

CONTRA COSTA COUNTY CLIMATE ACTION PLAN, 2019 ANNUAL PROGRESS REPORT

January 2020

Submitted by the Contra Costa County Sustainability Commission to
the Contra Costa County Board of Supervisors

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Contra Costa County Sustainability Commission
2019 Climate Action Plan Progress Report

The Contra Costa County Sustainability Commission’s purpose includes advising the Board of Supervisors and staff on successful implementation of the *Climate Action Plan (CAP)*, including suggestions on how that work can be performed more efficiently and effectively. The Commission includes in its annual report to the County’s Board of Supervisors this progress report on how the County is doing in terms of the goals and targets in the 2015 *Climate Action Plan*.

There are several areas where the County has made significant progress in meeting the quantitative *Climate Action Plan* targets. A number of the measures do not have targets and are considered “supportive.”

As the County updates the *CAP* in 2019 and 2020, the Sustainability Commission encourages the County to identify strategies and measures that will better allow the County to demonstrate progress in meeting greenhouse gas (GHG) reduction goals. The Commission also encourages the County to look for approaches that solve for multiple measures, for example reducing Styrofoam and/or plastics and increasing composting, reducing vehicle miles traveled and increasing use of public transportation and alternative transportation modes such as bicycling or walking.

Energy Efficiency

Measures EE1, EE2, EE3

GHG Emissions Reductions Target by 2035 for All EE Measures		GHG Emissions Reductions Expected by 2020 for All EE Measures		Total % Expected to be Completed by 2020
14,000 MTCO ₂ e ¹		7,510 MTCO ₂ e		105%
	Measure	% of Completed Projects to date through 2019	Total % Expected to be Completed by 2020 ²	
EE1	Provide opportunities for residential buildings to become more energy efficient.	44%	66%	

¹ MTCO₂e¹ = carbon dioxide equivalent

² Percentages are calculated using the 2015 Contra Costa CAP Monitoring Tool provided by Michael Baker International. The percentages included remain tentative until additional requested data is provided.

	Measure	% of Completed Projects to date through 2019	Total % Expected to be Completed by 2020 ²
EE1	Provide opportunities for nonresidential buildings to become more energy efficient.	8%	16%
EE3	Provide education and outreach highlighting the benefits of energy conservation	100%	100%

A geographic breakdown of where projects were carried out in the unincorporated County is provided below. It should be noted that the 2018 numbers include the PG&E Advanced Home Energy Upgrade (AHUP) program, which was administered by PG&E through 2018 and discontinued in 2019. In 2018, there were 3 AHUP projects in El Sobrante and 9 in Kensington, which are included in the 2018 table below.

2018 Energy Efficiency Single-Family Homes Completed – Unincorporated			
Community	# Homes Retrofited	Total kWh Savings	Total Therms Savings
<i>Alamo</i>	11	5553.17	985.56
<i>Bay Point</i>	1	779.52	48.79
<i>Byron</i>	1	755.1	91.8
<i>Crockett</i>	2	489.09	143.12
<i>Discovery Bay</i>	4	2928.6	242.46
<i>El Sobrante</i>	8	1028.39	1609.27
<i>Kensington</i>	12	480.2	4774.09
<i>Rodeo</i>	3	761.42	296.27
Totals	42	12775.49	8191.36

2019 Energy Efficiency Single-Family Homes Completed - Unincorporated			
Community	# Homes Retrofited	Total kWh Savings	Total Therms Savings
<i>Alamo</i>	8	1438.32	515.93
<i>Bay Point</i>	1	243.44	89.2
<i>Byron</i>	1	243.44	89.2

2019 Energy Efficiency Single-Family Homes Completed - - Unincorporated			
Community	# Homes Retrofited	Total kWh Savings	Total Therms Savings
<i>Crockett</i>	0	0	0
<i>Discovery Bay</i>	1	203	79.53
<i>El Sobrante</i>	2	111.09	132.64
<i>Kensington</i>	5	455.06	434.88
<i>Rodeo</i>	3	335.69	299.62
Totals thru 9/1/19	21	3030.04	1641

Below is the data for multi-family projects in the unincorporated County in 2018; there were no multi-family projects in the unincorporated County in 2019. Data on specific communities in which multi-family projects were implemented is not available; PG&E claims that providing this information violates consumer privacy rules.

2018 Multi-Family Projects completed			
	Units	kWh Savings	Therms Savings
2018	14	5951	492.9

Cool Roofs and Shade Trees

Measure EE4

The CAP calls for 1,790 existing homes and 9 businesses to complete cool roof retrofits by 2020. In 2018 and 2019, staff reported steady increases of cool roof installations in residential and commercial buildings; we have successfully met the projected target for 2020.

