



Climate Neutral for a Healthy, Prosperous Menlo Park

10/20/15

Mayor Catherine Carleton and City Council Members
701 Laurel Street
Menlo Park, CA 94025

RE: Menlo Spark Comments on the Climate Action Plan

Dear Mayor Carleton and City Council Members,

We are writing in support of the City of Menlo Park Climate Action Plan Update and 2020 Climate goals. Menlo Spark is a nonprofit organization working with businesses, residents and government partners to achieve a climate-neutral Menlo Park within ten years. We request that the City consider the steps necessary to achieve its 2020 climate goals, most importantly clean power and sustainable building standards, and begin planning those measures.

The City has shown a laudable commitment to climate action and sustainability through its goal to reduce greenhouse gas emissions (GHG) by 27 percent from 2005 to 2020, adopted in 2013. We congratulate the City for the recent Beacon Award recognizing leadership on sustainability efforts. This leadership is more important than ever before, as concern over climate change is growing rapidly, as we collectively experience the impacts of climate change: More intense storms, wildfires and drought, and as new flood plain maps are drawn in anticipation of sea-level rise. Fortunately, the many measures needed to reduce GHGs in Menlo Park will also result in a cleaner, more sustainable City with more transportation choices and a more vibrant downtown.

City staff have done an excellent job providing annual Climate Action Plan updates that detail progress in Menlo Park and chart a course towards our goals. The slate of measures proposed in the Climate Action Plan update contains ***two key actions that will ensure success in reaching our 2020 climate goals, if done well and implemented in a timely manner: Clean Power and Energy Standards for new buildings that prevent an increase in consumption.***

Our analysis of the GHG inventory in Menlo Park, potential growth scenarios accounting for low and high growth, and analysis of each measure shows that clean power and new building standards together make up the majority of the emission reductions needed to meeting our 2020 goals. Please see the table attached for a summary of proposed climate measures and progress from 2005 to 2020.

Clean Power is the single greatest action that the City of Menlo Park can take to reduce GHGs. Over 50 cities across the globe have committed to 100% renewable power, many for economic reasons in addition to sustainability goals.¹ Fortunately the cost of clean, renewable power has come down substantially in the last few years and Menlo Park now has an opportunity to join San Mateo County's Community Choice Energy (CCE) program to dramatically increase renewable power.²

¹ See for example: <http://go100percent.org/cms/> Note that Palo Alto already provides 100% renewable power and San Francisco and Marin Counties are committed to this goal by 2020.

² Wind and solar power used to be pricey, but the cost has plummeted and continues to drop. In the last 5 years, wind prices dropped by 35% and solar prices by 50%. Wind turbines are making cheap power in Texas and Iowa, and the 3.87¢ electricity from a new Nevada solar farm could be the cheapest anywhere in the U.S. Source: <http://www.clearpath.org/en/clean-energy->

We urge the City of Menlo Park to hold study sessions and workshops to investigate the San Mateo County CCE, as the best opportunity at this time to provide clean, reliable, renewable power. However, Menlo Park will need to play an active role in the County CCE to ensure that it will supply the cleanest power portfolio that is feasible. The County recently released a study showing several options for the CCE (See Table 1). The County’s study indicates that not only would Peninsula Clean Energy (PCE) be viable under a broad range of market conditions, there is potential for significant GHG reductions.³

Table 1: San Mateo County Community Choice Energy Options

Key Considerations	Scenario 1	Scenario 2	Scenario 3
Renewable Content	35%	50%	100%
Rate Competitiveness, average relative to PG&E rates	6% savings	4% savings	2% increase
Residential Cost Impacts Average monthly use ≈ 450 kWh	\$5.40 monthly savings	\$4.05 monthly savings	\$1.80 monthly increase
Assumed Participation Rates Rates are assumed to influence participation levels, with medium & large businesses highly cost sensitive	85% across all customer groups	85% across all customer groups	75% for residential & small commercial; 50% for all others
Comparative GHG Emissions relative to PG&E portfolio	Additional GHG emissions of 136,000 tons	75,000 ton GHG emissions reduction	130,000 ton GHG emissions reduction

