CITY OF ALAMEDA
Memorandum

To: Honorable Mayor and
Members of the City Council

From: Lisa Goldman
Acting City Manager

Date: April 5, 2011

Re: Receive an Update on the City's Green Initiatives

BACKGROUND

In February 2008, the City Council adopted a resolution setting a greenhouse gas reduction goal of 25% below the 2005 baseline level of 303,097 carbon dioxide equivalent units (eCO_2). The City Council also adopted the Local Action Plan for Climate Protection (LAP), a document prepared by community members and City staff to describe the policies and measures that the City will take to reduce greenhouse gas emissions. Since that time, the City has worked to promote and implement a number of strategies to reduce both the City's and the community's carbon footprint.

DISCUSSION

This report provides an update on the City's "green" activities over the past year in the areas of ordinances, resolutions, and programs and policies. The City Council adopted one ordinance in 2011, and one resolution in 2010 that will have an impact on Alameda's carbon footprint.

Green Building Ordinance Update

In March 2011 the City adopted an ordinance that amended the Alameda Municipal Code to include the 2010 California Green Building Standards Code, which was adopted statewide on January 1, 2011. The 2010 California Green Building Code requires:

- 20 percent mandatory reduction in indoor water use, with voluntary goal standards for 30, 35 and 40 percent reductions;
- Separate water meters for nonresidential buildings' indoor and outdoor water use, with a requirement for moisture-sensing irrigation systems for larger landscape projects;
- Diversion of 50 percent of construction waste from landfills, increasing voluntarily to 65 and 75 percent for new homes and 80 percent for commercial projects;

- Mandatory inspections of energy systems (i.e. heat furnace, air conditioner, mechanical equipment) for nonresidential buildings over 10,000 square feet to ensure that all are working at their maximum capacity according to their design efficiencies;

- Low-pollutant emitting interior finish materials such as paints, carpet, vinyl flooring and particle board.

Additionally, one staff member in the Community Development Department has been trained as a GreenPoint Rater. Under the GreenPoint Rated program, a Certified GreenPoint Rater evaluates and verifies a home's green features, allowing builders and homeowners to brand their homes with a recognizable seal of approval.

Zero Waste Resolution

In October 2010, the City adopted the Zero Waste Resolution including a Zero Waste Implementation Plan (Plan). The zero waste initiative is the number one green house gas reduction initiative in the City's LAP. The Plan includes a timeline to achieve zero waste strategies in the City's schools, residential and business sectors.

The Plan promotes working towards zero waste by:

- Reduction of the overall and per-person solid waste generated within the city.

- Consumer education on product impacts to the waste cycle in order to reduce the need for additional collection programs.

- Increases in diversion in the recyclable and compostable materials generated in the city.

- Support of federal and state initiatives to build the environmental and social costs into a product's cost.

- Require manufacturer's product take back at the product's end of useful life.

Specific implementation task recommendations for 2011 through 2020 include:

- Reducing solid waste by increasing diversion materials to include: film plastics, rigid plastics, and textiles.

- Fortifying the existing construction and demolition debris ordinance by increasing the current 50% diversion requirement to 75% diversion requirement.

- Collaborating with Community Action for a Sustainable Alameda (CASA) to develop a community-based, social-marketing campaign that promotes and supports zero waste strategies.

- Advocating for producer responsibility at the state level and working with local retailers to reduce the amount of product packaging materials; reduction of toxic materials used in production and manufacturing; extension of products' useful lives; and product durability.

The Public Works Department's integrated waste management staff continually works with the City's collection hauler, Alameda County Industries (ACI), to obtain the most up-to-date information to promote and implement these programs.

Programs and Policies

Solid Waste and Recycling

The LAP identified a number of initiatives to help Alameda reduce its carbon footprint, including development and adoption of the Plan, as described above. The Public Works Department, which is responsible for the City's solid waste and recycling programs, hired a consultant to help with this effort. The consultant conducted several public meetings, which included meetings to targeted audiences such as schools, the business community, and the community at-large. A survey, in several formats, was circulated at public meetings, on the web, and City events to gain input and support from many sectors of the public for the proposed Zero Waste implementation programs.

As described above, a draft Plan was developed by the consultant and reviewed by staff prior to its presentation to the City Council in October 2010. The City Council adopted the Resolution and Plan and requested that staff work further with the business community to implement mandatory commercial recycling in 2012 instead of 2014. The City Council directed staff to present a progress report in June 2011 on this effort.

In 2011, Public Works staff plans to conduct additional outreach within the business community to obtain additional comment regarding implementation of mandatory commercial recycling in 2012. The mandatory commercial recycling business outreach plan is modeled after the 2008 ban on polystyrene foam take out containers implementation plan. The results of this new effort will be presented to the City Council in June 2011.

Energy and Energy Efficiency

Alameda Municipal Power's (AMP) renewable supply mix increased to 61% of total load in 2009, up from 55% reported for 2008. AMP's carbon-free supply mix held steady at 77% during the same period. For the past two years, AMP has maintained the highest percentage of renewables in its supply portfolio compared to all other California utilities.

