



**RESOURCE
MANAGEMENT AGENCY
COUNTY OF TULARE
AGENDA ITEM**

BOARD OF SUPERVISORS

KUYLER CROCKER
District One
PETE VANDER POEL
District Two
AMY SHUKLIAN
District Three
EDDIE VALERO
District Four
DENNIS TOWNSEND
District Five

AGENDA DATE: December 17, 2019

Public Hearing Required	Yes	<input type="checkbox"/>	N/A	<input checked="" type="checkbox"/>
Scheduled Public Hearing w/Clerk	Yes	<input type="checkbox"/>	N/A	<input checked="" type="checkbox"/>
Published Notice Required	Yes	<input type="checkbox"/>	N/A	<input checked="" type="checkbox"/>
Advertised Published Notice	Yes	<input type="checkbox"/>	N/A	<input checked="" type="checkbox"/>
Meet & Confer Required	Yes	<input type="checkbox"/>	N/A	<input checked="" type="checkbox"/>
Electronic file(s) has been sent	Yes	<input checked="" type="checkbox"/>	N/A	<input type="checkbox"/>
Budget Transfer (Aud 308) attached	Yes	<input type="checkbox"/>	N/A	<input checked="" type="checkbox"/>
Personnel Resolution attached	Yes	<input type="checkbox"/>	N/A	<input checked="" type="checkbox"/>
Agreements are attached and signature line for Chairman is marked with tab(s)/flag(s)	Yes	<input type="checkbox"/>	N/A	<input checked="" type="checkbox"/>
CONTACT PERSON: Celeste Perez PHONE: 559-624-7010				

SUBJECT: Climate Action Plan 2018/2019 Annual Progress Report

REQUEST(S):

That the Board of Supervisors:

1. Approve the Climate Action Plan 2018/2019 Annual Progress Report.
2. Direct the Resource Management Agency Director, or designee, in concert with the County Administrative Officer, to take all necessary and proper action to implement the Climate Action Plan.

SUMMARY:

On August 28, 2012, the Tulare County Board of Supervisors adopted the General Plan Update 2030. After extensive negotiations, the lawsuit between the County and the Sierra Club was settled in March 2015. According to the settlement, Tulare County retained a qualified, professional consultant to perform a scope of work addressing the following tasks:

- (1) Emission Inventory Update.
- (2) CAP Monitoring and Tracking Protocol and Tools.
- (3) Assistance with Annual Progress Reports.

The settlement also calls for a "comprehensive" Greenhouse Gas Emissions Inventory update.

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DATE: December 17, 2019

The Greenhouse Gas Inventory Update was completed and approved by the Board on February 23, 2016, along with Tasks 2 & 3 approved by the Board on December 6, 2016. The Comprehensive Inventory Update identified in the settlement is required to be updated following the Regional Transportation Plan (RTP), which was adopted by TCAG on August 20, 2018. The "comprehensive" CAP inventory update was included in the 2018 Board Approved CAP Update.

The Progress Report also provides information on current grants and incentive programs that are available to residents and businesses of Tulare County to reduce greenhouse gases.

The Climate Action Plan 2018/2019 Annual Progress Report is the fourth in a series of progress reports that describes the progress since the County adopted the CAP in 2012. The CAP uses growth projections to predict the emissions that would occur in the 2020 and 2030 milestone years without controls in place. This is known as a business as usual (BAU) scenario. The reductions needed to achieve consistency with state targets are calculated as a percentage reduction from BAU.

The primary measures of growth are changes in population and housing, which result in increases in energy use for housing, transportation, and utilities. The increases in development-related emissions are offset by measures adopted to reduce greenhouse gas emissions from existing and new sources.

Conclusion

The following are highlights from the CAP 2018/2019 Annual Report:

- Growth continues to be lower than projected in unincorporated Tulare County (occupied housing units increased by 273 units in 2018/2019), resulting in lower emissions than were projected in the CAP, and the County remains on track to achieve its 2020 target.
- Alternative energy project completions continued at a good pace during the previous fiscal year, with 452 residential solar projects, 18 agricultural/dairy solar projects, and four other commercial solar projects, with 9.98 megawatts of generating capacity.
- The statewide and Tulare County economy has continued to recover. Unemployment in Tulare County has dropped to 8.0 percent as of October 2019 after peaking at over 19 percent at the height of the recession in 2010.
- The State has successfully reduced emissions to below the Assembly Bill (AB) 32 2020 target for the 2016 and 2017 emission inventories of statewide emissions, achieving the AB 32 target 3 years early.
- The Update to the Tulare County CAP including an updated emission inventory was adopted in December 2018 and can be used in determining an appropriate and feasible 2030 target consistent with SB 32.

According to the settlement as specified in section IV, the CAP Annual Report is required to report on the following two requirements:

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DATE: December 17, 2019

- (1) Beginning in 2016, the County will do an "Annual Review" of the Emissions Inventory including per capita Vehicle Miles Traveled ("VMT").
- (2) If the Annual Review concludes there is an increase in GHG emissions, or VMT for two (2) consecutive years, the County Board will hold a noticed public hearing to consider staff recommendations to reduce GHG/VMT's. The County Board will make findings as to staff recommendations.

The Climate Action Plan 2018/2019 Annual Progress Report provides findings and concludes in accordance with the two requirements mentioned above, that there has not been an increase in GHG emissions or VMT for two (2) consecutive years.

Accordingly, it is respectfully requested that the Board of Supervisors approve the proposed Climate Action Plan 2018/2019 Annual Progress Report as part of the implementation of the Settlement Agreement.

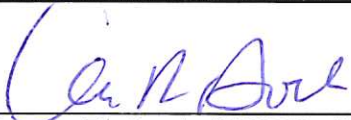
FISCAL IMPACT/FINANCING:

The Climate Action Plan 2018/2019 Annual Progress Report is funded in the FY 2018/19 adopted budget.

LINKAGE TO THE COUNTY OF TULARE STRATEGIC BUSINESS PLAN:

The County's five-year strategic plan includes the (i) "Economic Well Being Initiative - to promote economic development opportunities, effective growth management and a quality standard of living"; and (ii) "Quality of Life Initiative – to promote public health and welfare, educational opportunities, natural resource management and continued improvement of environmental quality."

ADMINISTRATIVE SIGN-OFF:



Aaron R. Bock, MCRP, JD, LEED AP
Assistant Director, Economic Development and Planning Branch



Michael Washam
Associate Director



Reed Schenke, P.E.
Director

Cc: County Administrative Office

SUBJECT: Climate Action Plan 2018/2019 Annual Progress Report
DATE: December 17, 2019

Attachment(s) A – Climate Action Plan 2018/2019 Annual Progress Report

**BEFORE THE BOARD OF SUPERVISORS
COUNTY OF TULARE, STATE OF CALIFORNIA**

IN THE MATTER OF THE 2018/2019)
CLIMATE ACTION PLAN ANNUAL) Resolution No. _____
PROGRESS REPORT)

UPON MOTION OF SUPERVISOR _____, SECONDED BY
SUPERVISOR _____, THE FOLLOWING WAS ADOPTED BY THE
BOARD OF SUPERVISORS, AT AN OFFICIAL MEETING HELD DECEMBER 17,
2019, BY THE FOLLOWING VOTE:

AYES:
NOES:
ABSTAIN:
ABSENT:

ATTEST: JASON T. BRITT
COUNTY ADMINISTRATIVE OFFICER/
CLERK, BOARD OF SUPERVISORS

BY: _____
Deputy Clerk

* * * * *

The Board of Supervisors:

1. Approved the Climate Action Plan 2018/2019 Annual Progress Report.
2. Directed the Resource Management Agency Director, or designee, in concert with the County Administrative Officer, to take all necessary and proper action to implement the Climate Action Plan.



**2018/2019
Climate Action Plan Progress Report
Tulare County, California**

Prepared for: **Tulare County Resource Management Agency**
5961 South Mooney Boulevard
Visalia, CA 93277

Prepared by: **Mitchell Air Quality Consulting**
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Contact: Dave Bryant, Special Projects Manager Contact: Dave Mitchell, Senior Air Quality Scientist

December 3, 2019

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ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
ARB	California Air Resources Board
BAU	Business as Usual
CalEEMod	California Emissions Estimator Model
CAP	Climate Action Plan
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CH ₄	methane
CO ₂	carbon dioxide
CVRP	Clean Vehicle Rebate Project
DOF	California Department of Finance
EMFAC	EMission FACTors Model
FY	Fiscal Year(s)
GHG	greenhouse gases
HFC	hydrofluorocarbon
HVIP	California Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project
MTCO _{2e}	metric tons of carbon dioxide equivalent
MW	megawatts
RMA	Tulare County Resource Management Agency
SB	Senate Bill
SJVAPCD	San Joaquin Valley Air Pollution Control District
SLCP	Short-Lived Climate Pollutant
TCAG	Tulare County Association of Governments
TCAT	Tulare County Area Transit
TSM	Tentative Subdivision Map
VMT	vehicle miles traveled

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SECTION 1: ANNUAL PROGRESS REPORT

1.1—Background

The purpose of this report is to provide an annual report on the progress achieved in implementing the Tulare County Climate Action Plan (CAP) as adopted in August 2012 (Tulare County 2012) and revised in December 2018 (Tulare County 2018).¹ The following is the Fourth Annual Progress Report (Progress Report or Report), which describes the progress achieved during Fiscal Year (FY) 2018/2019.



Photo Source: Tulare County Economic Development, 2016

This Progress Report uses a number of metrics and sources to demonstrate progress to date. Report preparation entailed collection of data from multiple sources within Tulare County, and from state agency reports and databases. The data generally reflects only those unincorporated areas within the County's jurisdictional areas; incorporated cities are not accounted for in the County's CAP. A constraint in making precise comparisons for some metrics is that some sources cited present the data for different timeframes and at different levels of detail. The Report strives to present the data that most clearly demonstrates and illustrates the extent of progress achieved. The metrics addressed in the Progress Report are listed as follows:

- Overall growth in population and housing compared with amounts projected in the CAP;
- The number of residential units constructed by type (that is, single-family, multi-family, mobile home, etc.);
- The average development density of the residential projects compared with Tulare County Blueprint targets;
- The percentage of residential construction in Community Plan areas and in rural residential areas (also compares development in cities with unincorporated Tulare County);
- The average percentage Title 24² energy efficiency standards were exceeded in residential subdivisions compared with efficiencies used for CAP projections;
- Amount of non-residential construction by type (that is, commercial and retail projects, industrial and agricultural processing);
- Sustainability features incorporated into non-residential projects beyond regulation;
- The energy efficiency of new residential and non-residential projects;

¹ Dairy and feedlot emissions are not addressed in the General Plan CAP or this progress report. They are being addressed separately in the Dairy and Feedlot Climate Action Plan (Dairy CAP) (Tulare County 2017).

