

County of Santa Clara Facilities And Fleet Department




FAF01 092507

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DATE: September 25, 2007

TO: Board of Supervisors

FROM: 
Larry Jinkins
Director of Facilities and Fleet Department

SUBJECT: Cool Counties Referral Report

RECOMMENDED ACTION

Consider recommendations relating to the U.S. Cool Counties Climate Stabilization Declaration.

Possible action:

- a. Under advisement from the Board of Supervisors meeting of August 14, 2007 Item No. 15; Accept report relating to the U.S. Cool Counties Climate Stabilization Declaration.
- b. Approve in concept the resources and staffing required to partially support the greenhouse gas emissions reduction goals as outlined in the U.S. Cool Counties Climate Stabilization Declaration and this report, and direct staff to return to the Board with implementation actions.

c. Adopt resolution for adopting the U.S. Cool Counties Climate Stabilization Declaration. (Roll Call Vote)

FISCAL IMPLICATIONS

The initial actions specifically described in Recommended Action item "b" and implicitly described in item "c" in this report will require at minimum \$340,000 in new ongoing staff costs and \$11.1 million for funding the Unfunded Energy Conservation Project list.

Additional future actions required to meet the year 2050 goals of this program are unknown at this time, but can be expected to require an additional \$19 million or more to return the County to its 2004 energy consumption level, and additional millions to reduce the County's current energy consumption, and associated greenhouse gas emissions from all sources by 80%. Although 2004 is not an emissions reduction base year, it is a useful County benchmark year since it is the year in which the County completed 500 energy conservation projects and started adding 18 new County buildings.

If approved, Administration will return to the Board with budget modifications necessary to begin implementation of this program.

CONTRACT HISTORY

Not applicable

REASONS FOR RECOMMENDATION

The Board of Supervisors requested information regarding adoption of the U.S. Cool Counties Climate Stabilization Declaration.

BACKGROUND

At the August 14, 2007 meeting the Board of Supervisors requested that administration provide information on the U.S. Cool Counties Climate Stabilization Declaration. This report summarizes the current status of the U.S. Cool Counties program, and provides preliminary information regarding the resource requirements associated with meeting the objectives of this program.

On July 16, 2007 during the National Association County Organizations (NACO) meeting members launched the Cool Counties initiative. Initial members included King County (WA), Fairfax (VA), Nassau (FL), Arlington (VA), Montgomery and Queen Anne's (MD), Miami-Dade (FL), Alameda (CA), Cook (IL), Shelby (TN), Hennepin (MN) and Dane (WI). King, Fairfax and Nassau Counties led the initiative in partnership with the Sierra Club.

The U.S. Cool Counties program is one of many recent greenhouse gas emissions reduction programs and initiatives having varying emissions reduction goals over differing time frames. The Kyoto Protocol, California's AB 32, U.S. Mayors Climate Protection Agreement each propose differing targets as described in the table below. These programs

and the Sustainable Silicon Valley CO2 Emissions Reduction Program, Joint Venture Silicon Valley Network Climate Protection Task Force, and ICLEI's Cities for Climate Protection Program are examples of a few of the recent international, national, state, and local initiatives. The chart below describes some of these differing program goals.

Initiative	Target Date(s)	Reduction Target(s)
Cool Counties	by 2010	By 2010 stabilize emissions, then 10% reduction every 5 years thereafter.
	by 2050	An 80% reduction from current (2007) emissions levels by 2050.
AB 32	by 2020	A 25% reduction to approximate 1990 levels. ARB to further define.
	by 2050	An 80% reduction to below 1990 levels. ARB to further define.
U.S. Conference of Mayors	by 2012	From 2012 levels to 7% below 1990 levels.
Kyoto Protocol	by 2012	From 2012 levels to 5% below 1990 levels.

In adopting the U.S. Cool Counties Climate Stabilization Declaration, the county agrees to:

- Inventory County government operations greenhouse gas emissions; and inventory county-wide community greenhouse gas emissions.
- Reduce County government greenhouse gas emissions by 80% below current levels by 2050 through a 10% reduction every five years;
- Work with local, State, and Federal leaders to inventory and reduce county-wide greenhouse gas emissions to 80% below current levels by 2050 through a 10% reduction every five years; and,
- Urge Congress and the Federal administration to enact similar multi-sector national program requirements and to implement programs that will reduce national greenhouse gas emissions by 80 % by 2050.

