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TO: Mariko Yamada, Chair
Yolo County Board of Supervisors

FROM: Matt Rexroad
Supervisor, 3rd District

DATE: November 6, 2007

SUBJECT: Climate Change Working Group Progress Report

BACKGROUND

On January 23rd of this year the Board established a “Working Group” consisting of myself, Deputy County Administrator Dirk Brazil, and John Mott-Smith and charged us with determining a course of action for Yolo County on the issue of climate change.

Although such a course of action will involve policies and procedures within the range of jurisdictional powers of the county, we thought it appropriate to first examine and review actions taken by the county to put its own house in order on this issue. Accordingly, we solicited the participation of Ray Groom and John Bencomo to assist with development of a list of actions and activities the county has taken to reduce energy usage and greenhouse gas production.

We are pleased to report that Yolo County has, due to the foresight and leadership of Mr. Groom and Mr. Bencomo, and prior to the formation of the Working Group, taken significant actions on the issue of climate change. Moreover, the County has recently adopted important additional measures.

WHAT WE HAVE ACCOMPLISHED SO FAR IN YOLO COUNTY

Yolo County staff and experts have examined our current climate-change policies and developed a listing of climate change accomplishments in our buildings, fleet, and general practices. This list is meant to be illustrative, rather than all-inclusive; there are undoubtedly many more programs that could be mentioned.

“Cool Counties”

On September 11th the Board unanimously adopted a resolution declaring that Yolo County was joining with 13 other counties in the United States to participate in the “Cool Counties Climate Stabilization Declaration,” thereby making Yolo County one of only 13 charter counties in the entire country making this commitment. This is a significant act of leadership and commits Yolo County to seek to reduce greenhouse gas emissions by 80% by the year 2050.

California Climate Action Registry

Ray Groom has prepared the necessary materials and information, and Yolo County has formally applied to join the California Climate Action Registry, a program of the State of California that is “aimed at developing and managing a common greenhouse gas emissions reporting system” that will form the basis for future regulatory and voluntary efforts to assess, verify, and credit reductions in these emissions. This program requires the county to establish baseline energy use against which future actions and policies to reduce usage can be measured for effectiveness. The baseline audit will be independently verified, and Yolo County will establish annual reports to document energy usage.

Partnership with UC Davis

Mr. Groom has also arranged with Professor Niemeier in the Department of Civil and Environmental Engineering (also, Director of the John Muir Institute of the Environment) at UCD for her students in Urban Sustainability to assist the County in studying its carbon generation and in developing policies and strategies to reduce emissions. This partnership with UC Davis will both support and supplement the audit requirements of the county’s application to the California Climate Action Registry.

Energy Efficiency in Existing Buildings and Facilities and Programs:

The following are examples of actions and programs undertaken (primarily by Mr. Groom and Mr. Bencomo) to increase the efficiency (and thereby reduce the cost) of energy used by Yolo County

We replaced incandescent lights with compact fluorescent bulbs. This energy retrofit has dramatically saved energy and lowered our costs.

In 2004, we conducted a “countywide energy conservation retrofit program” and retrofitted county building light packages, boilers, economizers, chillers, VFD’s, fans, water heaters, motors, and HVAC (Heating Ventilation Air Conditioning) for increased energy efficiency and a projected savings of nearly one half million dollars per year over a 15 year period.

In 2004 we conducted a “countywide computer energy management” program to install electronic computerized climate control in all major county buildings, including establishing

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standard thermostat levels for summer and winter for buildings that are controlled by our energy management system.

We participate in several rebate programs through our energy provider (PG&E), including rebates for solar installations, critical peak pricing, the "demand bidding program" that trades kilowatts for dollars by reducing load and the countywide energy conservation retrofit program.

As part of the countywide retrofit program we installed cogeneration capacity at the Monroe Detention Facility, with an estimated savings of \$30,000 per year over a 15 year period.

We established a "building closure program" to close older, less energy-efficient buildings, including demolition of certain buildings with extremely high energy costs, for an estimated annual savings of nearly \$200,000 per year over a 15 year period.