Alameda's renewable energy is produced from a wide variety of sources, including geothermal, landfill-gas-to-energy, solar, and wind.

In 2010, AMP continued to expand its renewable energy portfolio. Under a new 20-year agreement with the Northern California Power Agency (NCPA), Alameda now receives 100% of the renewable energy output from an existing small hydroelectric facility, known as the Graeagle project. The new agreement, which was approved by the City Council in January 2010, replaces a prior long-term agreement for the facility under which Alameda split the output 50/50 with another utility.

Also in 2010, AMP signed a new long-term Power Purchase Agreement that increases AMP's participation in a proposed new landfill gas project to be located at the Butte County Landfill. AMP staff is actively working with the supplier to finalize implementation details for this new landfill gas project. The Butte project is expected to be online in summer 2012. AMP's renewable energy percentage is expected to increase by 3.5% after the first full year of the plant's operation.

AMP participated in several innovative project enhancements at the NCPA Geothermal Project at the Geysers that will result in increased renewable energy deliveries for the city. The first project involved the installation of two large-scale solar photovoltaic arrays (each rated one megawatt) that power wastewater pumps used to replenish NCPA's geothermal steam field. To further boost renewable energy production at the Geothermal Project, NCPA installed a small generator in a steam field injection well – the first such application of its kind.

AMP's program to encourage the installation of roof-top solar generation had another successful year in 2010. AMP approved rebates for new projects totaling 72.3 kilowatts (kW), adding to the 324 kW of capacity that was installed in 2008 and 2009. Another 60 kW of solar generation is under construction on top of the City's Main Library, funded by the City's federal stimulus fund award.

Lastly, in 2010 AMP joined the Western Renewable Energy Generation Information System (WREGIS), an Internet-based service used by energy utilities and suppliers in California to track and report deliveries of renewable energy. AMP joined WREGIS in anticipation of pending state legislation that will require its use as well as to enable the utility to transact Renewable Energy Credits from its supply portfolio.

AMP staff will measure and report on the greenhouse gas (GHG) content of AMP's current supply mix. This report will include a comparison of AMP's current GHG level against the 2005 baseline and provide an assessment on whether AMP is on track towards achieving a targeted reduction of 14,559 metric tons of CO2 equivalent by 2020. Staff will also evaluate the electric rate impact under various Renewable Portfolio Standard (RPS) alternatives. This analysis will inform staff's recommendation to the Public Utilities Board concerning an update to AMP's existing 40% RPS.

In the area of energy efficiency, the Public Utilities Board approved a 10-year energy-efficiency target for FY 2011 – FY 2020, as required by Assembly Bill 2021. Energy efficiency is included as a power resource in AMP's annual load forecast.

Through AMP's energy efficiency programs, 1,326 megawatt hours have been saved in 2010, which is equivalent to the annual energy use of 323 average Alameda residential customers. The resulting greenhouse gas emissions reduction from the 2010 energy-efficiency programs is 470 tons of equivalent carbon dioxide (CO2e), which is equal to the annual emissions of 59 cars.

Commercial lighting retrofits are a significant part of AMP's energy efficiency portfolio. The increase in diversity of light emitting diode (LED) technologies and decrease in cost will play a large role. In 2010 LED streetlights, walkway lights, and parking lot lights were installed.

Also in 2010, using an American Public Power Association Demonstration of Energy Efficiency Developments and utility energy efficiency funds, AMP completed an "Evaluation of the Energy Efficiency Potential of Alameda Municipal Power's Electric Distribution System". AMP staff has been evaluating the costs and benefits of changing out some of the systems transformers to increase distribution system efficiency.

Work on the Energy Efficiency and Conservation Block Grant (EECBG) projects has progressed in a timely manner. The Alameda Unified School District audits were completed, and the District has started implementing some of the recommended measures. The Third Party Energy Audit Program was also completed and resulted in an additional auditing of over 200 residences. The remaining projects include the audit of all City facilities, the Webster Street SMART Corridor, and the Main Library Solar project, which are scheduled to be completed in 2011.

Staff has also been working with other regional agencies regarding partnering in regional stimulus funded energy efficiency programs.

Miscellaneous

In September 2010, the City of Alameda received a $250,000 Urban Greening Planning Grant from the multi-jurisdictional Strategic Growth Council (SGC). The City's planning effort, called the Urban Greening Plan, will develop a comprehensive Parks and Open Space Master Plan, an Urban Farm and Gardening Plan and recommendations on General Plan updates that would increase sustainability citywide. This planning effort is currently underway, and the Urban Greening Plan is expected to be completed in late 2011.

FINANCIAL IMPACT

There is no financial impact associated with receiving this update on the City's green initiatives. However, staff is actively seeking grants to enable the City to further its efforts to reduce greenhouse gas emissions.

RECOMMENDATION

Receive an update on the City's green initiatives.

Respectfully submitted,

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