In calling for an 80% reduction of greenhouse gas emissions by the year 2050, the U.S. Cool Counties program is similar in most respects to AB 32. However, the Cool Counties program sets the reduction target below current (2007) levels whereas AB 32 sets the target below 1990 levels. Both programs require a reduction in the use of fossil fuels within the next 42 years while population continues to increase. Since fossil fuels are the primary energy source for our industrialized nation, meeting this goal will fundamentally change our industrial sectors and society. As illustrated in the attached chart the sources from which we obtain energy, the purposes for which we use energy, and the manner in which we use energy will require major changes and increasing marginal costs if these goals are to be met.

As noted above, many government organizations are passing resolutions and declarations promising to reduce greenhouse gas emissions. Unfortunately, very few of these government organizations are providing the financial and staff resources needed to accomplish their stated reduction goals. Initial County resource needs for meeting the goals of this program are described below.

While it is not possible at this time to provide a total County "roadmap" for reducing greenhouse gas emissions by 80% over the next 42 years, initial required resources and actions can be identified. Future efforts will include development of a Climate Action Plan that will provide a roadmap for reducing greenhouse gas emissions.

Initial Actions

Initial actions required in the short term include:

- **Establish a Utilities Program Manager position:**

The Facilities and Fleet Department (FAF) currently has 812 electrical, natural gas, water, sewage, and solid waste accounts. This is a \$14 million annual program that needs a dedicated, full-time manager. The utilities program manager position has not previously been established because of the six successive years of County budget and staff reductions. The U.S. Cool Counties program will further increase the demand for such a manager by requiring additional work including the inventory and tracking of County greenhouse gas emissions and planning the future projects that will reduce the County's greenhouse gas emissions.

- **Provide funding for the Unfunded Energy Conservation Projects:**

The County currently has an identified unfunded energy conservation project list of \$11.1 million that will reduce the County's energy consumption (and associated greenhouse gas emissions) by 7.2 million kilowatt hours (kWh). These projects are defined in Appendix G, of the Ten Year Capital Improvement Plan.

The County is adding 18 new buildings to its inventory between 2004 to 2010. These new buildings will increase the County's annual electrical usage by 19.3 million kWh. Future funding in excess of \$19 million will be needed to offset the remaining 12.1 million kWh (19.3M kWh – 7.2M kWh) electrical increase, resulting in a total funding requirement of more than \$30 million to return the County back to its year 2004 electrical usage level. Additional funding will be needed to off-set the natural gas usage of these new buildings. More funding will be needed to accomplish the full 80% emission reduction objectives of the Cool Counties Program.

- **Establish a County Greenhouse Gas Emissions Reduction Coordinator position:**

Ten government organizations (Sustainable Silicon Valley, Joint Venture Silicon Valley, International Council for Local Environmental Initiatives, Silicon Valley Clean Cities Coalition, Association of Bay Area Governments, California Fuel Cell Partnership, Stationary Fuel Cell Collaborative, CSAC AB 32 Working Group, Counties GSA Directors Council, and U.S. Cool Counties) and one industry group (BOMA) have requested County participation in their initiatives. This is a significant coordination effort for which there is no established County position. The U.S. Cool Counties initiative requires participating counties to take a leadership role in planning for and reducing regional greenhouse gas emissions, an additional requirement for which there is no established staff position. The person in this position would be needed to work with other government agencies and local businesses to develop a Climate Action Plan.

- **Recognize the need to implement energy conservation / emissions reductions projects that have long financial payback periods, and develop and fund a list of such projects**

The Unfunded Energy Conservation Projects list discussed above was developed from an energy audit conducted in 2002 by Chevron Energy Solutions Company. These projects have payback periods of 12 years or less. To obtain additional energy conservation / emissions reductions, the County will need to invest in projects that will have financial paybacks of more than 12 years. As good fiscal practice it is recommended that the County first fund the projects that have a return on investment of 12 years or less. Developing the future projects list for projects having paybacks of more than 12 years and executing these projects will require the combined efforts of the FAF Utilities Program Manager, the County Greenhouse Gas Emissions Reduction Coordinator, selected energy consultants, and capital project managers.