² "Title 24" refers to the California Building Standards Code (Title 24, California Code of Regulations). It was last updated May 9, 2018, (2019 Triennial Edition) and becomes effective on January 1, 2020. The 2019 Title 24 Building Code Standards are scheduled to be incorporated into the Tulare County Ordinance Code by the County on December 17, 2019 and will update existing provisions of Chapter 15 of Part VII to make the County's building regulations consistent with the updated State regulations, where applicable.

- Assessment of vehicle miles traveled (VMT) from new development in the previous year in comparison to forecasted amounts;
- Overall progress from water conservation measures;
- Overall progress in achieving solid waste reduction goals;
- Energy retrofit projects completed (kilowatts of solar installed, efficiency retrofits completed, etc.);
- County of Tulare transportation, energy and water conservation programs implemented and effectiveness of the programs;
- Status of state regulations adopted to reduce greenhouse gas emissions, including newly adopted or amended regulations and the State's estimate of the effectiveness of the regulations; and
- Adoption of County land use plans for rural communities and hamlets.

The Progress Report also provides information on current grants and incentive programs that are available to residents and businesses of Tulare County to reduce greenhouse gases.

1.2—Highlights

- Growth continues to be lower than projected in unincorporated Tulare County (occupied housing units increased by 273 units in 2018/2019), resulting in lower emissions than were projected in the CAP, and the County remains on track to achieve its 2020 target.
- Alternative energy project completions continued at a good pace during the previous fiscal year with 452 residential solar projects, 18 agricultural/dairy solar projects, and four other commercial solar projects with 9.98 megawatts of generating capacity. (Agriculture/dairy project statistics are provided for informational purposes only.)
- The statewide and Tulare County economy has continued to recover. Unemployment in Tulare County has dropped to 8.0 percent as of October 2019 after peaking at over 19 percent at the height of the recession in 2010.
- The State has successfully reduced emissions to below the Assembly Bill (AB) 32 2020 target for the 2016 and 2017 emission inventories of statewide emissions, achieving the AB 32 target 3 years early.
- The Update to the Tulare County CAP including an updated emission inventory was adopted in December 2018 and can be used in determining an appropriate and feasible 2030 target consistent with SB 32.

1.3—Measuring Progress

Progress in achieving CAP goals is based on growth and control. The growth that occurs in the County results in increases in emissions. The controls and programs in place reduce emissions from

new and existing sources of greenhouse gas (GHG) emissions. The CAP uses growth projections to estimate the emissions that would occur in the 2020 and 2030 milestone years without controls in place to reduce the emissions. This is known as a “business as usual” (BAU) scenario. The reductions needed to achieve consistency with state targets are calculated as a percentage reduction from BAU.

All projections require course corrections to adjust to changing conditions and new information. For example, growth can be slower or faster than projected. Controls can be more or less effective than estimated. Growth continues to be slower than projected when the CAP was adopted; as such, there are fewer emissions from growth to offset. Conversely, controls and programs to reduce GHG emissions at the state level have proceeded in accordance with the 2008 Scoping Plan adopted by the California Air Resources Board (ARB) to implement AB 32—The Global Warming Solutions Act of 2006. These conditions benefit the County as they result in the County being ahead of where it needs to be to meet the CAP 2020 target and in position to make continued progress toward the SB 32 2030 target included in the 2018 CAP Update.

1.3.1 - Estimating Emission Reductions

GHG emission reductions are achieved by a number of ways such as reducing energy consumption, by reducing VMT and by using cleaner (lower carbon) energy sources. Energy efficiency improvements are achieved by using less energy to accomplish the same work, whether traveling in a vehicle or heating and cooling a building.

The emission reductions for motor vehicle fuel efficiency are based on state and federal fuel efficiency standards that apply to the manufacture and sale of vehicles. The manufacturers are required (by state and federal law) to meet gradually increasing levels of fuel efficiency each year. As new, more fuel-efficient vehicles are purchased and older, less fuel-efficient vehicles are retired, the average fuel efficiency for the vehicle fleet is improved.

On the energy production side, carbon intensity is reduced by increasing the percentage of renewable sources of energy (such as wind, solar, geothermal, hydroelectric sources, and biofuels) compared with energy generated using fossil fuels (such as natural gas and coal).

Measuring progress in reducing GHG emissions in Tulare County requires examination of growth in emissions sources and measures in place to reduce GHG emissions from existing and new sources. The primary measures of growth are changes in population and housing, which in turn result in increases in energy use for housing, transportation, and utilities. This Progress Report refers to GHG emissions increases caused by these increases in energy use as “development-related” emissions because they are generated by people occupying new and existing development projects. The increases in development-related emissions are offset by measures adopted to reduce GHG emissions from existing and new sources.

1.3.2 - Emission Inventories/Progress Summary

Inventories are accounting systems that allow for the identification of significant sources of GHG emissions and consequently opportunities for reducing GHG emissions. The community inventory was updated for the CAP update in December 2018. The updated inventory shows that the County’s

2020 target is within reach. The updated inventory also reflects statewide 2030 targets mandated by SB 32 and regulations.

1.3.3 - Growth in Population and Housing

This Progress Report includes population and housing estimates and forecasts that are used to predict growth in GHG emissions. For many source categories, GHG emissions are closely correlated with population. For example, on a community average, home energy use is directly related to the number of people in the community.

Population

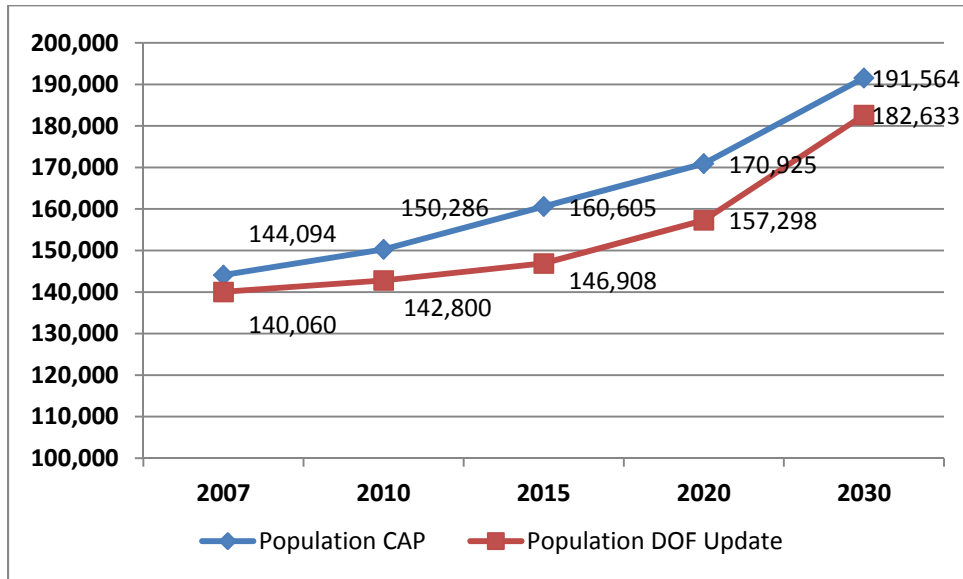
Population growth in unincorporated areas from 2010 to 2030 used in forecasting emissions in the CAP is compared with current State of California Department of Finance (DOF) estimates and projections in Table 1. The growth in population as of January 2019 was 14.3 percent less than the amount projected in the CAP. The population growth projected for 2020 is 11.7 percent lower than projected in the CAP. The population in unincorporated areas of the County grew at an average rate of 0.64 percent per year between 2010 and 2015. The population in the unincorporated area has declined by 1,629 persons or 1.1 percent from 2015 to 2019, for an annual average decrease of 0.7 percent. The CAP originally required a 26.2 percent reduction accounting for growth its 2020 target. Based on current growth estimates, the County would need a reduction of 14.7 percent from BAU to reach the 2020 target. In the 2017 Scoping Plan Update, the ARB also includes lower growth forecasts and indicates that the entire State is on track to reach the AB 32 2020 target (ARB 2017), and—as previously mentioned—the 2016 and 2017 statewide inventories were below the target.

**Table 1: Tulare County Unincorporated Population, 2010 to 2030—
Differences in Projections from CAP Inventory and Current DOF Estimates**

Source	Population					
	2010	2015	2018	2019	2020 (Est.)	2030 (Est.)
Tulare County 2012 CAP Population Data and Projections	150,286	160,605	166,797	168,861	170,925	191,564
Updated DOF Population and Projections	142,800	146,908	144,375	144,741	151,197	167,580
Difference	7,486	13,697	22,422	24,120	19,728	23,984
Percent Difference	-4.98%	-8.53%	-13.44%	-14.28%	-11.54%	-12.52%
Source of Estimate: Tulare CAP and DOF Report E-5 (2017) and P-1, 2015.						

As shown in Figure 1 (which compares the CAP and DOF projections under the DOF projections), growth would return to historic rates after 2020. However, even accounting for this trend, the total population would remain below projections used in the CAP.

Figure 1: Comparison of Population Projections 2007 to 2030



Growth in Tulare County between 2014 and 2019 has taken place primarily in the incorporated cities. The population of the cities grew by 21,901 during this period, while the population in the unincorporated County declined by 1,621 persons. The population growth rate in incorporated areas averaged 1.5 percent per year, while the rate in the unincorporated County has declined by an average of 0.2 percent per year since 2014.

