



## VENTURA COUNTY HIGHLIGHT:

# City of Thousand Oaks Hill Canyon Wastewater Treatment Plant (HCTP)

The County of Ventura highlights the City of Thousand Oaks Hill Canyon Wastewater Treatment Plant (HCTP) nestled deep in Hill Canyon on 50 acres of city-owned Conejo Canyons Open Space. The low elevation of the facility relative to the city means the plant requires little pumping. City Council challenged the HCTP staff who met the vision for the facility to become completely self-sufficient. The HCTP staff are committed to environmental excellence, economy, efficiency, conservation, optimization and renewable energy generation.

## AWARD HIGHLIGHTS

- *National Association of Clean Water Agencies Gold Peak Performance Award for facility operations (multiple years)*
- *American Public Works Association (APWA) National Environmental Project of the Year for City Wetlands Creation Project adjacent to (2005)*
- *APWA Project of the Year for Transportation for the Hill Canyon Wildwood Park 145-foot long Conejo Canyons Bridge linked open space trail access (2011)*

The HCTP has capacity to process 14 million gallons of wastewater per day. Through exemplary public-private partnerships and substantial assistance from Southern California Edison, the facility provides 100% of operations needs from renewable energy created by a large on-site solar farm and a co-generation system that turns biogas into electricity. The plant now has capacity to export renewable energy to other city facilities. With smart city staff planning, the sale of resources ensures low sewer service charges for Thousand Oaks residents and earns the HCTP approximately \$600K per year in annual revenue.