We began a "countywide appliance replacement program" to replace, in conjunction with utility rebates, older, energy inefficient appliances, such as refrigerators (the county has more than 50 that are over 20 years old), with energy efficient EnergyStar appliances.

County Landfill

We capture methane gas from the Yolo County landfill, using it to generate electricity (generates about 2½ Mega Watts). Currently, Integrated Waste Management has contracts for landfill gas and energy production rights and royalties. IWM is also working with the state on a pilot program for an anaerobic "green waste" digester, which will also generate methane. If this program is successful, it could produce enough methane to power one or more micro turbines for on-site use, or sale of the gas to an adjacent customer such as City of Davis.

Several ongoing pilot projects to increase the rate of methane production and energy generation have placed Yolo County at the forefront of waste management in the country.

Construction of New Buildings

We adopted Leadership in Energy and Environmental Design standards (LEED) for new county buildings. These standards set benchmarks for achievement of different levels of energy, resource, and water efficiency in new construction. These standards, as applied to the Bauer building, address a variety of features, including water usage, building location and orientation, provision for bicycle parking, landscaping, parking, waterless urinals that can save more than 400,000 gallons of water per year, energy generation, time-of-use metering, building reflectance, energy efficient appliances, recycling and salvaging, use of paint with low levels of volatile organic compounds, etc.

We installed solar panels on the Bauer Building, housing mental health and public health services. The panels produce 40% of the building's power needs, and the use of hybrid heating/cooling reduces the energy required to operate the building.

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We directed that the construction of the new jail be as energy and resource conservative as permitted by law.

Recycling

We implemented a recycling program for county buildings in which we recycle paper, cardboard, cans and bottles, fluorescent tubes, oil, computers, rigid plastics, agricultural plastics, PVC pipe, toner cartridges, cell phones, batteries, and electronic waste.

Currently, the county has agreements with each of the incorporated cities for our battery drop-off program. The county charges Davis, West Sacramento, Winters, and Woodland a fee for battery pickup for each drop-off site when a container is full. There is no fee for recycling the batteries. However, as our program (state-mandated) is for residential waste, the recycling containers must be placed in public areas and be accessible to the public for battery drop-off. Businesses and agencies that do not permit public access are not allowed in the program and are required to follow the requirements for a conditionally exempt, small quantity generator.

Integrated Waste Management (IWM) has a small grant (\$7,000) from the County Integrated Waste Management Board (CIWMB) to set up a fluorescent tube/bulb drop-off recycling program. We are working with a consultant to determine how to set this up in public buildings and retail stores as well as to provide for continued funds for the program.

Yolo Agricultural Marketing Initiative

The Agriculture Commissioner has initiated a program to promote local agricultural programs and reduce “food miles” (and therefore CO2 emissions) required to provide fresh food and vegetables to local consumers, markets, and restaurants.

Monitoring State Legislative and Regulatory Actions

Staff has been attending meetings of the California Air Resources Board, the Climate Action Team, and other state bodies charged with implementation of AB 32, the Global Warming Solutions Act of 2006, as well as monitoring activities of the California Supervisors Association of California and the League of California Cities. Implementation of state programs and policies to meet mandated reductions will involve many different parts of county government, including planning, land use, emergency services, solid waste management, and transportation and by monitoring these agencies the Board will be advised of opportunities and potential issues.

Transportation and Fleet Vehicles:

Our YoloBus fleet has been converted from diesel to natural gas use.

We installed charging stations for electric vehicles at the Bauer building and will add to all future facilities. Our first charging station was at Planning and Public Works (PPW). (We conducted a pilot project with all electric vehicles that did not serve our purposes except for limited

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commuting between local county facilities. We currently utilize an electric vehicle at PPW for that exclusive purpose.

Integrated Waste Management is planning to install a fueling station (small above-ground gasoline and diesel tanks) at the landfill to significantly reduce the number of trips the staff must make to Woodland to refuel vehicles and purchase fuel for use in on-site equipment. The operations contractor already has a much larger diesel tank on-site for heavy equipment.