Residential Cool Roof Installations

Year	# Cool Roofs Installed
2010	54
2011	46
2012	31
2013	10
2014	44
2015	73
2016	226
2017	335
2018	482
2019	527
Total	1,828

Commercial Cool Roof Installations

Year	# Cool Roofs Installed
2014	2
2016	3
2017	2
2018	8
2019	15
Total	30

Rooftop Solar

Measure RE 1

The CAP calls for 50 new homes and 2,500 existing homes to have solar arrays by 2020. The County has far exceeded this goal, issuing on average 1,500 permits annually for rooftop solar since 2014. Since the County implemented online applications in 2015, about 25% of applications have been issued electronically. In 2020, the State will require all new residential buildings to install solar.

Staff is developing systems and processes to report in the future on the geographic areas where projects are installed.

Year	Total # Residential PV Permits	# of Residential PV E-Permits
2018	1482	414
2019	1759	323

Solar on County Buildings

Measure RE 2

The County has installed nearly 5 MW of solar photovoltaics (PV) on County facilities to date. The performance target is 1 MW by 2020. The County is in progress to install solar PV at 10 more sites, many of which are also being considered for energy storage. This next wave of solar PV would result in a doubling of capacity and may include 3 MW of storage capacity. The new County Administration Building includes solar canopies on the parking lot, as well as 14 electric vehicle chargers. The new Emergency Operations Center will continue to take energy from the solar panels that were at the site previously and is being evaluated for the possibility of upgrade to Zero Net Energy with the addition of more solar capacity, as is the new Administration building.

Solar on County Facilities

Target	Actual
1 MW	5 MW

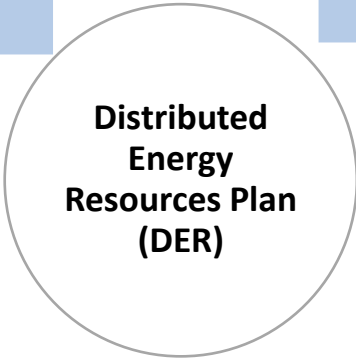
1 MW of solar PV is enough to serve 250 households in California, The County facilities will generate 5 MW in solar power, enough electricity to power 1,250 households.

Solar PV
 20 Existing Photovoltaic Systems
 6,800,000 kWh/yr Estimated Production
 4,809 tons Annual GHG Reduction
 10 Systems in-progress
 6,000,000 kWh/yr Estimated Production
 4,243 tons Annual GHG Reduction

Energy Storage
 3 Energy Storage systems in-progress
 Tons of Annual GHG Reduction and kWh/yr Estimated Production are still being projected

Energy Efficiency
 County currently pursuing Fluorescent to LED lighting projects in County facilities
 All new construction and major tenant improvements in County facilities target LEED Gold

Electric Vehicles
 16 Plug-in Electric Vehicles in County Fleet
 31 Chargers installed County-wide
 \$40,000 Cash Rebates received to date
 County Enrolled in CARB Low Carbon Fuel Standards program



Demand Response
 County has building energy management systems at 40 facilities optimizing for energy efficiency.
 County is participating in utility Demand Response programs such as Time of Use Pricing,

MCE Enrollment

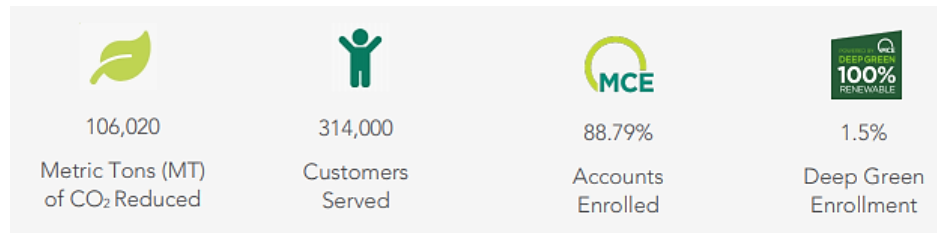
Measure RE 3

Measure RE 3 is supportive and does not have numeric target. However, this is an area of significant progress. The CAP identifies community choice aggregation as a strategy for increasing the amount of renewable energy consumed in the County.

