

Planning for a Resilient Future

Energy Action Plans for the Cities of Ventura, Moorpark, and Thousand Oaks

Brief Summary

Ventura County Regional Energy Alliance (VCREA) and the Community Environmental Council, in partnership with the cities of Ventura, Moorpark, and Thousand Oaks, have prepared Energy Action Plans (EAPs) for all three cities as well as EAP templates for the remaining jurisdictions within Ventura County. Work began on the EAPs in November 2017 and continued through March 2021. The EAPs contain goals, strategies, and actions for each city to reduce greenhouse gas (GHG) emissions related to energy generation and consumption over the next ten years. Each EAP includes: 1) a comprehensive GHG emissions inventory; 2) future scenario forecasts for 2025 and 2030; 3) GHG emissions reduction strategies; and 4) timeframes, costs, co-benefits, and responsible parties for strategy implementation.

The EAPs are structured to achieve each city's fair share of the statewide reduction goal established by California Senate Bill 32 (Pavley, Chapter 249, Statutes of 2016), which requires a statewide reduction of 40% below 1990 GHG emissions by 2030. Additionally, to protect their community, especially vulnerable populations, the EAPs provide a framework to address the environmental, health, and safety concerns of residents and workers as they relate to climate change impacts on the energy system.

Lead Agency and Partnerships

- Lead Agency and Project Manager: VCREA
- Primary Partner, Outreach Coordinator, and kWh Administrator: Community Environmental Council
- EAP Development Support: Cities of Ventura, Moorpark, and Thousand Oak
- kWh Countdown Technical Assistance: TRC and Abraxas Energy Consulting
- EAP Support: Rincon Consultants, Inc.

Drivers

The development of EAPs was driven by a desire of the City Councils and community advocates to create a plan to reduce energy use, increase energy efficiency, shift to renewable energy sources, and electrify both transportation and natural gas-powered processes to achieve significant energy savings and GHG reductions. Furthermore, the EAPs are intended to accelerate each city's development of a climate action plan (CAP) and to inform the policies that promote climate adaptation and reduce GHG emissions in each city's General Plan Update.

Engagement Process

All three cities conducted robust public outreach and engagement to provide residents, business owners, city staff, community-based organizations, and other stakeholders with the opportunity to participate in

developing the EAPs. Bilingual, geographically, and demographically diverse targeted outreach was conducted to reach all stakeholder groups and accurately represent community needs. A variety of methods were utilized, including surveys; workshops; tabling events; and stakeholder meetings. Additionally, since the Ventura County region was lacking data on energy usage in small to medium size businesses, a pilot program called kWh Countdown was developed as part of the EAP engagement process. kWh Countdown provided free energy audits and benchmarking for these types of businesses. Through the kWh Countdown program, 34 energy audits were conducted at no cost to Ventura County businesses. Eight facilities were also evaluated for the feasibility to install solar systems. Data gathered from the pilot project helped to understand small to medium size businesses' energy usage and needs for energy upgrades. This data informed and supported the development of EAP strategies for the commercial sector.



Photo by VCREA Staff

Climate Impact Area

Climate change is causing more severe temperatures and prolonged droughts. These circumstances trigger dangerous events that imperil life and property, such as the Thomas Fire that began in December 2017, and burned for 40 days, threatening the cities of Santa Paula, Ventura, Ojai and Fillmore, as well as many unincorporated communities, before moving into Santa Barbara County. Thus, in addition to reducing GHG emissions, the EAPs serve as a planning tool to mitigate the impacts of climate change on the region's energy systems. By implementing EAP strategies that promote building and transportation electrification, energy efficiency, shifts in energy use timing, and the adoption of local renewable energy and storage resources, all three cities are taking the next step to support a local renewable, resilient electricity system.



Thomas Fire Photo by Bill Nash

Funding Source

- California Energy Commission's Local Government Challenge: \$427,544
- Southern California Edison (SCE) and Southern California Gas Company's Strategic Plan Program: \$124,969