- The 35% Renewable option is *not viable*, because although it could save ratepayers 6 percent, it would significantly *increase* GHGs.⁴
- The 50% Renewable option would reduce costs by 4% and reduce GHGs a moderate amount, but leaves the City to find additional, costlier measures to reduce GHGs in order to meet 2020 goals.
- The 100% renewable option initially costs \$1.80 more per month for the average household. It reduces GHGs a significant amount to meet 2020 climate goals and leads to further GHG reductions through electric cars and a transition to clean, efficient electric power for water and space heating.

Source: The Pacific Energy Advisors Feasibility Study for San Mateo County, <http://green.smcgov.org/sites/green.smcgov.org>

We analyzed the County’s Scenarios 2 and 3 (50% and 100% renewable power) in the context of the slate of measures proposed in the Climate Action Plan, to evaluate what is required to meet our 2020 climate goals. The two scenarios would reduce roughly 10,000 and 20,000 tons of GHGs (respectively) in Menlo Park in 2020, making this the single largest and most important measure in our Climate Action Plan.⁵ ***It is clear that the City of Menlo Park cannot reach its 2020 climate goals with 50% renewable power. We strongly urge the City to pursue 100% renewable power as a base option, or to work with the County to create another option that maximizes renewable content with a goal to reach 100% over time and keep rates as close to parity with PG&E as possible.*** We would be happy to work with the City and any other local partners to promote existing, free energy efficiency programs for homes and businesses that could net power customers savings in the event of minimal rate increases by helping them reduce their power use.

[get-the-facts.html](#) Note that Palo Alto power, which is 100% renewable, retails at 9.5 cents per kWh vs. 16.7 cents per kWh for standard PG&E electricity (Res1).

<http://www.cityofpaloalto.org/civicax/filebank/documents/8089> <http://www.pge.com/tariffs/electric.shtml#RESELEC>

³ The Pacific Energy Advisors Feasibility Study for San Mateo County.

http://green.smcgov.org/sites/green.smcgov.org/files/DRAFT_Peninsula_Clean_Energy_CCA_Technical_Study_9_18_2015.pdf

⁴ PG&E has a relatively low carbon intensity of its power portfolio due to significant use of nuclear and large hydro power, such that a 35% Renewable power portfolio with “system power” making up the balance will have a much higher carbon intensity.

⁵ This is based on data from the PEA Feasibility Study and accounts for the estimated opt-out rates for both scenarios, assuming opt-out customers revert to PG&E’s power portfolio.

The second most significant measure, essential to meeting our 2020 climate goal, is clean energy standards for buildings.⁶ ***As Menlo Park considers roughly 2 million square feet of new commercial development,⁷ it is important to set clean standards ahead of the upcoming state Net Zero Energy requirements that begin in 2030 for commercial buildings.⁸*** There are many examples and models of clean energy standards for buildings applied to special sustainable building districts or city-wide that we have detailed in our recent ConnectMenlo comments. We would be happy to work with City staff to tailor these approaches to the specific needs of new developments in Menlo Park, so that these new developments help rather than hinder Menlo Park in meeting its climate goals.

A Clean Power portfolio for Menlo Park and Clean Building Standards are linked together because providing 100% renewable grid power could allow developers to move their focus from on-site renewables such as rooftop solar panels, to increasing building efficiency and using alternatives to natural gas for water and space heating.⁹ Both measures are time sensitive. San Mateo County is moving quickly to develop a CCE, with interested cities required to join by the end of February. Again, we strongly urge the City to begin the public process for the County CCE as soon as possible and to explore a base power portfolio with as much renewable content as possible to ensure that we can meet our 2020 climate goals.

As the development rate in Menlo Park increases, it is imperative to set new clean building standards quickly. This will prevent us from being locked into conventional, inefficient and high-carbon new buildings that will last generations and prove difficult to retrofit. The anticipated building boom presents an opportunity to show leadership on upcoming state standards and put Menlo Park on a much lower carbon path.

