



SAN MATEO COUNTY ENERGY STRATEGY **2012**

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FINDINGS AND RECOMMENDATIONS



PREPARED BY THE UTILITIES & SUSTAINABILITY TASK FORCE



ACKNOWLEDGMENTS

We appreciate the participation, input and feedback of all the task force members and other interested parties.

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BAY AREA AIR QUALITY MANAGEMENT DISTRICT

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EXECUTIVE SUMMARY

SAN MATEO COUNTY ENERGY STRATEGY

San Mateo County and its cities have three critical reasons to develop an energy strategy, 1) the ever-increasing financial costs of energy and water, 2) the impact that creating additional energy related infrastructure will have on local communities, and 3) the increasing concern about climate change and its effects. As the State Legislature continues to develop new climate protection legislation, it is in our joint best interest to implement a strategy that puts us in control of the situation rather than being controlled by it.

The Utilities Sustainability Task Force (USTF), an ad hoc energy working group of the Congestion Management and Environmental Quality Committee (CMEQ), is composed of six elected officials and six stakeholder representatives, a project consultant, county staff and others. In February of 2006, the USTF was chartered to consider the future needs of San Mateo County in regards to both energy and infrastructure.

At a time when the cities and the County find themselves under pressure to adopt initiatives to protect the environment, the Energy Strategy shows that energy efficiency and water conservation are still the most effective ways to save money as well as both our precious resources and the environment.

The objective of the San Mateo County Energy Strategy is to frame the discussion and to define practical actions for the cities and the County about energy, water, alternative generation, and climate protection. It will also recommend a countywide effort including goals, strategies, actions and resources. Energy usage as it relates to transportation is not in the scope of this report or its recommendations and it will be addressed separately.

*...ENERGY EFFICIENCY
AND WATER
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THE MOST EFFECTIVE
WAYS TO SAVE MONEY AS
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ENVIRONMENT.*

This Executive Summary emphasizes the need for the county and the individual cities, as a whole, to act on issues related to Energy, Water, and Climate Change.

ENERGY:

Overall, energy use is increasing.

Pacific Gas and Electric Company (PG&E) estimates that a one percent annual increase in overall electricity use for the Peninsula area (which includes San Mateo County) is expected for each of the next five years. This extra one percent annually represents an additional 9.8 megawatts of energy that must be generated and delivered to the region every year. Meeting this demand would require approximately one small new power plant every five years. Additionally, PG&E expects the Peninsula's peak demand to grow by 11 percent in the next decade and San Francisco's peak demand to increase by 12 percent in the next decade.



TRANSMISSION AND GENERATION:

Additional transmission and generation infrastructure will impact cities and the county physically and environmentally.

Keeping in mind that power lines to San Francisco run through San Mateo County, if both counties continue to use more energy every year as expected, the state may require PG&E to develop new power sources and to add new transmission lines through San Mateo County. Some portion of the increased demand may be offset by alternative energy systems such as solar and wind, but the remainder will likely come from natural gas power plants causing potential environmental impact. Meeting peak demands generally requires the use of Peaking Power Plants, which generate higher emissions.

...AN ADDITIONAL 9.8
MEGAWATTS OF
ENERGY...WOULD REQUIRE
APPROXIMATELY ONE
SMALL NEW POWER
PLANT EVERY FIVE YEARS.

WATER:

The demand for water is increasing.

The demand for water is increasing. The communities in San Mateo County support the efficient use of water to meet its current and future water needs. At the same time, these communities are highly dependent upon a single water supply, the Hetch Hetchy regional water system. The system is vulnerable to shortages due to drought and changing weather patterns. A countywide effort is required, as with energy, to ensure a safe, reliable and affordable water supply.

USING LESS WATER,
ESPECIALLY HOT WATER,
SAVES A LOT OF ENERGY.

Water and energy use are closely related. A significant amount of energy is used in the county to pump, heat and treat water. Using less water, especially hot water, saves a lot of energy. This and other factors, especially the potential of drought conditions, favor water conservation.

ECONOMIC IMPACTS:

The costs of energy and water are rising.