Housing

Some emission forecasts are directly related to housing growth. Housing growth forecasts are also used to allocate emissions among the unincorporated County and the cities in Tulare County when only countywide data is available. Table 2 provides the DOF housing estimates for 2010, 2015, 2017, 2018, and 2019, and forecasts for 2020 and 2030 for the unincorporated areas of Tulare County. The DOF used the Housing Unit Method to estimate total and occupied housing units, household size, household population, and group quarters population. Housing units are estimated by adding new construction (and annexations) and subtracting demolitions and then adjusting for units lost or gained by conversions. For unincorporated Tulare County, the DOF receives annual housing unit change data from Tulare County Resource Management Agency (RMA) for unincorporated areas (and from cities in Tulare County for applicable incorporated areas), and it, too, uses the most recent U.S. Census Bureau data.

Occupied housing units are estimated by applying a derived civilian vacancy rate to the estimated civilian housing units. Occupied units were used as a metric to estimate GHG emissions because little or no emissions-generating activity would occur at vacant residences.

The growth in occupied housing units from the 2010 base year to 2015 was 310 units for an increase of 0.79 percent over 5 years or around 0.15 percent per year. This indicates that housing growth also remains below CAP projections, which assumed an average annual increase in 1,009 housing units. Over the period from 2010 to 2015, the number of housing units was projected by the CAP to increase by 5,045 compared with the actual increase of 310 occupied units. Since 2015, the number

of occupied housing units has declined by 485 units. The difference between CAP projections and actual occupied housing since 2010 shows a net decline of 175 units since 2010.

Table 2: Tulare County Unincorporated Residential Housing Units 2010 to 2030

Source	Occupied Residential Housing Units						
	2010	2015	2017	2018	2019	2020 (Est.)	2030 (Est.)
California DOF Housing Estimates	39,109	39,419	39,002	38,661	38,934	42,754	49,328
Note: Data are for January 1 of each year. Projections of data for years 2020 and 2030 are based on population growth and average occupancy per dwelling unit in Tulare County from DOF Report P-1. Source of Estimate: California Department of Finance Report E-5 Population and Housing Estimates for 2010, 2015, 2017, 2018, 2019.							

Table 3 provides the housing growth from 2010 to 2019. This information provides a more detailed picture of housing trends in the unincorporated areas of Tulare County. The number of occupied housing units increased by 273 units in the last year but has decreased by 175 units since 2010.

Table 3: Tulare County Housing—2010 to 2019

Year	Total Housing Units	Occupied Housing Units
2010	44,456	39,109
2011	44,497	39,128
2012	44,616	39,148
2013	44,720	39,108
2014	44,884	39,295
2015	45,049	39,419
2016	44,437	38,883
2017	44,573	39,002
2018	44,432	38,661
2019	44,492	38,934
Source of Estimate: DOF Report E-5, 2019. Data is for January 1 of each year.		

The CAP land use strategy assumes that new urban development in Tulare County will occur primarily in cities and rural communities (as stated in General Plan Policy PF-1.2 Location of Urban Development). Review of housing data compiled by the DOF confirms that this has indeed occurred. Table 4 shows the number of occupied housing units in cities and unincorporated Tulare County from 2014 to 2019 and year-to-year increases over the period. Occupied housing units increased by 6,441 units in Tulare County cities, but declined by 361 units in the unincorporated areas of Tulare County,

resulting in a negative growth of 1.61 percent in the unincorporated areas and an increase of 5.97 percent in the cities over this 5-year period.

Table 4: City and County Occupied Housing 2014–2019

Year	Occupied Housing Units					
	Cities	Unincorporated	Total	Total Increase from Previous Year	Increase from Previous Year: Cities	Increase from Previous Year: Unincorporated
2014	93,565	39,295	132,860	—	—	—
2015	94,349	39,419	133,768	908	784	124
2016	95,907	38,883	134,790	1,022	1,558	-536
2017	96,845	39,002	135,847	1,057	938	119
2018	99,153	38,661	137,814	1,967	2,308	-341
2019	100,006	38,934	138,940	1,126	853	273
Inc. 2014–2019	6,441	-361	6,080	—	—	—
Percent Increase 2014–2019	6.9%	-0.9%	4.6%	—	—	—

Note:
Data as of January 1 of each year
Source: DOF Report E-5, 2019, Internet Version.

Although net occupied units in unincorporated Tulare County have declined in the past 5 years, some new housing has been constructed in the unincorporated County. Table 5 lists the number of single-family, multi-family, and mobile homes with finalized building permits for FY 2015/2016 through FY 2018/2019. As shown in Table 5, the number of building permits issued for residential housing units in the most fiscal recent year (2018/2019) was 123 units. The difference in occupied units may be due to demolitions, increased vacancy rates, increased persons per unit, and annexations to incorporated cities. The new units are required to meet the current 2016 Title 24 Building Energy Efficiency Standards and the CalGreen Code requirements and will use substantially less energy than the older existing homes. The new 2019 Title 24 Building Energy Efficiency Standards go into effect on January 1, 2020 and will provide additional reductions. Four years of data were provided to represent the most current development trends.

Table 5: Tulare County Residential Housing Permits FY 2015/2016 to 2018/2019

Category	Time Period			
	FY 2015/2016	FY 2016/2017	FY 2017/2018	FY 2018/2019
Single-Family	121	208	163	109
Multi-Family (duplexes)	7	35	5	6
Mobile Homes	46	52	46	8

Table 5 (cont.): Tulare County Residential Housing Permits FY 2015/2016 to 2018/2019

Category	Time Period			
	FY 2015/2016	FY 2016/2017	FY 2017/2018	FY 2018/2019
Total Units	174	295	214	123
Note: Mobile homes are sometimes referred to as manufactured homes. The homes reported in this table would meet the definition of mobile homes in the Tulare County Zoning Ordinance. Source: Tulare County RMA Building Permit Database queried November 2018 and November 2019.				

1.3.4 - Average Development Density of New Development

One indicator of future growth is the approval of new subdivisions within unincorporated areas of the County. The County has approved one new subdivision and one minor revision to an existing subdivision during the last fiscal year (2018/2019). Although the projects were approved, it does not add to emissions until the projects are constructed and occupied. As shown in Table 6, the two subdivisions include a total of 126 new lots. The density of the subdivision in Strathmore is 11.8 units per acre, which is greater than the 5.3-unit-per-acre goal in the CAP, based on the Tulare County Association of Governments (TCAG) Blueprint; and the Woodlake subdivision has a density of 0.43 units per acre, which is less than the 5.3-unit-per-acre goal. The subdivision in the rural area of the County had a density of 0.34 units per acre but created only 43 lots. The projects in rural communities and adjacent to cities provide 66 percent of the total lots added. In addition, most development of all types and high-density residential have been occurring within the cities of Tulare County that are expected to be denser and more numerous than development in rural areas of Tulare County and will allow the County including the cities to meet or exceed the 5.3-unit-per-acre goal.

Table 6: Tulare County Approved Tentative Subdivision Maps FY 2018/2019

Map No.	Location	Acres	Lots	Density (Units per Acre)
TSM 773 (Minor Revision)	Strathmore	7.04	83	11.8
Community Plan Area Totals	—	7.04	83	11.8
TSM 805	Woodlake	125	43	0.34
Rural Area Totals	—	125	43	0.34
Total	—	132	126	—
Note: TSM 850 is located approximately 1 mile from the Woodlake Rural Community. Source of Data: Tulare County RMA Planning.				

An additional 15 residential units were approved with Special Use Permits in FY 2018/2019 as second or third units that will be constructed on existing lots. Additional units increase the overall development density by a small amount.

1.3.5 - Commercial and Industrial Development

There was an increase in commercial and industrial development activity during FY 2018/2019. Review of building permit completions identified a total of 96,129 square feet of commercial, warehouse, and office space during the fiscal year ending June 30, 2019. This compares with 45,510 square feet of retail, commercial, and office projects in FY 2017/2018.

The County approved the Sequoia Gateway Commerce and Business Park Specific Plan for a large development project located at State Route 99 and Caldwell Avenue in FY 2018/2019. The project will ultimately construct 1.2 million square feet of commercial, retail, restaurant, and office space on a 126.9-acre site. No construction has begun during this reporting period. The project is expected to take a number of years to build out. Individual projects within the specific plan will be included in future reports as they are completed.

Data for new commercial projects completed in FY 2018/2019 are shown in Table 7. Providing local commercial services in Tulare County rural communities will generally reduce VMT by replacing trips to the more distant cities with closer local trips. The projects include school buildings, a veterinarian facility, warehouses, cold storage, a commercial addition, and a small mechanical building. Dairy projects for housing animals were not included.

Table 7: Tulare County Commercial and Industrial Projects FY 2018/2019

Project	Location	Square Feet
Commercial/Office/Industrial Construction		
School Administration Building	Visalia	5,709
School Classroom Building	Visalia	3,434
Large Animal Veterinary Lab	Tulare	6,160
Warehouse with Office	Exeter	6,135
Warehouse with Office	Exeter	6,135
Cold Storage Building Addition	Delano	49,763
Cold Storage Room Addition for Grapes	Delano	14,393
Ag Storage Building	Visalia	4,000
Mechanical Building for Dairy	Pixley	400
Total Short-term Projects for Unincorporated County		96,129
Source: Tulare County RMA Building Permit Database queried November 2019.		

1.3.6 - Percentage of Residential Construction in Community Plan Areas and in Rural Residential Areas

Where growth occurs is also an important factor in Tulare County’s GHG reduction strategy. As described in the CAP, the Tulare County General Plan Update provides goals and policies for accommodating growth in the County. The goals and policies are expected to result in land use

patterns that reduce GHG emissions by encouraging new growth to occur in existing communities (including cities) and to be constructed at higher than historic development densities to reduce VMT. Review of housing permit data for FY 2018/2019 from the RMA permit database indicates a total of 123 units were built. Of these units, 43 were built in rural communities and 80 were built in rural areas of the County. Thirty-five percent of housing units were permitted in rural communities and 65 percent were permitted in rural areas.

1.3.7 - Assessment of Vehicle Miles Traveled

The Progress Report assesses the VMT in the unincorporated areas of the County with the amounts used in preparing the CAP. Overall estimates of VMT for the entire County are prepared by the TCAG to support the Regional Transportation Plan (RTP) and Federal Transportation Conformity Requirements. The latest VMT update is from data supporting the TCAG 2018 RTP/SCS (TCAG 2018). The estimate of the portion of VMT that is assigned to the unincorporated areas of Tulare County is based on the percentage of County population in the unincorporated areas. The percentage of population in the unincorporated areas of the County has declined from 31.9 percent in 2014, to 31.0 percent in 2017, and to 30.2 percent in 2019. This change is due to more growth occurring in the incorporated cities than the unincorporated County areas. The VMT assigned to unincorporated Tulare County has declined from 2,518,809 VMT per day in 2015 to 2,468,559 per day in 2017—a reduction of 0.5 percent. VMT is projected to be nearly flat to 2020, with growth continuing at a rate of 0.57 percent per year to 2030 reflecting a return to higher population growth rates in the future.