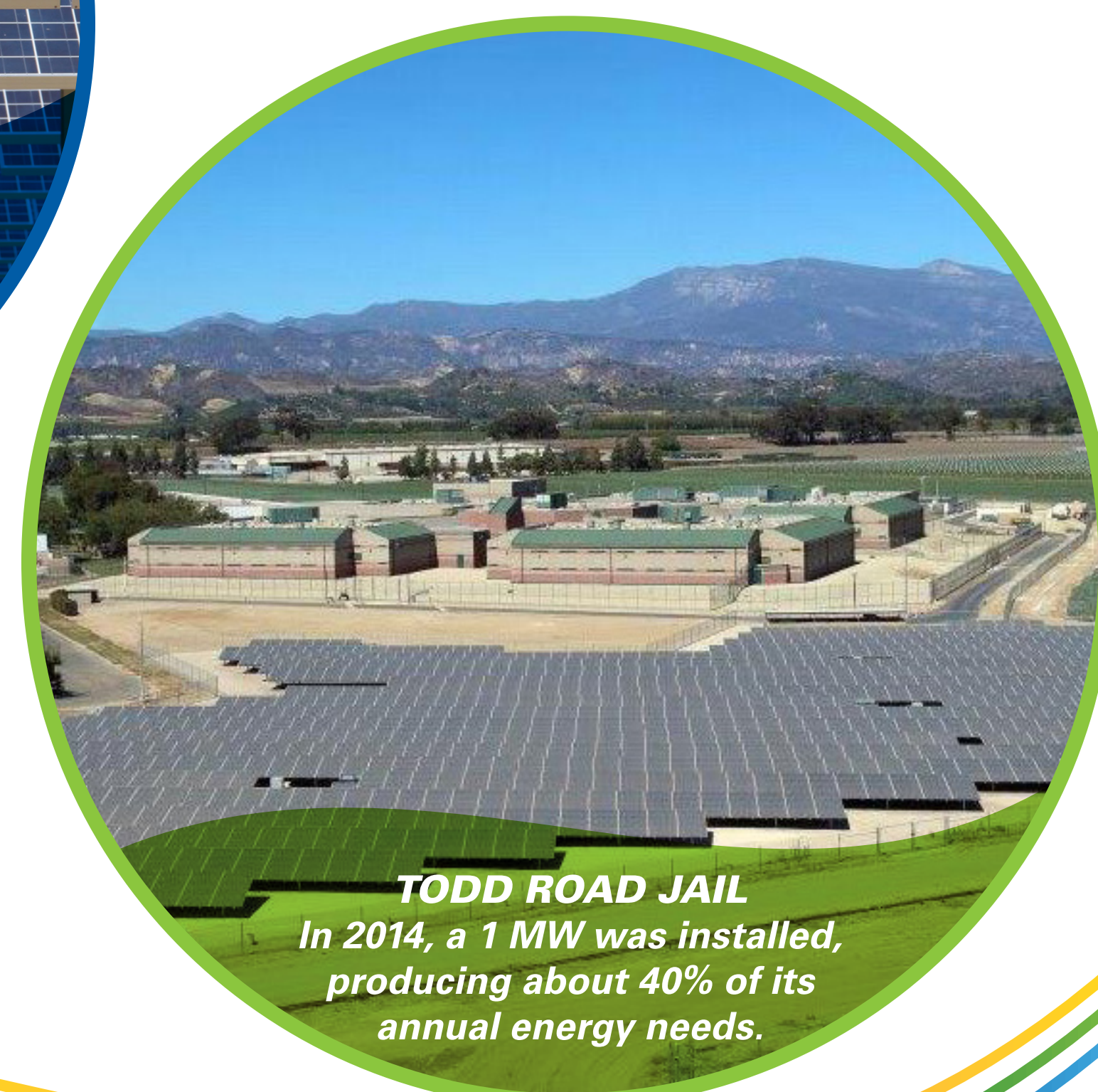
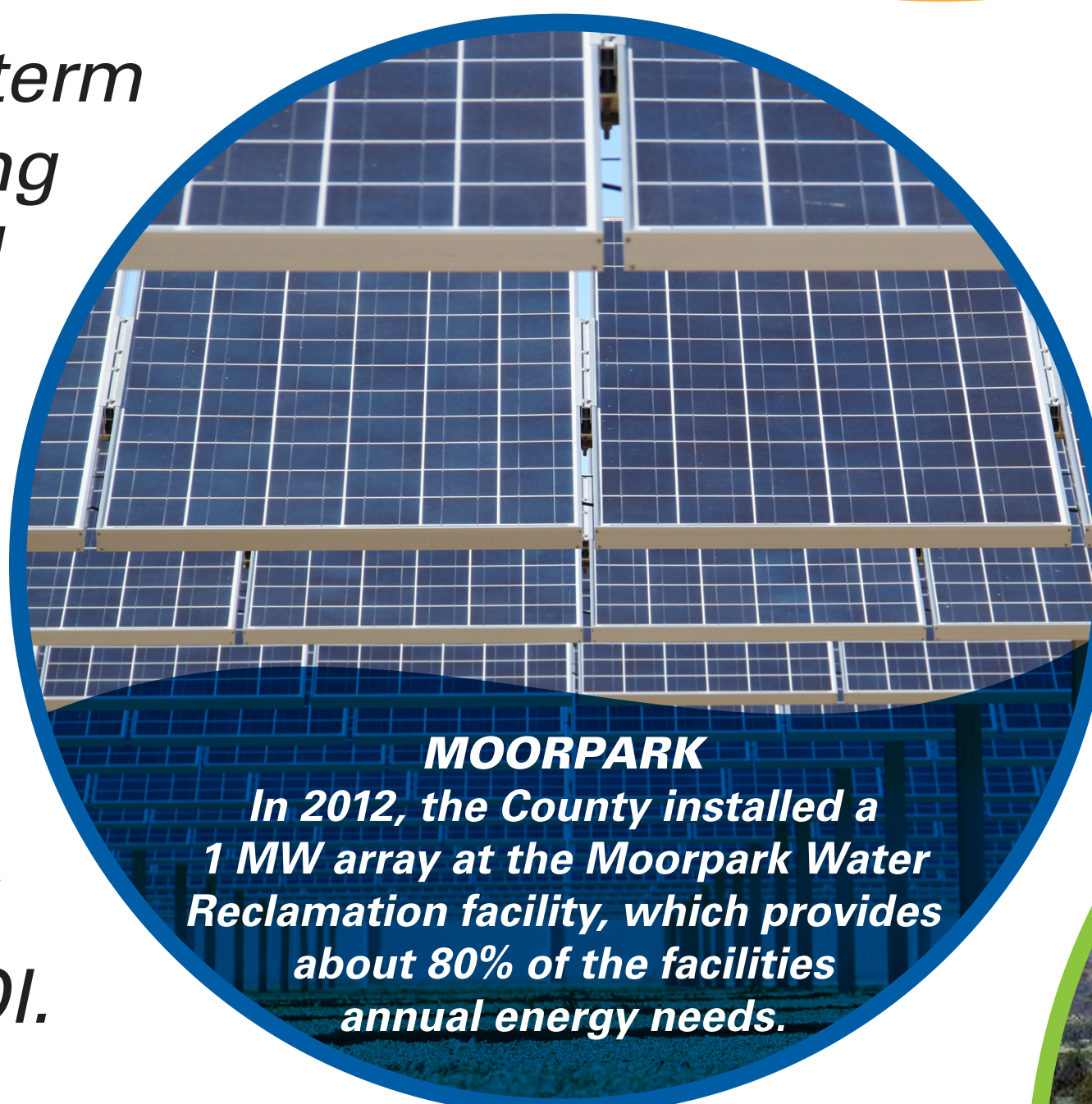
## VENTURA COUNTY HIGHLIGHT:

# Energy Efficiency Leads to Renewable Energy

Ventura County Board of Supervisors made a commitment to reduce GHG emissions by reducing current consumption and creating offsets for all future increases. This is particularly challenging due to the County having already upgraded lighting and air conditioning systems. Realizing that large-scale renewable energy projects are the best way to achieve offsets. Several departments; County Executive Office, Public Works Agency, General Services Agency, Sheriff's Department and Probation Agency have all worked together to identify sites, facilitate process and implementation, research financing strategies, operate solar arrays and plan on future sites.

## LESSONS LEARNED:

- Establish a project manager to coordinate implementation and communication and be the central point of contact.
- When possible hire design-build contractors.
- In the planning phase address long-term concerns like maintenance (cleaning panels, inspection, controlling weed growth) and who is responsible.
- Involve utility from beginning.
- Consider depreciation of panel productivity.
- Take into account regional utility rates increase, if possible use local averages to have a more accurate ROI.







## VENTURA COUNTY HIGHLIGHT:

# CLIMATE ON THE MOVE

**The VCREA Climate on the Move has three broad areas:**

## Energy

*Electricity & natural gas combustion*

*A 10% reduction of our natural gas combustion would be roughly equivalent to all natural gas used in Camarillo and Fillmore in 2012.*

## Mobile Sources

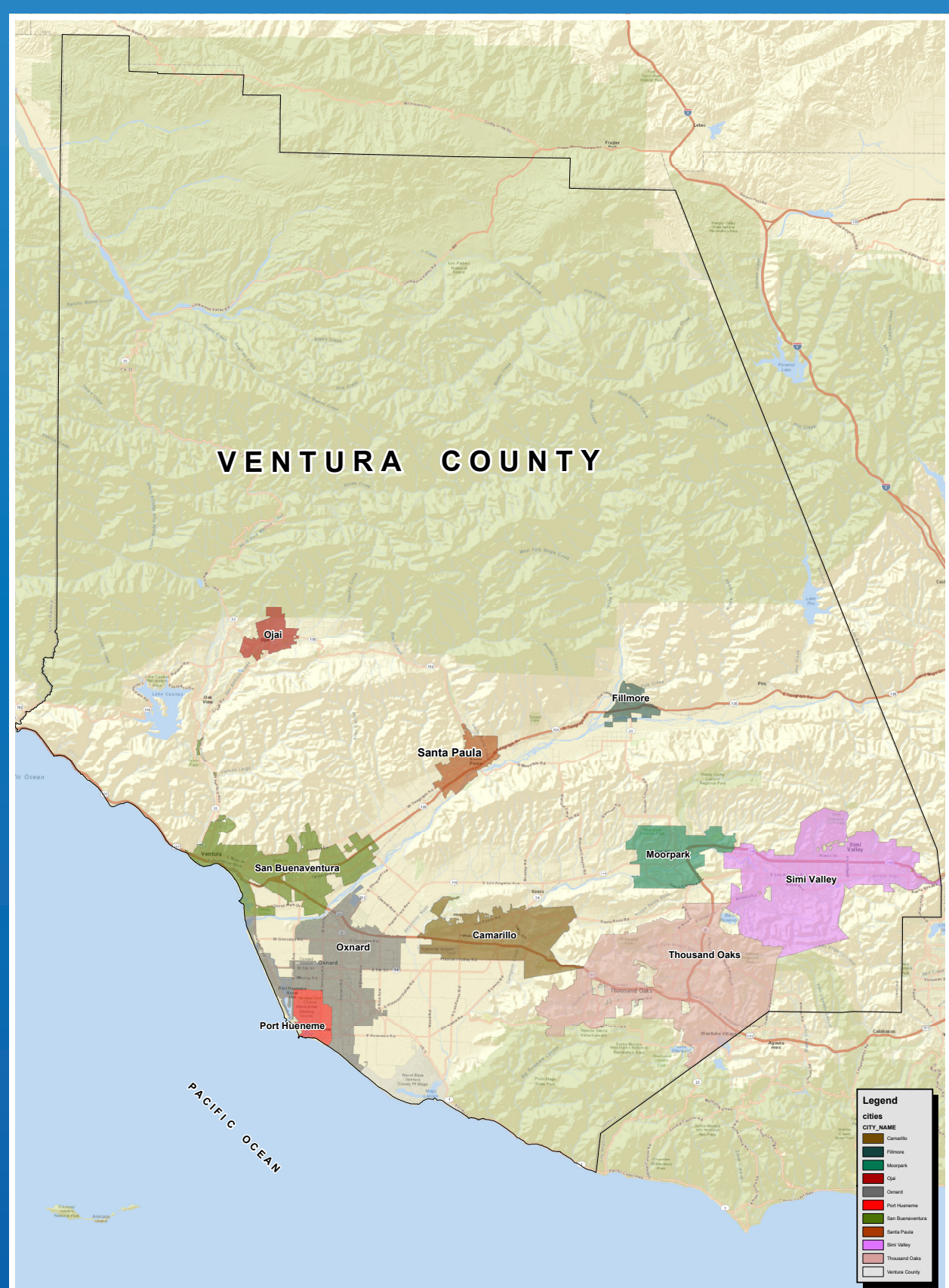
*On & off-road burning of diesel & gasoline*

