



DATE: September 15, 2015

CATEGORY: New Business

DEPT.: Community Development

TITLE: **Community Climate Protection Roadmap**

RECOMMENDATION

Adopt a Resolution Approving a Community Climate Protection Roadmap, including establishing new greenhouse gas emission reduction targets for 2025, 2030, 2035, 2040, and 2045, to be read in title only, further reading waived (Attachment 1 to the Council report).

BACKGROUND

In November 2009, the City Council adopted voluntary greenhouse gas (GHG) emission reduction targets for the community as a whole. The targets require a reduction in total emissions below a baseline year (2005) and do not account for residential and commercial growth. The adoption of the targets was in response to the Global Warming Solutions Act (AB 32) being signed into law, requiring California to reduce Statewide GHG emissions over time.

Since that time, the City has developed several plans and policies to guide its sustainability efforts and GHG reduction strategies, such as two Environmental Sustainability Action Plans (ESAPs) and a regulatory-based Greenhouse Gas Reduction Program (GGRP) associated with the General Plan update. However, a comprehensive plan to meet the City's communitywide 2050 GHG reduction targets has not been adopted to date.

While the GGRP seeks to limit the increase in GHG production associated with growth anticipated in 2020 and 2030 under the 2012 General Plan update, it does not aim to reduce emissions below 2005 levels in alignment with the City's 2050 reduction targets. The actions identified in the GGRP are required under the California Environmental Quality Act (CEQA) to implement the General Plan, whereas the Mountain View CPR is more comprehensive and includes strategies and implementation mechanisms the City could adopt in order to meet its broader 2050 GHG reduction targets.

The City's communitywide GHG reduction targets are:

- 5 percent below 2005 levels by 2012;
- 10 percent below 2005 levels by 2015;
- 15 percent to 20 percent below 2005 levels by 2020; and
- 80 percent below 2005 levels by 2050.

While these reduction targets are voluntary and there are no legal consequences of not achieving them, working to reduce the City's GHG emissions supports the State's GHG reduction goals under AB 32.

In February 2013, the City Council authorized staff to develop communitywide and Municipal Operations Climate Action Plans (MOCAP) in conjunction with the County of Santa Clara (County), which had secured PG&E and Strategic Growth Council grant funding to develop Climate Action Plans (CAPs) for several local cities. Staff has worked with the County's consultant, AECOM, to develop a communitywide CPR (an exhibit to Attachment 1). In parallel, staff also worked on the development of a MOCAP to guide the City's municipal operations GHG reduction efforts. The MOCAP was adopted by the City Council at its May 19, 2015 meeting.

At the April 28, 2015 Study Session, a majority of Councilmembers identified the following three priority areas for the communitywide CPR:

- Promoting solar photovoltaic (PV) installation and electric vehicle (EV) purchases;
- Pursuing "low hanging fruit" projects based on cost and GHG reduction potential; and
- Investigating the formation of a Community Choice Energy (CCE) program.

Further, the Council requested that the following five items be added to the CPR, which has been done:

- Investigate hydrogen for use as an alternative fuel (e.g., potentially installing a hydrogen fueling station in Mountain View);
- Do more to coordinate transportation policies at the regional level;

- Provide outreach and assistance to encourage the installation of solar PV systems and purchase of EVs;
- Encourage businesses to pursue “green” activities and facility upgrades, including certification; and
- Continue to investigate adopting additional Property Assessed Clean Energy (PACE) programs for Mountain View.

ANALYSIS

The purpose of the CPR is to provide the City Council with a series of strategies and actions the City could undertake to reduce its communitywide GHG emissions and potentially reach the absolute GHG reduction targets adopted by the City Council in November 2009. The strategies include level-of-magnitude cost and GHG reductions, and can be used by the City Council and staff as the basis for further conversation and development of more detailed work plans for those strategies deemed a priority. In adopting the CPR, the City Council would not be committing to implement any of the strategies/actions specifically.