The TCAG 2018 RTP/SCS used updated models, traffic data, and demographic data to estimate VMT. This has resulted in more accurate VMT estimates that are substantially lower VMT than was used to develop the 2012 CAP emission inventory. The estimated VMT for 2015 in the 2012 CAP was 4.38 million VMT per day. The VMT from the TCAG 2018 RTP/SCS for unincorporated Tulare County is 2.47 million, a difference of 43.6 percent below 2012 CAP projections. In addition to the TCAG modeling changes, growth is well below projections as illustrated by comparing the percentage VMT growth projected in the CAP with actual population growth that has occurred between 2015 and 2019 in unincorporated Tulare County. The 2012 CAP predicted growth averages 3.1 percent per year, which would result in a 15.5 percent increase in 5 years. The 2018 CAP Updates uses a 1.3 percent per year growth rate that reflects the lower current growth projections. This results in projected growth of 6.5 percent in 5 years, which is 7.9 percent more than has actually occurred during this period. The growth in unincorporated Tulare County between 2015 and 2019 based on changes in population reported by the DOF was -1.4 percent, meaning that growth in VMT was negative over the last 5 years. The results of the comparison are provided in Table 8.

Table 8: CAP VMT Comparison for 2015 to 2019

Category	Rate of Vehicle Miles Traveled Increase (Percentage)					
	2015	2016	2017	2018	2019	2015–2019
VMT Growth Rate 2012 CAP Inventory	3.1	3.1	3.1	3.1	3.1	15.5
VMT Growth Rate 2016 Inventory Update	1.3	1.3	1.3	1.3	1.3	6.5

Table 8 (cont.): CAP VMT Comparison for 2015 to 2019

Category	Rate of Vehicle Miles Traveled Increase (Percentage)					
	2015	2016	2017	2018	2019	2015–2019
VMT Growth Rate for Progress Report Based on Actual Population	0.4	-1.1	0.7	-1.3	0.3	-1.4
VMT Annual Growth Rate Differential (% Under CAP Rates)	-2.7%	-4.2%	-2.4%	-4.4%	-2.8%	-16.9%

Source: CalEEMod 2017 and Tulare County 2012 and Tulare County 2016.

Although population in the unincorporated areas of Tulare County has declined, new homes continue to be constructed, but at a slower pace than projected in the 2012 CAP and 2018 CAP Update. VMT from new residential development for the last two fiscal years was estimated using the CalEEMod emissions model. The results were then compared with the increase in VMT anticipated by housing buildout rate used for the CAP projections. Review of the RMA permit database identified a total of 214 residential units with final permits in FY 2017/2018 and 123 residential units in FY 2018/2019 (see Table 5). The VMT for the new units were estimated using the CalEEMod emission modeling. The CAP growth projections assumed that 23,208 residential units would be constructed between 2007 and 2030 for an average of 1,009 residential units each year. The data shows that the amount of residential development activity is much lower than predicted in the CAP. The VMT from new residential development is 20.3 percent of CAP forecast for FY 2017/2018 and 12.1 percent of CAP forecast in 2018/2019. However, since the net number of occupied housing units in unincorporated Tulare has declined, the true impact is less. The results of the analysis are presented in Table 9. The 2018 CAP Update includes updated growth projections that take into account the slower than expected growth that occurred between 2010 and 2017 in Tulare County. The CAP Update forecasts an average annual increase of 179 occupied units by 2020 and 351 occupied units between 2020 and 2030. As of end of FY 2018/2019, the number of occupied residential units declined by 361 units since 2015 for an average growth rate of -1 percent per year.

**Table 9: Annual Vehicle Miles Traveled from New Residential Development
FY 2017/2018 and FY 2018/2019**

Category	Annual Vehicle Miles Traveled	
	FY 2017/2018	FY 2018/2019
VMT from New Residential Units	5,055,701	3,969,005
VMT Residential Units Forecast in 2012 CAP (1,009/year)	24,866,337	24,866,337
Percentage of Forecasted VMT	20.3%	16.0%

Note:
VMT estimates generated using CalEEMod 2016.
Source: Tulare County RMA Building Permit Database queried November 2019 and Tulare County CAP, 2012.

The annual VMT generated from commercial and industrial development projects during the last two fiscal years is presented in Table 10. The type and amount of retail, commercial and industrial development used for this analysis is found in Table 7. The VMT was estimated by modeling each land use type with the CalEEMod model. The CAP does not include estimates of the amount of commercial development that would occur each year, so a direct comparison with the CAP is not possible. However, the data from the last two years reflect recent trends. Most of the VMT increase is from new school and warehouse uses in or near Tulare County rural communities. Commercial services and employment provided by the new development provide local services to underserved communities and would be expected to reduce travel to more distant businesses in neighboring cities to obtain jobs, and goods and services. No industrial projects were identified in the permit database as final in FY 2017/2018. The projects listed in Table 7 provide an increase of 96,121 square feet of floor space during FY 2018/2019 and an increase in VMT of 1,145,917 miles per year. Although the square footage of development is higher in FY 2018/2019, the VMT is lower, which is due to the types of projects that were completed. Warehouse and cold storage projects that were included in the latest year have a much lower trip generation per square foot than retail projects, which were included in the previous year’s projects.

Table 10: Annual Vehicle Miles Traveled from New Commercial and Industrial Development FY 2017/2018 and FY 2018/2019

Category	Annual Vehicle Miles Traveled FY 2017/2018	Annual Vehicle Miles Traveled FY 2018/2019
VMT from New Industrial, Commercial and Retail Development	2,598,298	1,145,917
Note: VMT estimates generated using CalEEMod. Source: Tulare County RMA Building Permit Database for Building Data.		

1.3.8 - Compliance with Energy Efficiency Regulations

The Progress Report assesses the extent to which recent projects exceeded the Title 24 Energy Efficiency Standards in effect at the time the CAP was prepared. The 2008 Title 24 Standards were in place in 2012 when the CAP was adopted. The CAP states that development subject to CEQA review would need to achieve a 1.1 percent overall reduction beyond regulation and an average project reduction of 6 percent from all development-related emission sources to meet the CAP target. No specific reduction amount was required for exceeding Title 24, but this measure was expected to be tracked to ensure adequate progress is achieved to meet the 2020 target. However, since the CAP was adopted, three new versions of Title 24 have been adopted that achieve energy savings well in excess of 2008 Title 24 that was the basis of the emission reduction requirement in the CAP and substantially less development has occurred than was anticipated in the CAP.

The 2013 Title 24 Standards became effective July 1, 2014. The California Energy Commission (CEC) estimated that the 2013 standards would increase building energy efficiency by 25 percent in residential buildings and 30 percent in non-residential buildings compared to the 2008 standards (CEC 2014). Therefore, projects permitted in Tulare County after July 1, 2014 would exceed Title 24

Energy Efficiency Standards used in the CAP emission inventory estimates by a minimum of these amounts. As such, residential projects constructed between July 1, 2014 and December 31, 2016 exceed 2008 Title 24 by at least 25 percent and non-residential projects exceed 2008 Title 24 by at least 30 percent. Title 24 is updated approximately every 3 years. The 2016 Title 24 standards went into effect on January 1, 2017. The 2016 Title 24 standards increased energy efficiency in new residential development by 28 percent compared to the 2013 Title 24 standards. New commercial buildings are required to increase energy efficiency by 5 percent compared with 2013 Standards (CEC 2016). Therefore, residential structures constructed after January 1, 2017 would exceed the 2008 energy efficiency standard by a combined 46 percent; and commercial development constructed after January 1, 2017 would exceed the 2008 standard by 33.5 percent. The 2019 Title 24 Standards are scheduled to go into effect on January 1, 2020 and provide a 7 percent increase in energy in residential energy. The new standards also require residential development to install solar panels. The increase in efficiency in commercial development was not available.

Title 24 compliance is demonstrated through Title 24 reports submitted to the local building department. Some, but not all, Title 24 reports provide a percentage above (beyond) regulation requirements. Buildings can comply with a prescriptive approach that includes specific requirements for each building component, or a whole building approach, which is based on achieving an overall energy efficiency that can be expressed as a percentage above standard. The County currently has not prepared a compilation of Title 24 reports that can be used to determine if (or in what amount) development in the unincorporated areas of the County exceeds the standards. Therefore, GHG emission reductions from building energy efficiency are based on the CEC estimates of energy savings.

The ability of developers to exceed the standard becomes increasingly difficult with each new version of Title 24. According to the California Energy Efficiency Plan, New Residential Zero Net Energy Action Plan 2015 to 2020, the State's goal is to achieve net zero energy consumption for new residential development by 2020, after which it will not be possible for projects to exceed the standard. The State Energy Plan goal for commercial buildings is to follow a path to net zero energy by 2030 for all new buildings and a substantial proportion of existing buildings (CPUC 2011).

In FY 2018/2019, manufactured homes comprised about 6.5 percent of new residential homes permitted in Tulare County, making them an important component of the housing stock. However, energy efficiency for manufactured housing is not regulated under Title 24 and, as such, is not enforced by the County. Manufactured homes are required to meet federal standards enforced by the Department of Housing and Urban Development. Mobile homes are part of the ENERGY STAR program. To earn an ENERGY STAR label and to qualify for a tax credit under the Energy Policy Act of 2005, a manufactured home must meet strict guidelines for energy efficiency set by the United States Environmental Protection Agency and be 15 percent more energy-efficient than homes built to the minimum energy code. They include additional energy-saving features and appliances that usually make them 20 to 30 percent more efficient than most homes built today, whether factory-built or site-built (EESI 2009).