Yolo County received a grant in the amount of \$287,580 from the California Air Resources Board for the purchase of low polluting construction equipment.

Personnel Training

We require Yolo County planning staff to attend California Environmental Quality Act (CEQA) and climate change courses at UC Davis extension.

General Practices

We initiated tree-planting programs, and our PPW currently operates a small nursery and provides tree planting for county facilities.

All new development is required to provide landscaping, energy efficient designs, and increased densities to promote infrastructure and utility efficiencies.

The Director of General Services has set a goal of a 10% annual reduction in energy usage over the next 5 years.

Integrated Waste Management is working on a Construction and Demolition (C&D) recycling ordinance to require 50% of the construction and demolition debris is recycled and diverted from land filling. (Marin County uses this fee to partially fund an energy management specialist in county government).

Integrated Waste Management is also working to construct and operate a mixed C&D sorting facility at the landfill that will recycle a minimum of 50% of the material sorted at the facility. (The cities of Woodland and West Sacramento have C&D ordinances).

We implemented a recycling program for county buildings in which we recycle paper, cardboard, cans and bottles, fluorescent tubes, oil, computers, rigid plastics, agricultural plastics, PVC pipe, toner cartridges, cell phones, batteries, and electronic waste.

Research Projects

Current energy and greenhouse gas related research projects that PPW staff and interns are working on include:

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- Pilot and full-scale bioreactor (wet cell) landfill operation, which increases the rate of waste decomposition and increases the rate of methane production for more efficient methane collection and use.
- Groundwater phyto-remediation using kenaf, a tropical plant used for cordage and textiles.
- Green waste anaerobic digester to generate, collect, and sell/use methane prior to aerobically composting the green waste.
- Substitution of canola for kenaf in the phyto-remediation project for local market. (There is no local paper manufacturing or fiber market for the kenaf).

WHERE DO WE GO FROM HERE?

No universal list of actions exists that all local governments take to address climate change; instead, it varies according to the particular circumstances of each local government. The programs and policies that are appropriate for Los Angeles County, for example, may not be what are best for Yolo County. The county can be proud of its actions to date; to a great extent we have our house in order or efforts are underway in this regard. The county is now in a position to look outward from its own facilities and fleet to the broader community. The following steps appear to be common to the planning process undertaken in other communities.

Step One: Establish a baseline for energy usage and greenhouse gas emissions.

Step Two: Create a target for reducing energy use and greenhouse gas emissions.

Step Three: Develop a plan to meet the target goal.

Step Four: Implement the plan.

Step Five: Monitor the results over time and adjust as necessary.

Yolo County, through actions already taken, and in conjunction with its application to the California Climate Action Registry, is a good way along the path to completion of Step One. Creation of a target for the amount of reductions in energy use and greenhouse gas production, as well as a date by which this target should be met, and a plan for getting there, should appropriately involve the community in a discussion of methods of achieving these targets.

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Involve the Community

The citizens of Yolo County have considerable expertise and interest in the subject of climate change, and the county would benefit from tapping into this reservoir of knowledge and expertise.

Meet with Leadership: As the county embarks on this path, it should first involve the leadership in the cities, the University, the Port, and school districts in order to: (a) advise these jurisdictions of its plans; (b) solicit information on what each jurisdiction is doing in the area of planning for climate change, and, (c) explore the potential for synergy and partnerships between the county and these other governmental entities.

Public Forums: In conjunction with local leadership, the county should conduct public forums in each region of the county in order to solicit ideas, suggestions, and views from Yolo County citizens on the subject of climate change and the development of targets for energy and greenhouse gas reductions. These forums should take the form of “brainstorming sessions,” the purpose of which is to collect each and any idea a citizen may bring forth. The ideas will subsequently be analyzed for cost-effectiveness, policy, feasibility, and other factors before being forwarded to the Board of Supervisors for discussion.