*53% of our County GHG Footprint is from mobile based sources.*

## Other Emission Sources

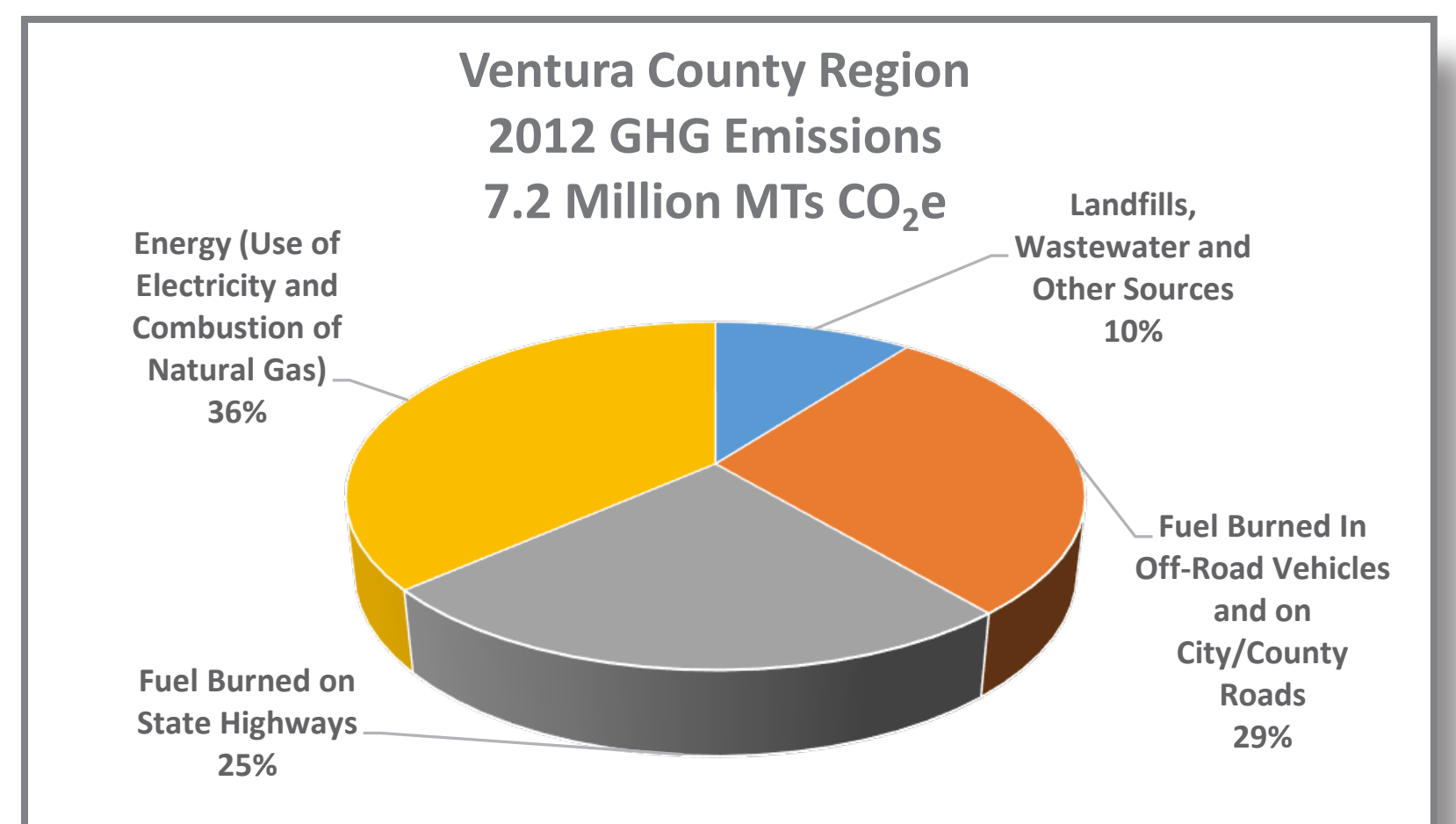
*Including landfill gas, emissions from wastewater treatment plants, & others*