We support and include by reference here the comments of the Environmental Quality Commission as stated in their September 30th, 2015 Memo to City Council regarding 2015-16 CAP Strategy Recommendations. Transitioning to 100% renewable power in Menlo Park and creating a sustainable M2 District with clean building standards, as well as transportation alternatives discussed by EQC creates an appealing opportunity for Menlo Park to get on track to meet our 2020 climate goals and in so doing, create a healthy, vibrant city. Finally, we appreciate the hard work and support of City staff on these issues and look forward to continuing to work collaboratively towards sustainability and climate goals.

Sincerely,



Diane Bailey, Executive Director
Menlo Spark

⁶ Although collecting methane from the decommissioned Bedwell-Bayfront landfill reduces slightly more GHGs than clean building standards, the building standards become more important in a high growth scenario, which appears likely at this time. The benefits of building standards also compound over time addressing over 40 percent of the carbon inventory, where methane collection slated to be complete in 2020 will reduce a static 10,000 tons of GHG, or 3 percent of the carbon inventory.

⁷ See ConnectMenlo: <http://www.menlopark.org/739/ConnectMenlo-General-Plan-Update>

⁸ The 2013 [Integrated Energy Policy Report \(see page 36\)](#) discusses upcoming California Building standards that will require all new residential buildings to meet net-zero standards by 2020, with commercial buildings meeting this standard by 2030. Note that the Standards are required to meet life cycle cost effectiveness requirements.

⁹ We highly recommend rooftop solar, but it is not essential where grid-power is fully renewable. Note that natural gas may become the single largest carbon source by 2020 as Climate Action Plan measures phase in for other sources.

Table 2: 2015 Climate Action Plan Update Analysis¹

1) Baseline Year, 2005	380,000	metric tons CO2 equivalents (MTCO2e)
2) Current Emissions, 2013	360,000	MTCO2e
3) 2020 Goal	277,500	MTCO2e, 27% reduction in 2005 emissions by 2020
4) Projected 2020 Emissions, Business as Usual²		
Low growth, 0.5% per year	315,000	MTCO2e
High growth, 1.66% per year	335,000	MTCO2e

5) Proposed GHG Reduction Strategies³, 2015 CAP Update (all numbers are emission reductions in MTCO2e)

FY 2015-16 ⁴		
Solar for City Buildings ⁵		400
EE for City Buildings ⁵		300
CH4 capture from Landfill ⁶	8,000 – 9,500	
FY 2016-17		
ZNE & LEED Silver for new buildings ⁷	600 – 9,300	
Zero waste & related measures ⁸	600 – 1,700	
EE & Renewables for Commercial & Residential ⁹	600 – 9,100	
Social Marketing for transportation alternatives ¹⁰	400 – 1,400	
Implement CCE (Clean Power) ¹¹	10,400 – 20,600	
FY 2017-18 ¹²		
Car Share ¹³	400 – 1,400	
Bike Share ¹⁴	400 – 4,300	
Increase Caltrain ridership ¹⁵	1,400 – 4,300	
Large scale renewable project ¹⁶	2,100 – 8,400	
FY 2018-19 ¹⁷		
Fuel Switching to reduce Natural Gas ¹⁸	500 – 3,800	
FY 2019-20 ¹⁹		
Replace old street lights ²⁰	100 – 200	

	Low End of Measures (Incl. 50% Renewables)	High End of Measures (incl. 100% Renewables)²¹
2020 emissions with CAP strategies, <i>Average growth</i> (MT CO2e)	299,000	270,000
% Reduction from 2005, Compared to 27% goal	21%	29%
2020 emissions with CAP strategies, <i>High growth</i> (MT CO2e)	309,000	272,000²²
% Reduction from 2005 Compared to 27% goal	19%	28%

¹ The analysis on which this Table is based is as accurate as possible based on current information and assumptions detailed in the following notes. This analysis is likely to change over time as new data comes available, and as assumptions are refined based on new information. Several experts have reviewed our analysis and concur with the results.