1.3.9 - Sustainability Features Incorporated into Non-Residential Projects beyond Regulation

Projects completed in FY 2018/2019 include 96,129 square feet of school, commercial, and industrial development. No sustainability features beyond compliance with regulations were identified for in the projects. However, all projects are required to comply with the increasingly stringent Title 24 energy efficiency standards and the CalGreen building code. Solar retrofit projects are described separately.

1.3.10 - Overall Progress in Achieving Solid Waste Reduction Goals

The State's goal is to achieve 75 percent recycling, composting, or source reduction of solid waste by 2020 to decrease reliance on landfills. The Tulare County Solid Waste Management Department reported the diversion rate in the unincorporated County was 63.7 percent in 2015. With the implementation of AB 341 through Licensed Hauler's Franchise Agreements, the County anticipates achieving the 75 percent mandate (Tulare County 2015). CalRecycle reports that unincorporated Tulare County achieved an annual disposal rate of 5.8 pounds per person per day in 2017 compared with the target rate of 6.2 pounds per person per day. The rate per employee was 18.7 pound per day compared with the target rate of 21.3 pounds per day (CalRecycle 2018). Data for 2018 have not been posted on the CalRecycle website.

The County of Tulare has six private solid waste haulers that operate recycling programs for residences, businesses, and government facilities in the unincorporated areas of the County. Each waste hauler provides its customers with recycling services.

The waste haulers provide information to their customers regarding mandatory recycling for commercial businesses that generate 4 or more cubic yards of garbage per week and for multi-family apartments that have five or more units. Effective April 1, 2016, businesses and schools that generate 8 or more cubic yards of waste must subscribe to organic waste recycling services. In addition, Tulare County Construction and Demolition Ordinance No. 3321 requires projects to divert a minimum of 50 percent construction and demolition debris and 100 percent of inert materials such as cement, brick, asphalt, etc. (Tulare County 2016a).

1.3.11 - Overall Progress in Achieving Water Conservation Goals

The County operates four water systems serving 289 connections as of January 2016 and over 200 privately owned public water systems (each serving multiple service connections) in the unincorporated areas. Only urban water systems are subject to statewide water conservation mandates and reporting requirements. Data for unincorporated Tulare communities were not available since connections are not metered; however, the major cities in the County achieved substantial water savings. None of the county water systems qualify as urban water subject to Public Utilities Commission reporting requirements. The County adopted the Ordinance Establishing the Staged Water Conservation Program at All County-Operated Water Systems in County Service Area No. 1 on May 17, 2016, which was designed to meet the Governor's Executive Order B-29-15 that requires a 25 percent reduction in potable urban water use compared with a 2013 baseline (Tulare County 2016b). The 2016 inventory update (Tulare County 2016c) used data from the County's three Community Service Districts (CSDs)—Delft Colony, Yetttem Water, and Seville Water Company—to

estimate overall water use and GHG emissions from water treatment and transport in the areas served by the CSDs in 2015. No new information was available for the current reporting period.

1.3.12 - Energy Retrofit Projects Completed

Solar Projects

The County has been very successful in permitting utility-scale, commercial, and residential photovoltaic solar projects. During the period from 2011 to 2019, the County approved 3,528 permits with a total generating capacity of about 610 megawatts (MW). Most residential and commercial solar projects are retrofits of existing buildings and ground mounted installations at existing developments. Emission savings for this amount of capacity was estimated using the PVWatts Calculator developed by the National Renewable Energy Laboratory (NREL) for energy production from solar panels in Tulare County (NREL 2019). The 610 MW of capacity would provide a reduction in emissions of approximately 242,487 metric tons of carbon dioxide equivalent (MTCO₂) per year.



Photo Source: Dave Mitchell, 2014

The County continues its success in permitting photovoltaic solar projects. As shown in Table 11, during FY 2018/2019, the County deemed 474 solar building permits final with a total generating capacity of 9.98 MW or 11.67 megawatt-hours per year. This amount of capacity would provide an emission reduction of approximately 2,894 MTCO₂ per year.

As previously reported, the County Board of Supervisors passed an ordinance on November 17, 2015 that requires solar photovoltaic systems or alternative energy systems to be installed on a specific percentage of single-family residences in each new residential development proposed in subdivision map applications. Beginning January 1, 2020, Title 24 Building Energy Efficiency Standards will require most residential projects to include solar panels to generate a portion of their energy needs.

Table 11: Solar Projects FY 2018/2019

Project Type	Number of Permits	Total Capacity (MW)
Solar Projects for Ag/Dairy Uses	18	4.12
Commercial Solar Projects	4	0.95
Residential Solar Projects	452	4.91
Total	474	9.98
Note: The energy capacity of the residential solar projects as reported in the RMA Building Permit Database. Source: Tulare County RMA Building Permit Database queried November 2019.		

On May 1, 2018, the Board of Supervisors approved a contract to install solar panels at seven County campuses, serving 13 County-owned facilities. The project would result in the installation of 9.4 MW of generation capacity and 0.75 MW of energy storage at two of the seven sites. The project is expected to save the County about \$14.6 million in energy costs over the 25-year project life.

Installation of the systems was completed in April 2019, and three of the seven sites have gone live. It is expected that the remaining four sites will go live in calendar year 2020.

1.3.13 - Tulare County Transportation, Energy and Water Programs

The County has achieved reductions in emissions on a number of fronts. A description of these accomplishments is provided as follows.

Fleet Vehicles

Data on the County vehicle fleet were obtained from the County’s fleet management database. The County vehicle fleet includes 1,493 vehicles, including passenger cars and light trucks, work trucks, and buses. The fleet includes 153 fuel-efficient light duty hybrid vehicles. As vehicles reach retirement age, the County has continually purchased new, more fuel-efficient vehicles, thus meeting the latest standards. The County operated 168 2018 and 2019 model-year vehicles as of June 30, 2019. The fleet includes 55 diesel-powered vehicles, with the remainder operating on unleaded gasoline. The County fleet traveled a total of 12,003,665 miles and consumed 948,340 gallons of gasoline and diesel fuels during FY 2018/2019.



Photo Source: Tulare Long Range Transit Plan, State of the System Report

The County also operates Tulare County Area Transit (TCAT), a fleet of 19 transit vehicles fueled by compressed natural gas (CNG). CNG buses emit about 9 percent fewer GHG emissions compared with the older diesel buses they replaced (TCAG 2017).

Vanpools

According to TCAG, CalVans vanpools have traveled 7.7 million miles and provided 1.6 million trips, resulting in a VMT reduction of 63 million miles since program inception. Overall, this figure represents an annual reduction of 27,000 tons of GHG (TCAG 2014).

New County Buildings

The County’s new South County Detention Facility is complete and opened in August 2019. The facility is now the County’s most energy-efficient building. The project meets or exceeds the latest energy and water efficiency standards and will be the County’s most energy- and water-efficient building. No other significant new County buildings were constructed during the reporting period (FY 2018/2019).

Transit Service

Transit use by county residents had seen a steady increase in from 2010 through 2014, but has experienced declines in more recent years. Figure 2 illustrates the increase in use by the Porterville and TCAT transit systems. TCAT, which provides regional service, saw its ridership increase from about 150,000 riders in FY 2009/2010 to about 350,000 in FY 2013/2014 (TCAG 2015). This is a 133 percent increase in ridership over a 4-year period compared with an increase in population of only

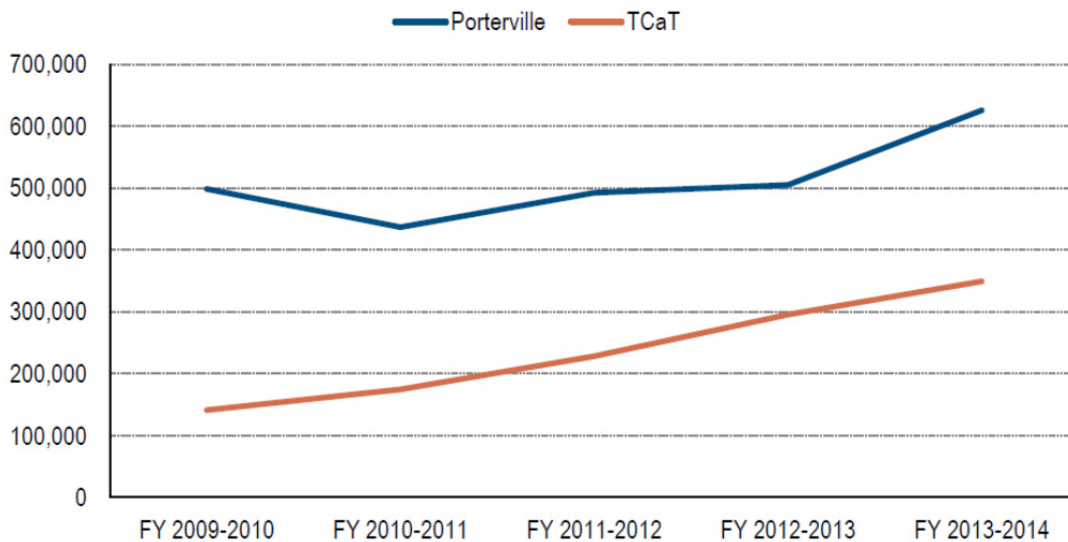
2.4 percent over the same period (DOF 2016). The 2019 Tulare County Regional Transit Coordination Study includes summary data for the six Tulare County transit systems for 2012 and 2017. The report shows that riders decreased from 3,208,493 to 2,904,402 for a 9 percent decrease, while the miles traveled by transit increased from 3,554,814 to 4,598,480 for a 29 percent increase. This reflects an increase in service, but a reduction in ridership (TCAG 2019). The annual ridership figures achieved by the TCAT system between FY 2014/2015 and FY 2017/2018 on fixed routes and by the Dial-a-Ride service are provided in Table 12.

Table 12: TCAT Transit Ridership FY 2014/2015 to FY 2017/2018

Fiscal Year	Fixed Route Annual Ridership	Dial-a-Ride Ridership	Total System Ridership
2014–15	374,312	10,717	385,029
2015–16	362,061	10,311	372,372
2016–17	292,835	7,633	300,468
2017–18	288,561	7,434	295,995

Source: Tulare County Transit Data, November 2019.

Figure 2: Historical Fixed Route Ridership by Agency



Source: Southeast Tulare County Transit Mobility Plan Final Report, December 2015.

