



Office of the City Manager

WORKSESSION
November 13, 2012

To: Honorable Mayor and Members of the City Council
From:  Christine Daniel, City Manager
Submitted by: Eric Angstadt, Director, Planning and Development Department
Subject: Climate Action Plan Update

INTRODUCTION

On March 20, 2012, Office of Energy & Sustainable Development (OESD) staff presented Council with the second annual report on implementation of the Berkeley Climate Action Plan. The main takeaway from that report was the following: while the community is making significant gains at reducing global warming emissions and has reduced emissions well below forecasted trends, we have substantially more work to do in order to achieve the community-wide emission reduction target (33% reduction below 2000 levels by 2020 and 80% reduction by 2050). Council directed staff to conduct an updated analysis designed to illustrate CAP implementation scenarios that would set the community on a path to achieving its ambitious targets. The purpose of this report and work session is to provide an update on that analysis, including identifying potential policy scenarios for closing the gap between current and targeted emissions levels. In this report staff also recommends a performance management approach to help ensure that the City is effectively tracking and reporting CAP implementation progress and making informed, coordinated decisions about how to prioritize CAP strategies.

CURRENT SITUATION AND ITS EFFECTS

According to the best available data, as of 2011 Berkeley's community-wide greenhouse gas (GHG) emissions, including emissions from transportation, building energy use, and solid waste disposal, are approximately 5% below year 2000 baseline levels. This represents a 13% reduction below Berkeley's forecasted "business-as-usual" scenario, meaning a modeled scenario in which the community is not taking action to reduce local emissions and emissions grow annually by a growth factor based on population. The 13% reduction below forecasted business-as-usual levels is significant because it represents the aggregated emissions reduction benefit in Berkeley of actions taken at all levels of society, including households, businesses and other organizations, and government. In the absence of these actions, such as increased energy efficiency in homes and businesses, reduced solid waste disposal, and less driving, Berkeley's emissions levels would be much higher than they are today.

However, we have much more work to do. We are not currently on a trend to achieve the 2020 target. Current emissions levels are approximately 14% higher than our

targeted trend. In order to achieve the 2020 emissions reduction target, Berkeley community-wide emissions must decrease by over 200,000 metric tons, the equivalent of taking over 35,000 passenger vehicles off the road. As a point of reference, Berkeley's current vehicle population is about 56,000.

The main purpose of the work session is to illustrate policy scenarios, or "wedges," that could fill the gap between business-as-usual and targeted GHG emissions levels. Filling this gap will require a combination of state and local government-level policies, as well as action by businesses and households.

It is to our community's benefit that the state of California is a worldwide leader in taking on the climate challenge. In 2006, Gov. Arnold Schwarzenegger signed the Global Warming Solutions Act (AB 32) into law. The law mandates that statewide GHG emissions be reduced to 1990 levels by 2020. The state's Scoping Plan that grew out of this law outlines a range of actions that would achieve significant community-level emissions reductions. Indeed, ***staff estimates that state-level policy could achieve approximately 63% of the emissions reductions needed to meet Berkeley's 2020 GHG emissions goal. The remaining 37%, approximately 93,000 metric tons of GHG emissions, will need to be achieved through local-level action.***

The reason that AB 32 has the potential to play such a significant role locally is that it directly affects major sources of GHG emissions, such as transportation and building energy use. For example, the Pavley Greenhouse Gas Vehicle Standards affect all new passenger vehicles in California starting in 2009 and will reduce statewide passenger vehicle GHG emissions by 34% by 2025. The Pavley standards will achieve approximately 17% of Berkeley's targeted reductions. Also affecting vehicle emissions is the Low Carbon Fuel Standard (LCFS), which reduces the carbon intensity of transportation fuels. The LCFS will achieve approximately 14% of Berkeley's targeted reductions. Other state-level transportation efficiency measures, including measures targeted at making heavy trucks more efficient, would achieve approximately 2% of Berkeley's targeted reductions. And the Renewable Portfolio Standard, a state-level policy that mandates that 33% of California's electricity come from renewable energy sources by 2020, would contribute reductions equivalent to about 30% of the reductions Berkeley needs in order to achieve its target. These state-level strategies, which were adopted by the Air Resources Board and are in various stages of implementation, will account for approximately 63% of the emissions reductions needed for Berkeley to achieve its target.

Clearly, state-level policy is critical. But it is also clear that our community will only achieve its target if climate action at the local-level is accelerated. Approximately 37% of the community-wide GHG reduction target must come from local-level policy. But what combinations of local strategies will get us to the target? Staff conducted an analysis designed to answer this question.