² Energy consumption is projected to increase from 0.5% to 1.66% annually, the low end of the range being consistent with statewide projections reflecting efficiency improvements and assumed by the County Clean Energy Program, the high end reflecting a high growth scenario as described by CEC.

Source (low growth): [PEA Feasibility Study for County Clean Energy Program, p. 35, September 2015](#)

Source (high growth): <http://www.energy.ca.gov/2014publications/CEC-200-2014-009/CEC-200-2014-009-SD.pdf>

Gasoline use is projected to drop from 9% to 13% in California between 2014 and 2020 due to vehicle and fuel efficiency standards, according to a Bloomberg New Energy Finance report

Source: <http://cleantechnica.com/2014/03/21/california-may-cut-transport-fuel-consumption-blazing-us-trail/>

Methane from the decommissioned landfill declines 5% every year

Source: July 2011 CAP Assessment Report, p. 41

Landfill Waste is estimated to decrease 4.8% per year

Source: 2015 CAP Update, p. 16.

³ The strategies listed here are from the 2015 CAP Update.

⁴ The following measures were not assessed because they are enabling measures without direct GHG reductions: Installation of four EV charging stations and *consideration* of Community Choice Energy.

⁵ GHG Reduction Estimate, as provided in the 2015 CAP Update.

⁶ Assuming 80-95% capture of Bayfront Park methane by 2020.

⁷ Assuming on the low end, 10% minor efficiency improvements required for new buildings with 1% turnover per year; and on the high end, 90% efficiency improvements approaching NZE for new buildings with 2% turnover per year.

⁸ Based on 75% to 90% waste diversion rates.

⁹ Energy Efficiency improvements were estimated based on metrics from Acterra's Green@Home Program, which reduces roughly 1,000 pounds of CO₂ per household enrolled, estimating 330 to 1,000 households participating. The assumption for renewable energy ranged from 1 to 30% of customers installing enough solar panels to cover 80% of their energy use by 2020.

¹⁰ Assuming one quarter to one percent Single Occupancy Vehicle (SOV) trip reduction & gasoline savings.

¹¹ The range represents San Mateo County's Peninsula Clean Energy Feasibility Study data for Scenario 2 (50% Renewables) and Scenario 3 (100% Renewables).

¹² The following measures were not assessed because their emissions fall outside of the City of Menlo Park GHG inventory: Support for Local Food.

¹³ Assuming one quarter to one percent SOV trip reduction & gasoline savings.

¹⁴ If coupled with bike route network improvements, assume one quarter to three percent SOV trip reduction & gasoline savings.

¹⁵ Assuming one to three percent SOV trip reduction & gasoline savings.

¹⁶ Assuming this measure could range from five to 20 times the size of the current City PPA.

¹⁷ The following measures were not assessed because their emissions fall outside of the City of Menlo Park GHG inventory, the GHG reductions will not occur before 2020, or they are enabling measures without direct GHG reductions: Revisiting the City EPP, Increasing Tree Canopy, Community engagement.

¹⁸ Assuming a 25 to 90% reduction in Natural Gas use among 1 to 2% of buildings per year.

¹⁹ The following measures were not assessed because their emissions fall outside of the City of Menlo Park GHG inventory, the GHG reductions will not occur before 2020, or they are enabling measures without direct GHG reductions: Housing density to promote transportation alternatives, Resiliency & Adaptation strategies, Community engagement & CAP updated with 2040 goals.

²⁰ Streetlights account for 13% of the city's 2,889 MTCO₂e emissions in 2009; since that time the city has saved 100 MTCO₂e from projects including retrofitting some streetlights according to the 2015 CAP Update. Here we assume that all new street lights are LEDs using renewable power and that 50% to 95% of remaining conventional fixtures are replaced with 95% efficient LEDs by 2020.

²¹ The sum of GHG reductions in this category was adjusted so that measures that reduce power use were discounted by 75% to make sure there was no double counting of reductions, given up to 75% of grid power supplied by 100% renewable sources.

²² Here the opt out rate for 100% renewable power is reduced to 20 percent.