing structures, such as ENERGY STAR® roof products, that have a high solar and thermal reflectance.

**18.A.p** - Encourage the use of electric lawnmowers and leaf blowers over those powered by gasoline.

**18.A.q** - Encourage the incorporation of energy conservation into the design of residential and commercial buildings; such as Tier 1 and Tier 2 of the Green Building Code.

**18.A.r** - Encourage the use of deciduous landscape trees near new development to provide shade during the hot summer months and allow solar warming during the cold winter months.

**18.A.s** - Support the use of alternative energy vehicles by encouraging new development to install electric charging stations for passenger vehicles, in particular at high use and density areas.

**18.A.t** - Support development of electric charging stations for passenger vehicles, in particular near transit stop locations and high use parking areas.

**Policy 18.A.6:** Encourage the use of solar power and other innovative energy sources as alternatives to more traditional forms of energy.

#### **Implementation Programs**

**18.A.u** - Promote Federal, State, and utility incentives, such as rebates, vouchers, and tax credits, and consider participating in a Property Assessed Clean Energy (PACE) program under AB 811 to provide property owners financing for solar photovoltaic systems.

**18.A.v** - Assist landowners wishing to utilize solar power and other alternatives by offering information on the requirements for their use in building codes.

**18.A.w** - Promote Federal, State, and utility financial incentives, such as rebates, vouchers and tax credits, to facilitate the installation of solar water heaters in homes.

**Policy 18.A.7** Encourage reduced consumption of fossil fuel energy by promoting alternative transportation methods and encouraging pedestrian oriented development to reduce the use of motor vehicles. See the Transportation Element and the Community Development and Design Element for a detailed listing of policies and implementation programs.