*25% of our landfill methane, a potent GHG, can be reduced by diverting organics wastes including yard trimmings, wood, food scraps, and paper.*

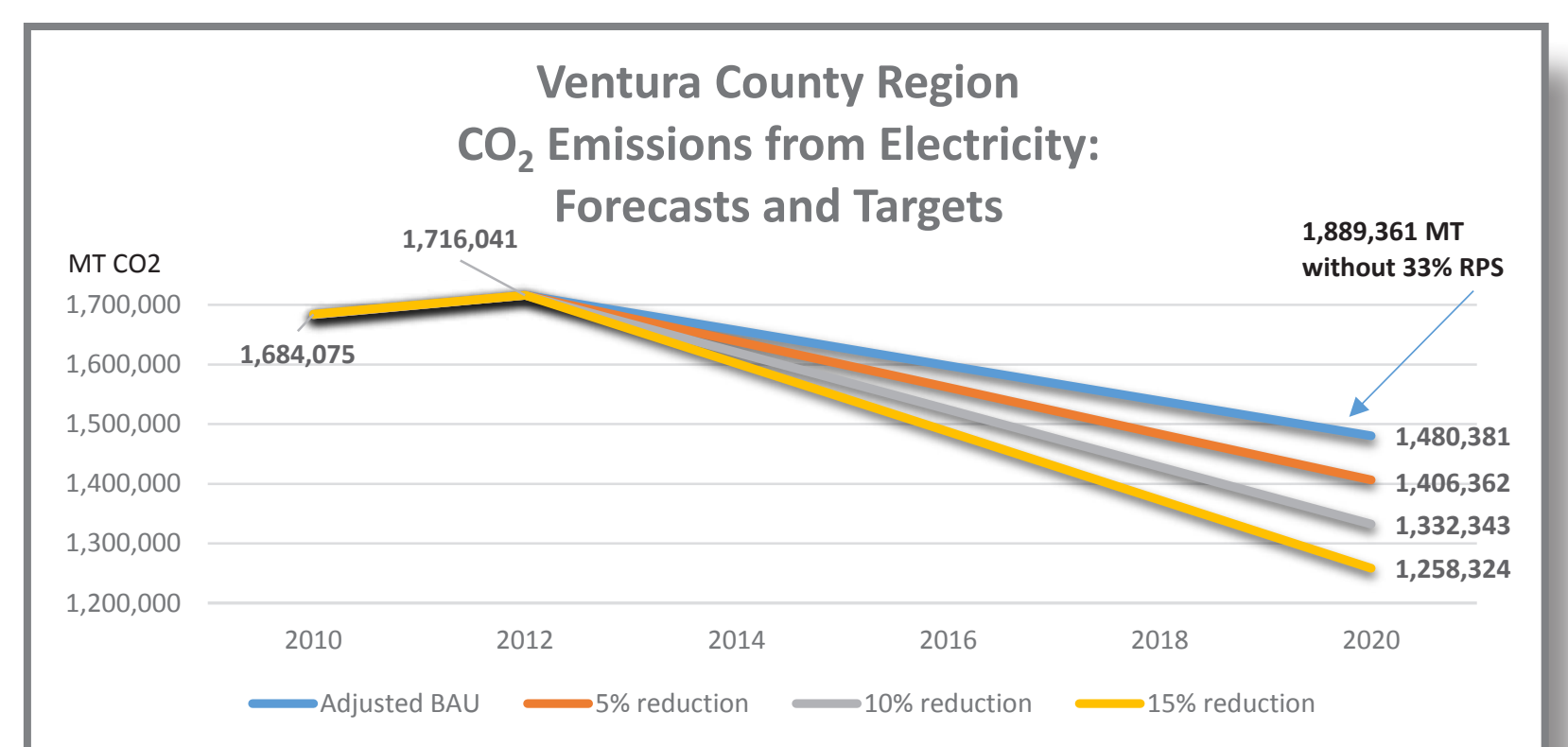


Ventura County Regional Energy Alliance (VCREA) prepared an inventory of Greenhouse Gas (GHG) emissions (2010 through 2012) for the region and for each of its local government member organizations with funding from Southern California Edison, under the auspices of the California Public Utilities Commission. Although individual VCREA members have developed GHG inventories and/or Climate Action Plans, the region as a whole lacked a comprehensive, community-based inventory of energy use and associated GHG emissions to provide forecasts for decision makers.