Landfills

The County’s landfills captured about 175 million cubic feet of methane in 2016. The methane is burned in flares. Methane is 25 times more potent as a greenhouse gas than CO₂. Therefore, capturing and flaring the landfill gas provides a substantial emission reduction than if the methane emissions were to escape to the atmosphere. The AB 32 Annual Landfill Methane Rule Reports prepared for each County landfill indicate that flares used at the sites have a destruction efficiency of 99.997 percent. The Visalia, Woodville and Teapot Landfills provide an estimated 40,918 MTCO₂e

reduction each year by flaring the methane captured (Tulare County 2016d, 2016e, and 2016f). The methane emissions in the landfills are expected to gradually decline as the organic matter in the landfill completes the decomposition process.

County Energy Conservation Programs

The County is responsible for enforcing Title 24 Building Energy Efficiency Standards and the CalGreen Building Code. No additional County ordinances or programs have been adopted; however, in May 2018, the County approved a project to install solar panels at seven County-owned campuses serving 13 County-owned buildings. Two locations will include energy storage. The project will provide 9.4 MW of generation capacity and energy storage capacity of 0.75 MW. Construction was completed in April 2019 and three of the seven sites are live. The remaining four sites are expected to go live in calendar year 2020.

County Water Conservation Programs

The County enforces water conservation requirements of the CalGreen Building Code and the Model Water Efficient Landscape Ordinance. The County has adopted a staged water conservation ordinance (adopted May 17, 2016) to meet the Governor’s Executive Order B-29-15, which requires a 25 percent reduction in potable water consumption as described in Section 1.3.11. The water conservation ordinance applies to the three water systems operated by the County: Delft Colony, Yetttem Water, and Seville Water Company. The 2016/2017 water year experienced above-average precipitation throughout the San Joaquin Valley and the Sierra Nevada, resulting in easing of water restrictions in many jurisdictions. The 2017/2018 water year was below normal with only 4.7 inches of precipitation falling at the Lindsay monitoring station. The 2018/2019 water year was well above normal with 13.0 inches of precipitation, thereby easing drought concerns.

1.3.14 - Agriculture

Although the State is taking steps to address agriculture GHG emissions (please see the discussion in Section 1.4 below), the Tulare County CAP at this time does not set or impose any targets or action



Photo Source: Tulare County Agricultural Commissioner/Sealer

programs for agriculture-generated GHG emissions. Dairy and feedlot emissions are not addressed in the General Plan CAP or this progress report. They are being addressed separately in the Draft Dairy and Feedlot Climate Action Plan (Dairy CAP) currently in draft form (Tulare County 2017). Consequently, agricultural GHG emissions are discussed in this Progress Report for informational purposes only. Emission reductions for the agricultural sector will be achieved by improving the fuel efficiency of equipment used for farming, use of low carbon fuels, more efficient use of water, and purchase of electricity from utilities that comply with the Renewable Portfolio Standard. An additional 18 agricultural solar projects were constructed in the County during FY 2018/2019 with a total of 4.1 MW of generation capacity; see Table 11. Fourteen dairy anaerobic digesters were

approved in Tulare County during FY 2018/2019. The energy production capacity of the facilities was not included in the report. Currently, GHG reduction programs for agricultural sources are voluntary and incentive-based.

Emissions related to fertilizer use and open field agricultural burning are based on acres of production for each crop type. The acreage of crops harvested for the last 2 years shows a net decrease. The County Agricultural Commissioner reports that Tulare County saw a decrease in harvested acres of field crops from 1.27 million acres in 2017 to 1.20 million acres in 2018 for a net decrease of about 73,000 acres (including range and grazing land). Harvested acres of tree crops decreased by 7,171 acres in 2018 from 2017. Total value for 2018 was \$7.21 billion compared with \$7.04 billion in 2017. This represents an increase of \$173 million from 2017 or 2.5 percent. Changes in crops grown and valuation are caused by a number of economic and market factors, and water availability (which can vary substantially during drought conditions, such as those experienced during 2011–2015). The San Joaquin Valley Air Pollution Control District (SJVAPCD) requires burn permits for open field burning; however, the data provide insufficient detail to provide a reasonable emission estimate. The emissions inventory is based on average rates of burning per acre of crop grown and not on actual burn reports.

1.4—Status of State Regulations Adopted to Reduce GHG Emissions

California continues to be a leader in adopting legislation to address climate change. Implementation of previously adopted legislation and adoption of new climate change legislation and Executive Orders continues at a fast pace.

AB 32 Global Warming Solutions Act (2006). AB requires the State to reduce California’s GHG emissions to 1990 levels by 2020. The State’s strategy for achieving AB 32 targets is contained in the ARB Scoping Plan and its updates. The ARB announced that total statewide carbon emissions fell to 429 million metric tons in 2016, a drop of 12 million tons from the year before. The decline means California met the Legislature’s goal of reducing emissions to 1990 levels, and did so a full 4 years before the target year of 2020. Under Assembly Bill 32 passed in 2006, California must reduce its emissions to 1990 levels (431 million metric tons) by 2020. The 2016 Greenhouse Gas Emissions Inventory shows that California emitted 429 million metric tons of climate pollutants in 2016—a drop of 12 million metric tons, or 3 percent—from 2015 (ARB 2018).

Senate Bill 32 (2016). In 2016, the California Legislature passed and the Governor signed SB 32, which is follow-up legislation to AB 32 California Global Warming Solutions Act of 2006 (Chapter 249, Statutes of 2016). The original legislation requires the ARB to reduce statewide GHG emissions to at least the 1990 emissions level by 2020 and to maintain and continue reductions thereafter. Under SB 32, the ARB must ensure that statewide GHG emissions are reduced to at least 40 percent below the statewide GHG emissions limit no later than December 31, 2030. The ARB is required to achieve the State’s more stringent GHG emission reductions in a manner that benefits the State’s most disadvantaged communities and is transparent and accountable to the public and the Legislature. The 2017 Scoping Plan Update implementing SB 32 was approved by the ARB in December 2017. The major elements of the framework proposed to achieve the 2030 target are as follows:

- SB 350
 - Achieve 50 percent Renewables Portfolio Standard (RPS) by 2030.
 - Doubling of energy efficiency savings by 2030.
- Low Carbon Fuel Standard (LCFS)
 - Increased stringency (reducing carbon intensity 18 percent by 2030, up from 10 percent in 2020).
- Mobile Source Strategy (Cleaner Technology and Fuels Scenario)
 - Maintaining existing GHG standards for light- and heavy-duty vehicles.
 - Put 4.2 million zero-emission vehicles (ZEVs) on the roads.
 - Increase ZEV buses, delivery and other trucks.
- Sustainable Freight Action Plan
 - Improve freight system efficiency.
 - Maximize use of near-zero emission vehicles and equipment powered by renewable energy.
 - Deploy over 100,000 zero-emission trucks and equipment by 2030.
- Short-Lived Climate Pollutant (SLCP) Reduction Strategy
 - Reduce emissions of methane and hydrofluorocarbons 40 percent below 2013 levels by 2030.
 - Reduce emissions of black carbon 50 percent below 2013 levels by 2030.
- SB 375 Sustainable Communities Strategies
 - Increased stringency of 2035 targets.
- Post-2020 Cap-and-Trade Program
 - Declining caps, continued linkage with Québec, and linkage to Ontario, Canada.
 - ARB will look for opportunities to strengthen the program to support more air quality co-benefits, including specific program design elements. In fall 2016, ARB staff described potential future amendments including reducing the offset usage limit, redesigning the allocation strategy to reduce free allocation to support increased technology and energy investment at covered entities and reducing allocation if the covered entity increases criteria or toxics emissions over some baseline.
- By 2018, develop Integrated Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

AB 398 Cap-and-Trade Extension (2017). On July 25, 2017 Governor Brown signed a bill extending the Cap-and-Trade program to 2030 fulfilling a major part of the States strategy to achieve the 2030 target.

SB 100 California Renewable Portfolio Standard (2018). The goal of the program is to achieve that 50 percent renewable resources target by December 31, 2026, and to achieve a 60 percent target by December 31, 2030. The bill approved by Governor Brown on September 10, 2018 would require that retail sellers and local publicly owned electric utilities procure a minimum quantity of electricity products from eligible renewable energy resources so that the total kilowatt-hours of those products sold to their retail end-use customers achieve 44 percent of retail sales by December 31, 2024, 52

percent by December 31, 2027, and 60 percent by December 31, 2030 (California State Senate 2018).

Executive Orders B-55-18 Carbon Neutrality by 2045 (2018). This Executive Order signed on September 10, 2018 sets a new statewide goal to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter. This goal is in addition to the statewide targets of reducing greenhouse gas emissions (Brown 2018).

Senate Bill 44 directs the ARB to develop a plan to spur deployment of electric medium- and heavy-duty trucks throughout California.

1.4.1 - Recent State Regulatory Actions

The 2019 Title 24 Building Energy Efficiency Standards, adopted on May 9, 2018, take effect on January 1, 2020 and focus on four key areas: smart residential photovoltaic systems, updated thermal envelope standards (preventing heat transfer from the interior to exterior and vice versa), residential and nonresidential ventilation requirements, and nonresidential lighting requirements. The ventilation measures improve indoor air quality, protecting homeowners from air pollution originating from outdoor and indoor sources. Under the new standards, nonresidential buildings will use about 30 percent less energy, due mainly to lighting upgrades. The standards require solar photovoltaic systems in new homes starting in 2020 (CEC 2018a)

Single-family homes built with the 2019 standards will use about 7 percent less energy due to energy efficiency measures compared with those built under the 2016 standards. Once rooftop solar electricity generation is factored in, homes built under the 2019 standards will use about 53 percent less energy than those under the 2016 standards. Net electricity metering rules limit residential rooftop solar generation to produce no more electricity than the home is expected to consume on an annual basis. If the home generates more, the surplus is compensated at much lower than the retail rate (CEC 2018b).