- **Dedicate the efforts of County Board Supervisors in attaining action at the State and Federal level for developing and deploying new technologies, establishing regional and national emissions reduction strategies, and ensuring sources of funding**

The technology needed to reduce the nation's use of fossil fuel by 80% does not exist at this time. Research and deployment funding is needed not only for developing more fuel efficient / alternative fuel vehicles, but also for lesser known needs such as more efficient air compressors, cooler computer servers, energy generation from tidal action, improved battery technology, more efficient / cleaner ship engines, etc. An open dialogue will be needed on the costs and benefits of the generation, transmission and use of all forms of alternative energy including nuclear energy. To fulfill the U.S. Cool Counties promises to the public, the elected officials of the participating Cool Counties will need to be extensively engaged at the State and Federal levels to get the legislation and funding needed to reconfigure the national economy from fossil fuels to alternative energies, and to develop and deploy energy efficient technologies among other strategies. Powerful economic forces will strongly resist this effort.

- **Identify funding sources for this effort**

The County investment in energy conservation for existing facilities has averaged about \$320,000 per year over the past four years. This is a miniscule amount in comparison to the amount that will be needed to reduce energy consumption by

10% every five years for a total emissions reduction of 80% within 42 years, especially since the most cost-effective energy / emissions reduction projects will have been implemented once the existing list of Unfunded Energy Conservation projects are completed. With the ongoing General Fund budget shortages, it would appear that alternative funding sources will be needed for implementing the aggressive U.S. Cool Counties objectives.

• **Develop a Climate Action Plan and participate in regional efforts**

Climate Action Plans (also referred to as Climate Protection Plans) typically inventory greenhouse gas emissions from both county governmental operations and from the broader community. These plans for urban areas include four primary strategies to reduce emissions including; development of alternative energy generation, investments in energy efficiency and conservation, expansion of recycling and solid waste reduction programs; and various transportation programs and investments. Secondary strategies include; changes in land use planning and zoning, agricultural practices, urban forestry initiatives, etc. These plans also model and account for increases in population, growth in municipal services, and expansion of building square footage and energy consumption demands. An effective Climate Action Plan identifies funding sources necessary to achieve emissions reductions.

Once completed the greenhouse gas inventories require annual updates and the Climate Action Plan requires updating every three to five years. In addition to the resources required to create the initial emissions inventories and the Climate Action Plan document, the U.S. Cool Counties program requires a resource commitment to achieve greenhouse gas reductions and then to track, measure and share information.

Many Climate Action Plans are prepared using consulting services. The Association of Bay Area Governments is promoting the development of integrated regional greenhouse gas inventories. To effectively participate the County needs to establish a position that will coordinate the County's efforts as discussed above, and provide funding to support the preparation of the county operational and community inventories and the Climate Action Plan.

The U.S. Cool Counties program is an aggressive program for reducing climate changes caused by greenhouse gases. It also has the added benefit of preparing the nation for the reduced future availability of fossil fuels. An 80 % reduction in emissions resulting from fossil fuel usage and other sources is huge in its scope with national ramifications.

Our recommended initial steps are just that – the beginning. The County has already made progress on some "green efforts" that will help the County reach emissions reductions targets. These are described in the June 7, 2007 County Green Report that can be found on the County website, <http://www.sccgov.org>. The County Green Report summary is provided as an attachment to this transmittal. Future resources in terms of staff and capital will be required to meet the long term goals. Otherwise, in adopting the U.S. Cool Counties Declaration, we will have made a commitment without the possibility of fulfillment.

CONSEQUENCES OF NEGATIVE ACTION

The Board will not have the information it requested.

ATTACHMENTS

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- Transmittal, August 14, 2007 Item No. 15
- U.S. Cool Counties Climate Stabilization Declaration
- County of Santa Clara Sustaining Energy Conservation Achievements
- Global Cost Curve for Greenhouse Gas Emissions Abatement