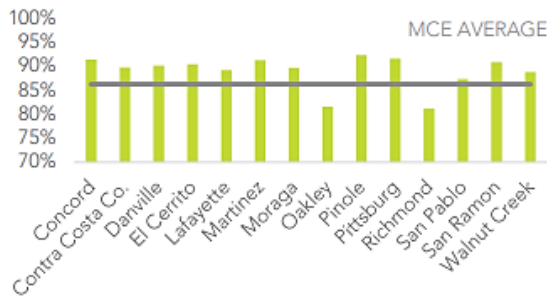
Contra Costa County Future Enrollments

City of Pleasant Hill – enrolling in Spring of 2021

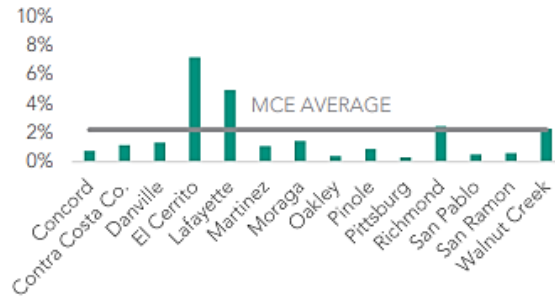
Antioch, Brentwood, Clayton, Hercules and Orinda are not considering MCE at this time



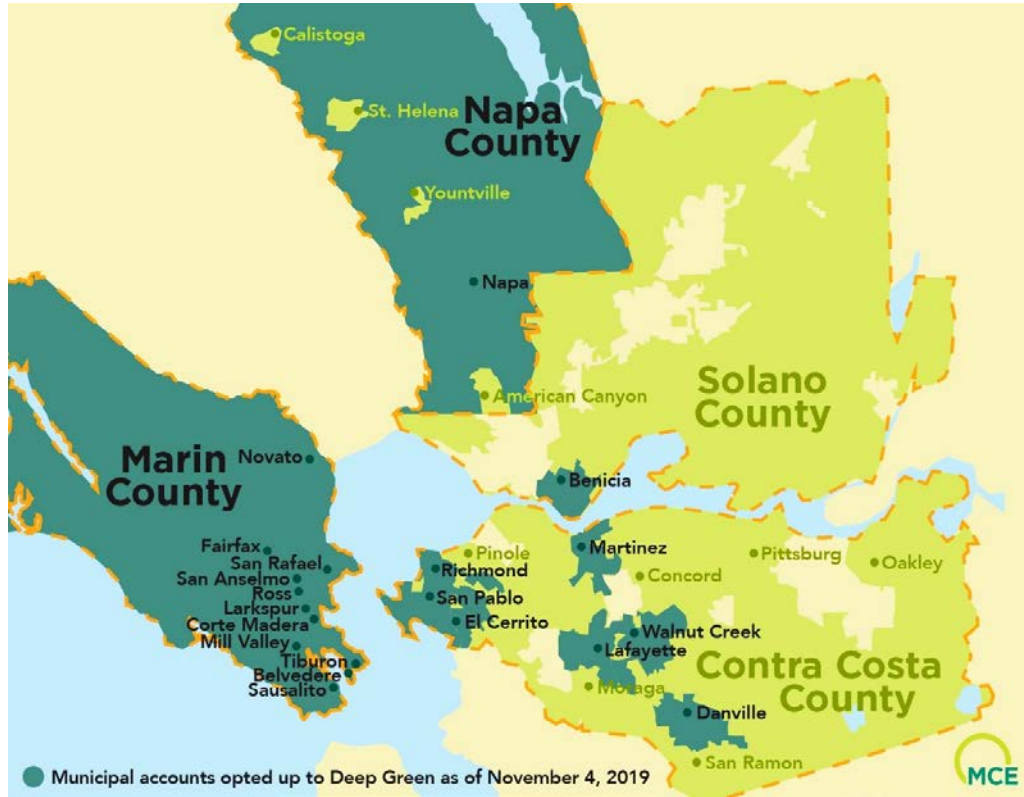
MCE Electric Account Participation Rate by Community



MCE Deep Green Account Participation Rate by Community



Community	Joined MCE	MT CO ₂ Reduced ¹	Participation Rate	Deep Green Rate	Deep Green ²
Concord	2018	2,474	91.35%	0.74%	N/A
Contra Costa	2018	3,554	89.71%	1.16%	N/A
Danville	2018	846	90.13%	1.32%	N/A
El Cerrito	2015	4,605	90.39%	7.17%	2017
Lafayette	2016	4,412	89.17%	4.92%	2017
Martinez	2018	730	91.20%	1.08%	N/A
Moraga	2018	230	89.63%	1.43%	N/A
Oakley	2018	560	81.55%	0.39%	N/A
Pinole	2018	307	92.28%	0.88%	N/A
Pittsburg	2018	2,032	91.58%	0.33%	N/A
Richmond	2013	64,504	81.12%	2.44%	2017
San Pablo	2015	4,536	87.33%	0.51%	2016
San Ramon	2018	1,458	90.83%	0.60%	N/A
Walnut Creek	2016	15,774	88.77%	2.26%	2018



Municipal accounts opted up to Deep Green as of November 4, 2019.