The most important ongoing state regulatory programs impacting sources of emissions in Tulare County include:

- Pavley I and II Motor Vehicle Fuel Efficiency Standards
- Low Carbon Fuel Standard
- Heavy-Duty Truck Efficiency Standards
- Title 24 Building Energy Efficiency Standards
- Title 24 CalGreen Building Code
- Renewable Portfolio Standard (RPS)
- Model Water Efficient Landscape Ordinance
- Solid Waste Diversion Mandate
- Cap-and-Trade Program

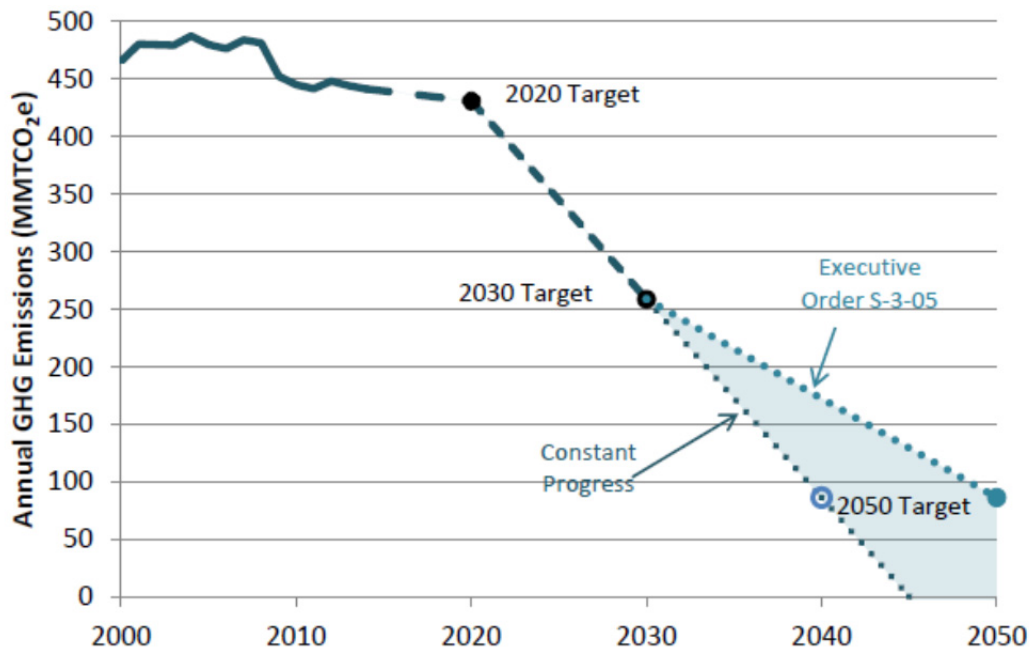
1.4.2 - New and Recent State Laws and Regulations

Senate Bill 32 and 2017 Scoping Plan)

The ARB adopted the 2017 Scoping Plan Update on December 14, 2017. The plan provides the State’s strategy to achieve the SB 32 2030 target of a 40 percent reduction in emissions compared with 1990 levels. The plan includes existing and new measures that when implemented are expected to achieve the SB 32 2030 target. The 2017 Scoping Plan achieves substantial reductions beyond 2020 through continued implementation of existing regulations. The major elements of the 2017 Scoping Plan Update to achieve the 2030 target were listed under the SB 32 discussion.

The required emission trajectory to achieve the 2050 goal is shown in Figure 3.

Figure 3: California’s Path to Achieving the 2050 Target



Source: ARB Draft 2030 Scoping Plan Update (ARB 2017)

The 2030 emission limit is 260 MMTCO₂e. The ARB estimates that the 2030 BAU (reference) Inventory will be 392 MMTCO₂e—a reduction of 132 MMTCO₂e, including existing policies and programs but not including known commitments that are already underway. The 2017 Scoping Plan Update includes the estimated GHG emissions by sector compared with 1990 levels that are presented in Table 13. The plan would achieve the bulk of the reductions from Electric Power, Industrial fuel combustion, and Transportation. Cap-and-Trade would provide between 10 and 20 percent of the required reductions depending on the amounts achieved by the other reduction measures.

Table 13: 2017 Scoping Plan Update Estimated Change in GHG Emissions by Sector

Scoping Plan Sector	Emissions (MMTCO ₂ e per year)		
	1990	2030 Proposed Plan Ranges	Percent Change form 1990
Agriculture	26	24–25	-4 to -8
Residential and Commercial	44	38–40	-9 to -14
Electric Power	108	42–62	-43 to -61
High GWP	3	8–11	167 to 267
Industrial	98	77–87	-11 to -21
Recycling and Waste	7	8–9	14 to 29
Transportation (including TCU)	152	103–111	-27 to -32
Net Sink	-7	TBD	TBD
Subtotal	431	300–345	-20 to -30
Cap-and-Trade Program	N/A	40–85	N/A
Total	431	260	-40

Source: ARB 2017 Scoping Plan Update (ARB 2017).

Short-lived Climate Pollutants

SB 605 of 2014 (Chapter 523, Statutes of 2014) calls for ARB to develop a Short-lived Climate Pollutant (SLCP) Strategy. SLCPs include black carbon (soot), methane (CH₄), and fluorinated gases (F-gases, including hydrofluorocarbons [HFCs]). The strategy approved by ARB on March 24, 2017 describes goals, regulations, incentives, and other efforts that would:

- Encourage national and international deployment of California’s well-established and proven measures to reduce black carbon emissions;
- Further reduce black carbon emissions from off-road and non-mobile sources, including forests;
- Significantly reduce methane emissions from dairy operations and effectively eliminate disposal of organics in landfills;
- Create and expand industries to capture value from organic waste resources in California;
- Significantly reduce fugitive methane emissions from oil and gas systems and other sources; and
- Accelerate the transition to low-GWP refrigerants and more energy-efficient refrigeration systems

SB 1383 of 2016 (Chapter 395, Statutes of 2016) sets forth more specific legislative direction for control of SLCPs. It requires ARB, no later than January 1, 2018, to approve and begin implementing

its SLCP strategy to achieve the following reductions in emissions by 2030 compared with 2013 levels: methane by 40 percent, hydrofluorocarbons by 40 percent, and black carbon (non-forest) by 50 percent. The law also specifies targets for reducing organic waste in landfills. SB 1383 also requires ARB to consider regulations to be implemented on or after January 1, 2024 specific to the dairy and livestock industry, requiring up to a 40 percent reduction in methane emissions below 2013 levels by 2030, if feasible and certain conditions are met. Lastly, the bill requires CalRecycle to adopt regulations to take effect on or after January 1, 2022 to achieve specified targets for reducing organic waste in landfills. The ARB approved the SLCP strategy on March 24, 2017.

The ARB has incorporated the SLCP strategy into the 2017 Scoping Plan Update. The strategy includes the 40 percent reduction in methane and hydrofluorocarbons and a 50 percent reduction in black carbon emissions by 2030 from the SLCP strategy.

1.5—Programs Available to Citizens and Businesses to Reduce GHG Emissions

1.5.1 - Federal Solar Tax Credits

Solar consumers are eligible for federal tax incentives for the purchase and installation of eligible solar systems, including both solar photovoltaic and solar hot water (solar thermal) systems, as well as other renewable energy investments. The federal tax credit is currently 30 percent of the total system cost with no upper limit. The credit drops incrementally to zero by the end of 2021.

1.5.2 - Southern California Edison Programs

Rebates

Southern California Edison offers programs and rebates to its residential and commercial customers. The following rebates are available in 2019 (SCE 2019):

- Smart Thermostat rebate of up to \$125
- Variable Speed Pool Pump rebates up to \$200

Southern California Edison's Self-generation Program

Southern California Edison customers can generate their own power to supplement the electricity purchased from Southern California Edison. "Self-generation," also called "distributed generation," can serve various purposes that include:

- "Back-up" or emergency generation designed to be used during utility power outages.
- "Cogeneration," or combined heat and power applications, used by customers that have a consistently high need for steam or another form of thermal energy.
- Generation to be used during "peak demand," when it may be less costly to operate a generator than to buy power from Southern California Edison. "Environmentally friendly" generation used by customers who want to reduce pollution.
- Generation to be used to improve reliability or power quality when operational needs exceed the level of service that Southern California Edison can provide. *Note: Self-generation does not include "merchant generation" intended for sale in California's wholesale electricity market.*

- Net Energy Metering (NEM) pays for excess solar generation from home solar generation systems.
- Self-Generation Incentive Program. Qualifying projects receive incentives ranging from \$0.44 per watt for non-renewable combined heat and power to \$1.07 per watt for renewable and waste energy recovery projects, and \$1.46 per watt for emerging technology projects such as advanced energy storage and fuel cells.

1.5.3 - PG&E Rebate Programs

Pacific Gas and Electric Company (PG&E) offers a variety of rebates for residential customers who install energy efficient equipment in eligible homes. Prescriptive rebates are available for eligible energy efficiency improvements such as HVAC, appliance, water heating, ventilation and pool pump upgrades. The following rebates were available as of 2010:

- Smart Thermostat replacing manually operated or programmable thermostat—\$50 per household.
- High Efficiency Gas Storage Water Heater—\$125 per unit
- High Efficiency Electric Heat Pump Storage Water Heater—\$300 per unit.
- Energy Upgrade California provides up to \$5,500 in rebates for home heating, cooling, and water heating systems (PGE 2019a).

PG&E's Self Generation Incentive Program provides financial incentives for the installation of new, qualifying wind or fuel cell self-generation equipment. Solar rebates are currently administered under PG&E's California Solar Initiative. While residential customers are not excluded from the program, the minimum 30-kilowatt system size for renewable technologies generally limits most applications to non-residential energy consumers (PG&E 2019b).

PG&E's Schedule NEM—Net Energy Metering Service provides solar customers with the option to offset the cost of their electricity usage with energy that their solar generating system exports to the grid. A "net meter" is installed to measure the difference between electricity supplied to the customer by PG&E and electricity the customer exports to the grid, over a billing month. The corresponding charges and credits are reconciled after 12-monthly billing periods of the system's interconnection. Typically, solar systems export more energy during the summer months, generating credits for customers to use during the winter months when the system does not meet their energy needs.

1.5.4 - SoCal Gas Non-Residential Programs

Zero Percent Interest On-Bill Financing. SoCal Gas offers to finance the purchase and installation of eligible energy-efficiency upgrades at zero percent for qualified customers. Loans range from \$5,000 to \$1,000,000.

Natural gas equipment rebates, which are available to large commercial, small commercial, industrial, and institutional customers for a wide variety of efficiency projects. Qualifying equipment

includes boilers, pipe and tank insulation, steam traps, water and pool heaters, energy management systems, furnaces and food service equipment.