Research and Data

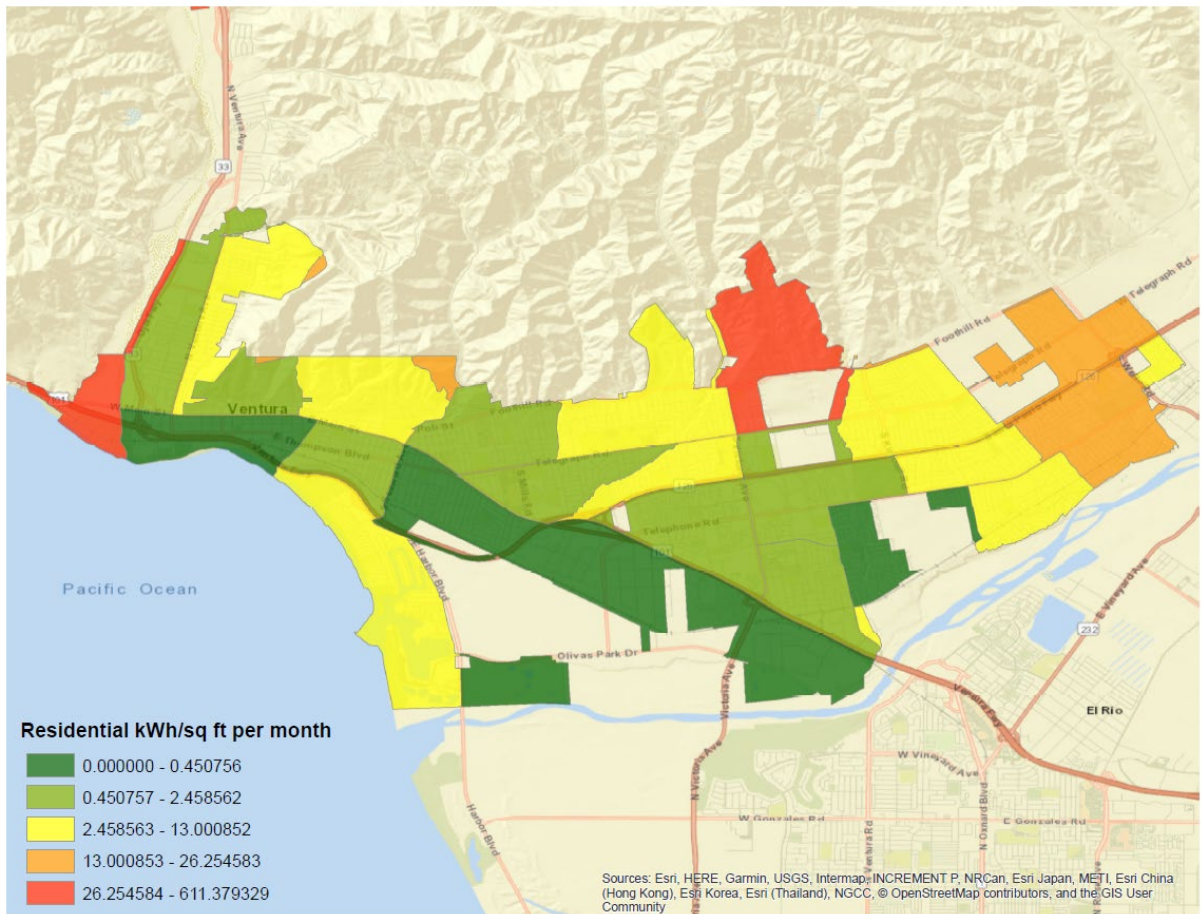
The EAPs were prepared using California Air Resources Board's 2017 Climate Change Scoping Plan and the latest GHG emissions accounting protocols (e.g., International Council for Local Environmental Initiatives' (ICLEI) Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions and ICLEI's Local Government Operations Protocol).

The EAP inventory computations were carried out using ICLEI’s ClearPath online tool and in-house Microsoft Excel-based data management tools. These inventories were used to inform development of the GHG reduction strategies. Each EAP strategy identifies GHG and energy reduction targets for 2025 and 2030. Excel-based monitoring tools have been developed to collect data and track GHG emissions so each city can monitor progress. ClearPath will be utilized to track its progress in reducing GHG emissions and assess the effectiveness of the EAP strategies. The methodologies, including the computations and assumptions, related to the GHG inventory, forecast, and emission reductions for each EAP strategy are thoroughly explained in EAP Appendix B: GHG Inventory Methodology, Appendix C: GHG Forecasting Methodology, and Appendix D Planning Scenario Methodology, respectively. For additional information, please check out each [City’s draft EAP](#).

Challenges

A major challenge in developing the EAPs was the availability of energy data used to develop the GHG emissions inventories and EAP strategies. However, the cities were able to get more granular electricity usage data from University of California, Los Angeles’ Energy Atlas than what SCE could provide because of aggregated customer energy usage rules. Energy Atlas offers a database of building energy consumption that links utility account information to building characteristics, sociodemographic data, and other significant attributes that can be expressed spatially. This data helped to identify where energy efficiency

Ventura Residential Electricity Usage 2016 (kWh/sq. ft/month)



is necessary, where to focus outreach efforts and possible incentives, and where energy reduction programs should be developed.

Outcomes

The EAPs describe three GHG scenarios that are forecasted: 1) future housing, employment, and population growth under business-as-usual; 2) adjusted business-as-usual that incorporates emissions reduction due to federal and state legislative actions; and 3) Community Planning Scenario that considers implementation of the EAP strategies and actions during the period of 2020 through 2030..

Under the Community Planning Scenario, when all federal, state, and local action reductions are applied, each City's GHG emissions are forecasted to decrease in 2030 by the following amount:

- City of Ventura: 281,915 MT CO₂e (44%)
- City of Moorpark: 96,235 MTCO₂e (43%)
- City of Thousand Oak: 611,750 MTCO₂e (45%)

The kWh Countdown program energy audits and solar analysis identified the total potential for the following:

- 3.30 million kilowatt-hour (kWh) reductions
- 11,659 therm reductions
- 1,147 kW demand savings per year
- 892 kW of solar systems

Replicability

EAP templates were developed to assist the remaining cities in the Ventura County region with customizing their own EAPs. Additionally, the EAPs and associated templates could be replicated in other communities that are interested in reducing greenhouse gas (GHG) emissions related to energy generation and consumption.

Additional Resources *(if applicable)*

- <https://www.vcenergy.org/services/local-government/energy-action-plans/>
- <https://californiaseec.org/seec-clearpath/>
- <https://energyatlas.ucla.edu/>
- <https://www.kwhcountdown.org/>

Further Information

Heather Allen, VCREA Program Administrator, heather.allen@ventura.org