Financing Opportunities

Measure RE 3

The CAP calls for improving participation in programs that help finance investments in energy efficiency and renewable energy. Property Assessed Clean Energy (PACE) programs allow property owners to voluntarily join an assessment district and borrow money for the purpose of making energy or water efficiency improvements to their property. In 2018, the County authorized a third PACE provider for property owners in the unincorporated County. A total of 338 projects have been completed in unincorporated areas in Contra Costa County by 25 local contractors up to date.

The Sustainability Commission notes that the County may wish to explore other financing programs and opportunities that might better meet the needs of all County residents, particularly those in lower income brackets.

Countywide Bike Trips per Weekday

Measure LUT 1

The CAP sets a target of 33,630 average countywide bike trips per day. This is not a metric that staff has been tracking due to cost of data collection and the inherent limitations of this data across the unincorporated County. This report includes data on the action items in the CAP for this measure, including infrastructure to support bicyclists and pedestrians, pervious pavement, and grants.

The County tracks data on the development of infrastructure that supports bicyclists and pedestrians. Due to the strong correlation between the installation of new high quality infrastructure and increases in bike use, the quantity of new infrastructure is used as a proxy for bike trips. Improvements to this metric would include tracking the quantity of protected bicycle facilities (Class I or Class IV) installed and advocating for the Contra Costa Transportation Authority (CCTA) to track the type of transportation used on a countywide basis. In 2019, the County added 2.8 miles of bike lanes, 0.27 mile of sidewalk and 26 ADA curb ramps in the unincorporated County.

Alternative Fuel Vehicles

Measure LUT 2

In 2018, the County helped the Contra Costa Transportation Authority (CCTA) obtain a grant from the California Energy Commission to develop an Electric Vehicle (EV) Readiness Blueprint.³ The Blueprint was completed in July 2019. It provides CCTA, County departments, and jurisdictions within the county data, best practices, and strategies to bring about a broad transition to electric vehicles across the county. It also includes reports on workforce needs for mechanics and electricians to service electric vehicles and charging infrastructure. CCTA and the County are working now to identify funding for EVs and EV charging infrastructure. A key first step is working with all the jurisdictions in the County to adopt streamlined EV permitting, as required by Assembly Bill 1236.

Reduce Vehicle Miles Travelled

Measure LUT 4

This measure establishes targets for BART and bus trips taken by residents of the unincorporated County, and decreases in vehicle miles travelled in high occupancy vehicle lanes. For reasons similar to bike trip data, this is not something staff tracks. Such an effort would require significant coordination with BART, bus operators, and other agencies to

³ The EV Blueprint can be viewed online at <https://ccta.net/2019/07/30/ev-readiness-blueprint/>

measure. The County is in regular communication with all these agencies through regional coordinating councils and is regularly working with them to increase funding and ridership.

Reduce Waste

Measure W1

Since 2007, the State measures jurisdictional waste reduction based on the amount disposed using a pounds of disposal Per Person per Day (PPD) metric. In 2018, the unincorporated County area disposal was 2.5 PPD, which is a reduction of 0.70 PPD from our 2007 baseline, equivalent to an overall diversion rate of 68%.

The County's corresponding annual PPD reduction of .60 tons exceeded the 2020 performance target requiring a .42 tons reduction.

In terms of the annual disposal tonnage target, the County achieved a 77,572 tons solid waste reduction compared to the 2020 baseline requiring 90,850 tons.

Reduce Methane and Other Emissions

Measure W2

Based on 2018 surface emission monitoring performed in operating landfills, the County achieved a 75% methane emissions capture rate compared to the 80% rate established in the CAP, which means this goal was not achieved.

It is not feasible to assess exact progress for this goal because unless methane emissions are captured, they cannot be measured.

Streetlights and Traffic Signals

Measure GO 1

The CAP sets a goal of replacing 7,210 lightbulbs in County facilities. All of the streetlights in the County, both those owned by the County -- 1,800 -- and those owned by PG&E -- 5,800 -- have been converted to LED as have all traffic signals in the unincorporated County. The conversion to LED of all street lights was completed in 2016 and the County has a regular program to upgrade lighting in County buildings. The County is currently reviewing maintenance and planning to accommodate for a conversion to next generation LED technology; such conversion would not be initiated until after 2024.