Consistent with the CAP, deeper reductions in local GHG emissions from building energy use can be achieved through a combination of increased efficiency and cleaner

electricity. There are a number of policy scenarios that could meet these objectives. Important components of any scenario that approaches achieving the 2020 goal are the following:

- Converting existing streetlights to more energy efficient LED fixtures
- Greening the energy consumed in buildings beyond what's required by the state's Renewable Portfolio Standard by achieving a sustained increase in solar photovoltaic (PV) installations, an accelerated increase in solar hot water installations, and other clean energy measures
- Updating standards for existing residential and commercial buildings (i.e., the Residential and Commercial Energy Conservation Ordinances) so as to achieve deeper energy use and cost reductions in our homes and businesses
- Reducing municipal building energy use through a combination of solar PV and solar hot water installations and increased energy efficiency

Transportation emissions reductions are also an important component of any set of policies. Reductions can be achieved through vehicle efficiency and clean fuel measures, which are mainly addressed at the state level, and by local measures that reduce vehicle miles traveled (VMT). Any scenario that approaches achieving the 2020 target necessitates VMT reductions from a combination of all of the following strategies:

- Housing increased population growth in mixed use, transit oriented locations
- Parking management strategies that reduce vehicle trips and reduce VMT associated with searching for a parking space
- Bicycle and pedestrian infrastructure improvements
- Increased car share availability and uptake

Achieving the 2020 goal also requires sustained reductions in GHG emissions associated with solid waste disposal. Staff assumed in its analysis that the community would continue current trends (waste-related emissions decreased approximately 60% since 2000) and achieve the adopted zero waste by 2020 goal.

Each of these sets of strategies comes with a cost as well as cost benefits. Staff's goal is to present an analysis that illustrates the trade-offs of potential policy options to achieve Berkeley's 2020 goal. Staff conducted its analysis mainly through extensive review of published academic reports on the GHG reduction potential of various local strategies, by reviewing relevant analyses conducted by other local governments, and by extrapolating from Berkeley's GHG trends to date.

Beyond Policy: A Potential Performance Management Approach

In order to ensure continuous progress toward the CAP goals, staff recommends establishing a formal, multi-departmental working group focused on accelerating implementation of the CAP and other related sustainability efforts. The team would be tasked with the following:

- Adopting a set of high-priority performance metrics that enable the team to effectively track progress toward the climate action goals and regularly communicate the status of progress to City Council and the community
- Advising division managers and project staff on carrying out CAP priorities
- Increasing organization-wide accountability for reducing energy and resource consumption in municipal operations by regularly monitoring resource consumption trends and advising staff on affecting those trends
- Identifying new ideas for removing barriers to sustainable practices in the community
- Coordinating on funding opportunities
- Preparing the annual Climate Action Plan update for City Council and community

The working group would be chaired by the Deputy City Manager, would meet quarterly, and would consist of department directors, division managers and other relevant project staff in team meetings as appropriate.

A fundamental outcome of forming a multi-departmental working group would be an enhanced organization-wide understanding of the status of CAP progress (and other sustainability efforts) and clarity on top priorities for achieving deeper reductions in global warming emissions. The recommendation for a multi-departmental team focused on improving municipal and community sustainability outcomes is consistent with staff's recommendation in response to the April 3, 2012 City Council referral regarding evaluating the potential benefits of creating a consolidated Department of the Environment. For more information, please see the Information report on the regular City Council Agenda for this same date.

BACKGROUND

Adopted by City Council on June 2, 2009, the CAP is the community's guide for reducing greenhouse gas (GHG) emissions to 33 percent below 2000 levels by 2020 and 80 percent by 2050. CAP strategies are designed to not only reduce GHG emissions, but also to achieve several other benefits, including improved public health due to less local air pollution and more active transportation modes; improved access to green jobs due to increased demand for solar and energy efficiency upgrades; and cost savings for residents, businesses, and the City government due to reduced energy use.

The City reports a range of climate action performance metrics online at www.cityofberkeley.info/climateprogress.

POSSIBLE FUTURE ACTION

The purpose of the work session is to provide City Council with an update on GHG emissions trends to date and offer the opportunity for discussion about some potential policy scenarios for closing the gap between forecasted and targeted GHG levels.

Staff also recommends launching a formal, multi-departmental team focused on accelerating CAP implementation.

FISCAL IMPACTS OF POSSIBLE FUTURE ACTION

Current climate action priorities are funded by existing grants and General Fund allocations. Staff continues to seek additional grant funding to maintain and scale-up existing efforts. The fiscal impacts of accelerating CAP implementation are currently unknown, but in any event are dependent on policy choices.

CONTACT PERSON

Timothy Burroughs, Climate Action Coordinator, Planning Department, 510-981-7437