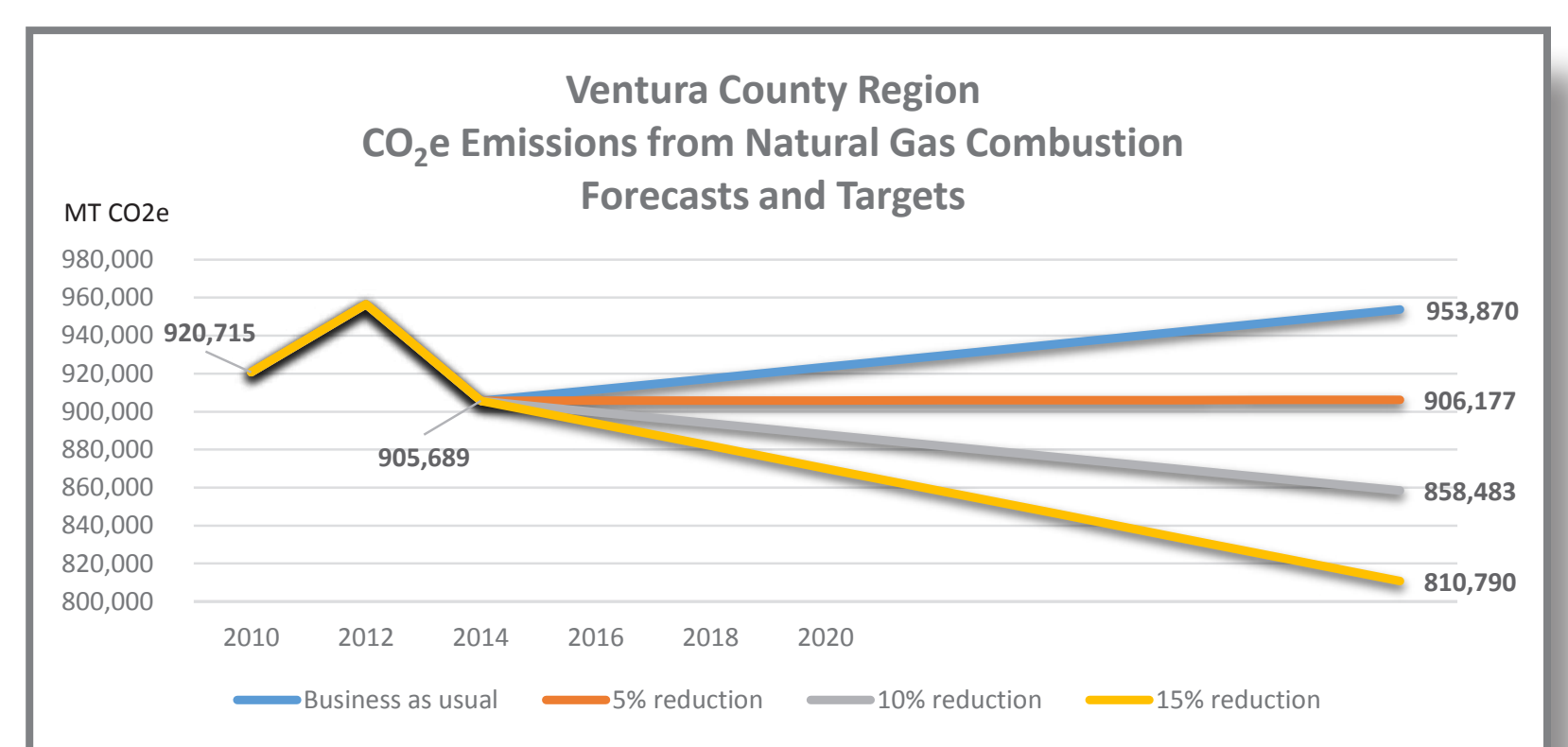
Development of GHG inventories for the region now provides important planning information and allows VCREA to analyze comparative GHG emissions and energy use and to identify trends over time. **Climate on the Move** will assist local government staff and elected officials for the cities of Camarillo, Fillmore, Moorpark, Ojai, Oxnard, Port Hueneme, Santa Paula, Thousand Oaks, and Ventura and the County of Ventura to implement municipally owned and community-based energy efficiency measures, as well as serve as a tool to obtain Cap and Trade funding.