The Energy Efficiency Calculated Incentive Program provides incentives of up to \$1 million per project (\$2 million per location) per year for large gas efficiency projects not covered by the basic rebate program (including new or replacement equipment, as well as for process improvements or new processes). The payment is \$1.00 per annualized therm savings or 50 percent of project cost, whichever is less. Eligible projects are required to undergo an energy analysis, but projects saving less than an estimated 200,000 therms/year may qualify to receive a no-cost analysis.

The Energy Assessments for Business Customers program offers free energy assessments to customers that use 250,000 therms or more per year to in order to help identify energy efficiency projects that may qualify for rebates (maximum \$1 million per project or \$2 million per site per year).

1.5.5 - Other Programs and Incentives

California Climate Investments (CCI) & Greenhouse Gas Reduction Fund (GGRF)

Revenue for the CCI Fund comes from the proceeds of The California Cap-and-Trade Program Auctions. State agencies implemented \$914 million in projects during the first six months of 2019, compared with \$1.4 billion for all of 2018 and \$720 million for all of 2017. In total, California Climate Investments saw 32,700 new projects, including 4,100 new affordable housing units under contract, and 40,000 new rebates for zero emission and plug-in hybrid vehicles. The fund supports a number of local assistance programs, including the following (ARB 2019):

- Affordable Housing and Sustainable Communities (AHSC)
- Active Transportation
- High Speed Rail
- Low Carbon Transit Options
- Low Carbon Transportation
- Sustainable Agricultural Lands Conservation (SALC)
- Transit and Intercity Rail Capital
- Transformative Climate Communities

Vehicle Incentive Programs

New Plug-in Car Purchases. Buyers of plug-in hybrids and electric cars benefit from a federal tax credit of \$2,500 to \$7,500, depending on the size of the battery in the car. On the low end of the spectrum, cars with 4 kilowatt-hour (kWh) battery packs will qualify for a \$2,500 tax credit. The credit has a maximum value of \$7,500 for cars with a 16 kWh battery pack (e.g., the Chevrolet Volt). The credits were provided as part of the American Recovery and Reinvestment Act, otherwise known as the “Stimulus Bill.” The incentive begins phasing out after an automaker sells 200,000 vehicles that are eligible for the credit. Tesla has reached this mark and now offers a reduced tax credit incentive.

The Clean Vehicle Rebate Project (CVRP) offers State rebates for the purchase or lease of qualified vehicles. Since program inception in 2009, the program administrator—the Center for Sustainable

Energy—has issued over \$440 million to fund rebates for individuals, nonprofits, government entities, and business owners. The rebates offer up to \$2,500 for light-duty zero emission and plug-in hybrid vehicles that the ARB has approved or certified and \$5,000 for hydrogen fuel cell vehicles. The rebates are available on a first-come, first-served basis to individuals, business owners, and government entities in California that purchase or lease new eligible vehicles. The Legislature approved \$140 million in Cap-and-Trade auction proceeds in September 2017. In periods when funding exceeds current budgets, waiting lists can form. Households earning more than \$300,000 and individuals reporting more than \$150,000 per year are no longer eligible.

The “REMOVE II Program” is administered by the San Joaquin Valley Air Pollution Control District (SJVAPCD) and provides incentives for the purchase of low emission passenger vehicles, light duty trucks, small buses, and trucks with Gross Vehicle Weight Ratings of 14,000 pounds or less. The SJVAPCD’s Drive Clean Rebate Program offers between \$1,000 and \$3,000 per vehicle and varies according to the emission certification level and size of the vehicle. Vehicles must be powered by alternative fuel, electric, or hybrid electric motors. The SJVAPCD is made up of eight counties in California’s Central Valley: San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare, and the San Joaquin Valley Air Basin portion of Kern. Rebate vouchers are available for the purchase of electric vehicles in qualifying counties for up to \$3,000 (Plug-In Cars 2016).

Electric School Bus Incentive Program. The SJVAPCD Electric School Bus Incentive Program provides monetary incentives for the replacement of existing diesel yellow school buses that transport public school children to and from school with all electric school buses. Eligible applicants are public school districts, Joint Power Authorities (JPA), and privately owned yellow school buses that are contracted with a public school to transport public school children. The maximum eligible incentive amount is calculated up to the cost-effectiveness limit up, not to exceed the maximum funding amount of \$400,000 (SJVAPCD 2019).

SJVAPCD Public Benefit Program. The SJVAPCD is currently providing funding opportunities under several components of its Public Benefit Grants Program to local public agencies. The program was developed and designed to meet the needs and challenges faced by Valley public institutions by providing funds towards a wide variety of clean-air, public-benefit projects that will provide a direct benefit to Valley residents. Program components include the following: New Alternative Fuel Vehicle Purchase, Community Improvement Projects that Reduce Vehicle Use and Emissions, Alternative Fuel Infrastructure, Enhanced Transportation Strategies, and New Electric Vehicle Infrastructure (SJVAPCD 2019).

Charge Up! Electric Vehicle Charger Incentive Program. This Program provides funding for public agencies, businesses, and property owners of multi-unit dwellings (apartment complexes, condominiums, etc.) in the San Joaquin Valley to install electric vehicle (EV) chargers. Funding incentives maximums range from \$5,000 to \$25,000 depending on the type of charger (SJVAPCD 2019).

SJVAPCD Programs for Businesses. The SJVAPCD offers grants and incentives for agriculture and businesses, including: the Hybrid Voucher Program that provides incentives to replace in-use, off-road tractors and mobile equipment used in agricultural operations; Electrified Dairy Feed Mixing program; Zero Emission Ag Utility Terrain Vehicle incentives for the replacement of existing diesel or

gasoline-powered UTVs in agricultural operations with electrics; and the Ag Pump Replacement Program that offers incentives for replacing diesel pumps with electric pumps (SJVAPCD 2019).

California Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project (HVIP) is a program to help speed the early market introduction of clean, low-carbon hybrid and electric trucks and buses. HVIP accomplishes this by addressing the biggest barrier to the purchase of medium- and heavy-duty advanced trucks: the high incremental cost of these vehicles in the early market years when production volumes are still low. All fleets—whether public or private, large or small—are eligible (SJVAPCD 2019). A limit of 200 voucher requests per fleet per calendar year is in effect as of October 25, 2019.

Southern California Edison Electric Vehicle Rebate. With the Clean Fuel Reward program, customers may be eligible for up to a \$1,000 rebate for purchasing or leasing a new or used electric vehicle. Funded by California’s Low Carbon Fuel Standard program, this rebate rewards people for fueling with electricity (SCE 2019).

PG&E Clean Fuel Rebate. PG&E offers an \$800 rebate to residential customers who purchase or lease an eligible plug-in electric vehicle (PEV). PG&E customers with EVs are eligible to receive an \$800 Clean Fuel Rebate for their use of electricity as a clean transportation fuel (PG&E 2019c).

Incentive programs are subject to change and funding limitations. Most programs are offered on a first come, first served basis.

1.6—Progress Report Summary

The primary purpose of the Annual Progress Report is to determine if the County is on track (i.e., progress) to achieve the CAP emission reduction target. If on track, no additional action is needed at this time to meet the target. If not on track (i.e., not progressing at the desired rate), the County would need to adopt/implement new measures or programs to achieve the desired reduction target. A review of the measures of progress indicate that the County is on track to achieving the 2020 target and is well-positioned to achieve later targets related to the recent enactment of SB 32. Table 14 summarizes the measures of progress.

Table 14: Tulare CAP Progress Summary

Metric	CAP Comparison	Progress on Track?
Overall growth in population and housing compared to amount projected in CAP	CAP 2019 Population: 168,861 Actual 2019 Population: 144,741	Yes
	CAP 2010-2019 Housing Unit Increase: 12,109 Actual 2010-2019 Housing Units: -175	Yes
	Change in Occupied Housing 2010-2019: -0.45%	Yes
Average Development Density in Community Plans	CAP Goal from Blueprint Strategy: 5.3 units/acre Approved TSMs in 2018/2019: 11.8 units/acre in rural communities	Yes ¹

Table 14 (cont.): Tulare CAP Progress Summary

Metric	CAP Comparison	Progress on Track?
VMT Comparison	2012 CAP 2015–2019 Growth Estimate: 15.5% 2018 CAP Update 2015-2019 Growth Est.: 6.5% Actual 2015–2019 Growth Rate: -1.4% Under 2012 CAP by 16.9% Under 2018 CAP Update by 7.9%	Yes
Per Capita Emissions	CAP 2020 Target: 8.8 MTCO ₂ e/person Updated 2020 Estimate: 5.8 MTCO ₂ e/person 2015 Per Capita Emissions: 6.9 MTCO ₂ e/person	Yes ³
Solar Projects FY 2017/2018	Residential: 451 projects—7.8 MW Commercial: 4 projects—1.5 MW Ag/Dairy: 18 projects—2.3 MW	Yes
Amount Title 24 Exceeded (compared with 2008 Title 24)	CAP Goal: 20% Residential: 46% Commercial: 33%	Yes
Progress from water conservation measures	New development would achieve the 20 percent reductions in landscape water use and indoor water use through compliance with regulations. Insufficient data were available to quantify benefits beyond regulations and from existing development in the unincorporated area.	Yes ²
Solid Waste	The County reports that it is on track to achieving the State’s 75 percent solid waste goal.	Yes
Status of State regulations	Sufficient regulations adopted for the State to achieve AB 32 2020 target.	Yes
<p>Notes:</p> <p>¹ The 5.3 units per acre density goal applies to all residential development within unincorporated areas where zoning allows residential units (not including existing large lots zoned for agricultural purposes which allows a maximum number of residences to maintain its agricultural nature). For FY 2018/2019 one TSM was in a rural community and had density exceeding the goal at 6.5 units per acre. A second TSM for a project was a minor modification to an existing subdivision in the foothill area and not a rural community. Sixty-six percent of new lots were created in rural communities or adjacent to a city.</p> <p>² Many residences and businesses in unincorporated Tulare County use private wells or are serviced by small water services with limited reporting requirements that would allow better tracking.</p> <p>³ Updates to per capita emission rates from 2018 CAP update.</p>		

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