Since the City’s reduction targets only currently include the years 2012, 2015, 2020, and 2050, the CPR recommends establishing five additional reduction targets every five years between 2020 and 2050 to make it easier to track the City’s progress in meeting its 2050 reduction target. This would require the City to calculate its community GHG emissions every five years at a minimum. Over time, it may make sense to calculate emissions every two to three years to gain greater visibility of the City’s progress between the target years; however, the City does not currently have the resources for such frequent calculations. The proposed additional GHG reduction targets discussed at the April 28, 2015 Study Session are:

- 26 percent below 2005 levels by 2025;
- 37 percent below 2005 levels by 2030;
- 48 percent below 2005 levels by 2035;
- 58 percent below 2005 levels by 2040; and
- 69 percent below 2005 levels by 2045.

2012 Community GHG Emissions Inventory

In order to evaluate the City's progress against its 2012 GHG emissions reduction target, staff conducted a 2012 community GHG emissions inventory. Between 2005 and 2012, Mountain View's communitywide GHG emissions increased 6.9 percent to 786,954 metric tons of carbon dioxide equivalent (MT CO₂e) annually. When compared to the City's 2012 reduction target of a 5 percent decrease from 2005 levels, this puts the City approximately 12 percent short of its goal. For additional details on the 2012 GHG emissions inventory, see the Study Session memo (Attachment 2).

Proposed Community GHG Reduction Strategies

The proposed CPR strategies focus on Building Energy, Transportation, and Solid Waste, since those three areas generated 99 percent of communitywide GHG emissions in 2012. Strategies are not included for the Water/Wastewater and Off-Road Mobile areas because of their very small contributions to community emissions. Implementing all of the actions identified in the CPR could generate about 100 percent of the emission reductions needed (approximately 750,000 MT CO₂e) to reach the 2050 reduction target under an Adjusted Business-As-Usual (ABAU) scenario. The CPR strategies include:

Building Energy Strategies

- A. Lower-Carbon Electricity
- B. Renewable Energy Generation – Solar Photovoltaic (PV)
- C. Renewable Energy Generation – Solar Hot Water
- D. Fuel Switching – Heating and Hot Water: From Natural Gas to Electric Heat Pumps
- E. Energy Efficiency – Existing Buildings
- F. Energy Efficiency – New Construction
- G. Business Green Upgrades
- H. PACE Programs
- I. Community Outreach

Transportation Strategies

- A. Fuel Switching—Compressed Natural Gas (CNG)
- B. Fuel Switching—Electric Vehicles (EV)
- C. Fuel Switching—Second Generation Biofuels
- D. Hydrogen Fuel
- E. Transportation Policies
- F. Community Outreach

Solid Waste Strategies

- A. Reduce Landfilled Waste

More information on the strategies can be found in the attached Study Session memo and the full CPR, which is Exhibit A to Attachment 1.

A Focus on Fuel Switching

The purpose of the CPR is to chart the most direct path toward achieving the City's communitywide, absolute 2050 GHG reduction target. As such, many of the CPR strategies and mechanisms are focused on fuel switching from traditional fossil fuel-based energy sources to renewable ones, since fuel switching provides the most effective way of reducing emissions quickly. *It should be noted that the absence of other transportation and land use strategies and mechanisms in the CPR for addressing climate change does not infer that they are less important or should not be pursued, only that they may not help the City reduce its emissions as quickly.*

FISCAL IMPACT

There would be no fiscal impact to adopting the proposed CPR as it does not commit the Council to funding any of the underlying actions. The CPR will be used as a framework for forwarding specific actions to the Council for funding via the goal-setting and budget process.

NEXT STEPS

Following adoption of the CPR by the City Council, staff will perform a cost benefit and resource impact study on the actions in the CPR and MOCAP, and seek Council Environmental Sustainability Committee and public input in order to prioritize the strategies. Staff will then return to the Council with a proposed ESAP-3 by fall 2016 that incorporates actions from the CPR and MOCAP, and other initiatives deemed high priority by the Council.

PUBLIC NOTICING

Agenda posting and e-mails sent to community members interested in environmental sustainability.

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- Attachments: 1. Resolution Approving a Community CPR
Exhibit A – Climate Protection Roadmap
2. [April 28, 2015 Study Session Memo, Climate Protection Roadmap](#)

cc: APWD – Hosfeldt, APWD – Solomon, PP, ZA, CBO, EDM, TBM, SWPM, DSC,
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