*Our Baseline Regional Footprint*



*Reduction Opportunity for Electricity*



*Reduction Opportunity for Natural Gas*





## VENTURA COUNTY HIGHLIGHT:

# ONLINE PERMITTING LEADS TO ENERGY EFFICIENCY

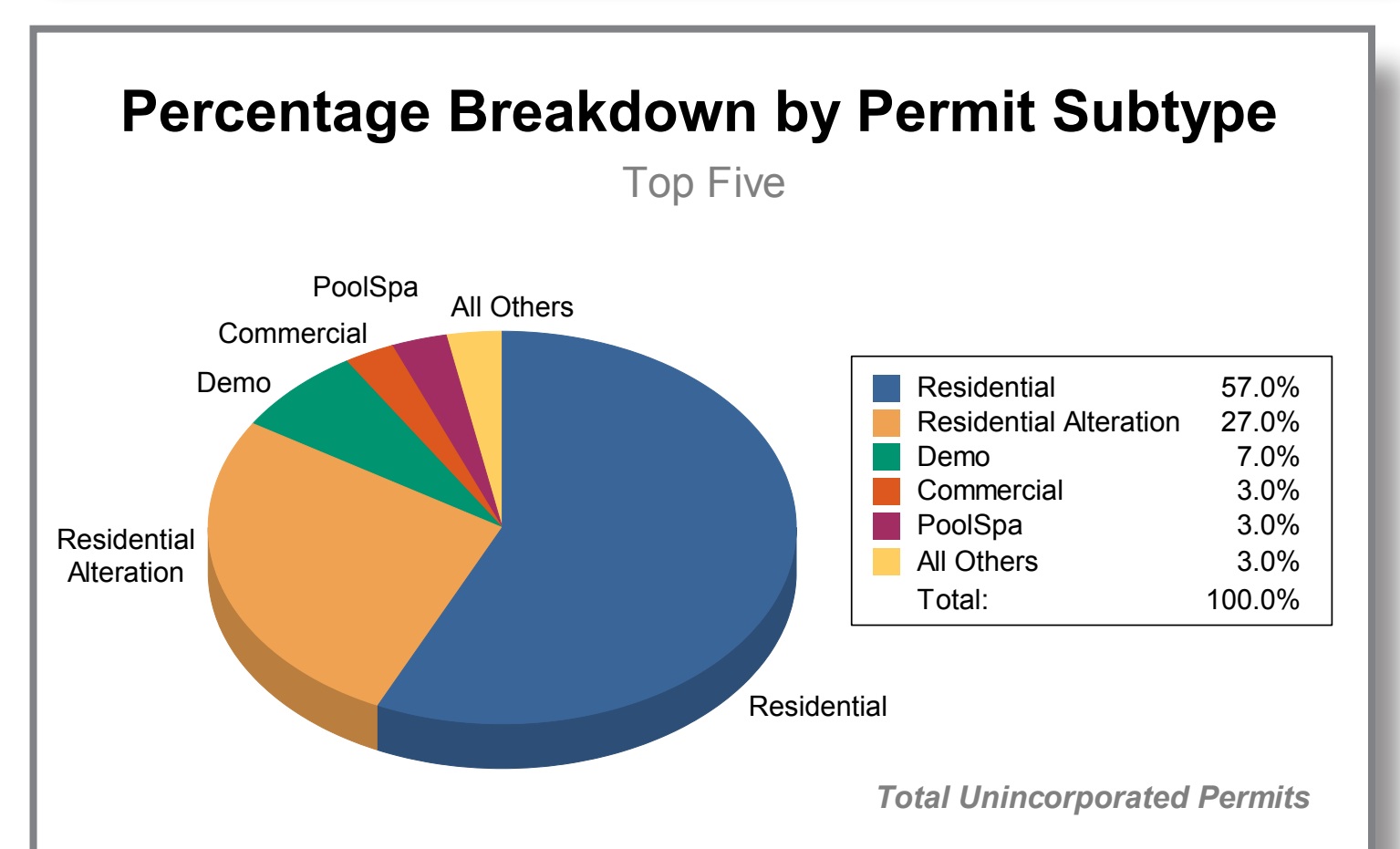
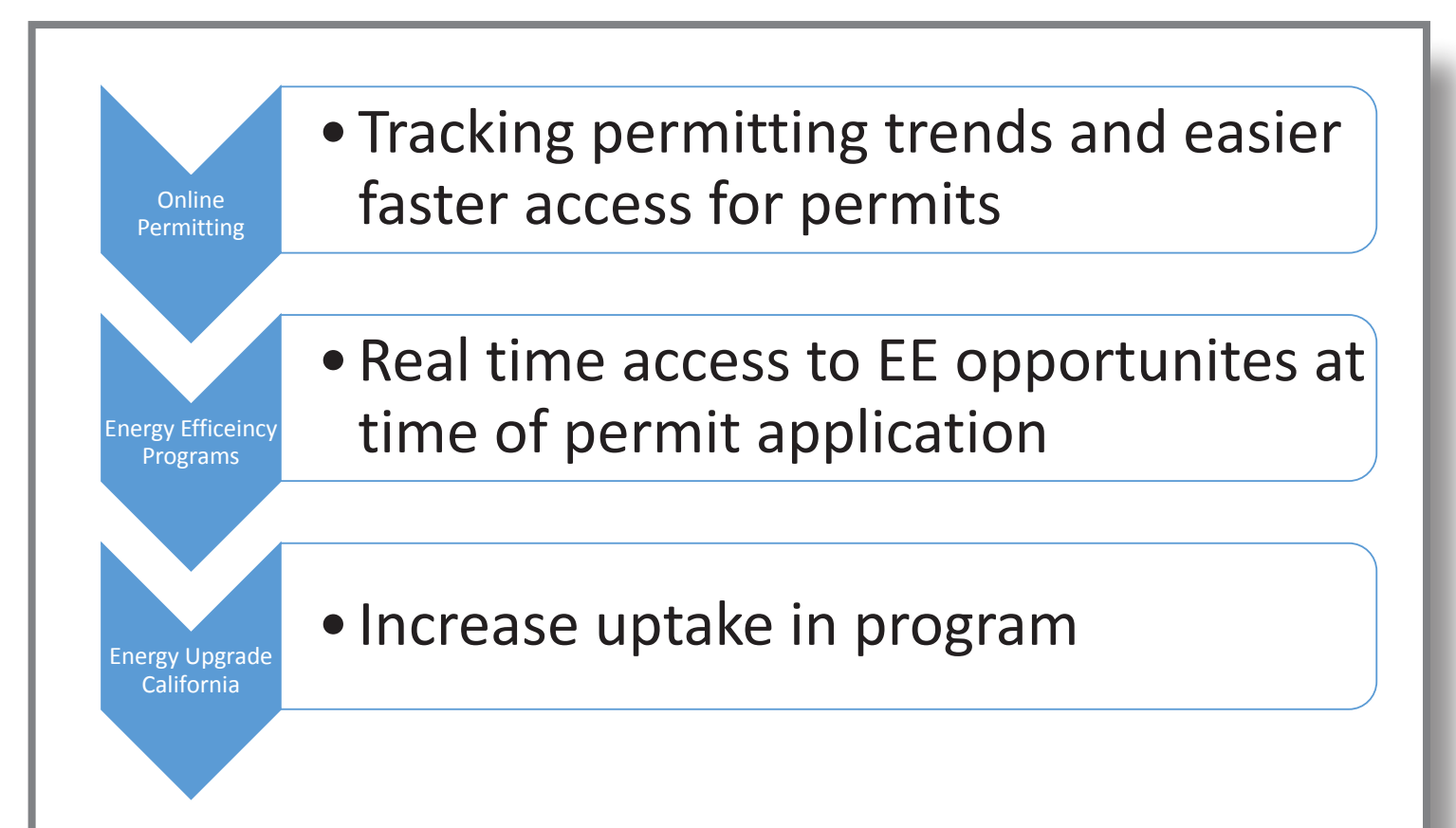
## Online Permitting System Benefits

- *Track the number of projects where there is potential EE measures.*
- *Give access to residents to view permit activity via weekly reports that show types of permits pulled.*
- *Track energy savings by tracking expected % savings kWh and/or expected % savings natural gas.*

County of Ventura with Collaboration of Ventura County Regional Energy Alliance (VCREA) recently completed the first phases of enhancing the County's permitting process by installing an online Electronic Document Review System (EDRS) that allows building permit applicants to submit building/engineering plans online. EDRS, a component of Accela Citizen Access, will take advantage of improved process efficiency and facilitate permitting of projects. Through the web interface developed, the system will facilitate the identification of Energy Efficiency (EE) opportunities and provide links to EE information.

## HIGHLIGHTS

- *In collaboration with VCREA where possible historical information on buildings to track EE over time.*
- *When online permit application is submitted send links or pop up information about EE retrofit programs available in the area.*
- *Collection of data, such as permit type, construction type, occupancy, and building area of the EE project.*



*Weekly report of permits pulled. Full report shows more detail about specific type of residential project.*