The rising cost of energy and water to residential, commercial and industrial consumers and their resulting economic implications cannot be ignored. Energy and water costs continue to increase as the need for greater infrastructure and demand increases. On the other hand, conservation and efficiency can reduce demand, and save current and future economic, social and environmental costs while providing opportunities for other conservation investment.



CLIMATE CHANGE:

There is increasing concern and awareness of climate change.

As carbon dioxide and other greenhouse gases are released into the atmosphere from the burning of fossil fuels such as natural gas, coal and petroleum in the production of energy, the gases trap solar rays inside the earth's atmosphere and cause the temperature of the air, land and oceans to rise. Energy and water consumption are directly tied to greenhouse gas emission.

ENERGY AND WATER
CONSUMPTION ARE
DIRECTLY TIED TO
GREENHOUSE GAS
EMISSIONS.

LEGISLATION:

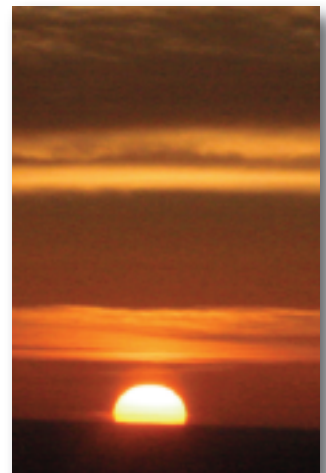
State legislation such as AB32 will impact city and county governments.

California legislation, AB32, calls for a return to 1990 greenhouse gas levels by the year 2020, which represents a 25 percent drop from today's emission rates. Long-term, the law calls for emissions to be reduced to 80 percent below 1990 levels by 2050.

THE STRATEGY:

A countywide strategy, involving the cities and the County, is the most effective approach to guaranteeing sufficient utility infrastructure, to preserve natural resources and to achieve greenhouse gas emission reduction goals.

The following general outline provides the Goals and Strategies contained in the San Mateo County Energy Strategy document. In the document, actions are divided into categories of Easy/Short-term, Intermediate/Medium-term, and Advanced/Long-term.





ENERGY

GOAL - To support the state's greenhouse gas emission reduction targets, San Mateo County will reduce the amount of power it purchases from utilities to 25 percent below 2005 levels through conservation, efficiency and increased local production of clean energy.

STRATEGY - Make energy efficiency standard practice.

ACTIONS:

Assess, and where feasible, implement energy-saving opportunities with the latest energy-efficient technologies in government facilities.

Assign staff, hire consultants, a climate action coordinator, and/or enlist the aid of volunteers to create an inventory of government operations emissions and develop a plan to save energy and conserve water.

Establish an energy-efficiency implementation action plan including the creation of an Energy Element and the updating of General and Strategic Plans.

REDUCE THE AMOUNT OF
POWER PURCHASES TO
25 PERCENT BELOW
2005 LEVELS

STRATEGY - Research, promote and invest in cleaner and greener sources of energy.

ACTIONS:

Install solar electric panels, wind turbine and solar hot water systems, develop cogeneration and alternative fuels at city facilities.

Encourage investment in clean energy systems such as solar electric, wind and solar hot water by providing rebates and either reducing or eliminating permit fees altogether.

Adopt green building standards and ordinances.



WATER

GOAL - Implement cost-effective and feasible water conservation. Institute recycling and development of other local water supplies, and strongly support local water utilities' efforts to meet commitments to an additional 5.2 million gallons per day of total conservation in 2030 based on a 2001 baseline throughout San Mateo County.

STRATEGY - Through BAWSCA, support activities in the lower Tuolumne River basin (e.g. additional agricultural conservation) such that projected water needs for San Mateo County in 2030 can be met with no net increase in water diversions from the lower Tuolumne River.

ACTIONS:

Establish ongoing communication with BAWSCA and promote dissemination of information related to legislation and other efforts to encourage agricultural conservation in the lower Tuolumne River basin.

STRATEGY - Make water conservation and reuse of water standard practices.

ACTIONS:

Recommend that city facilities and businesses use drought-tolerant plants and appropriate water conserving infrastructure through drip irrigation, intelligent water controllers and high efficiency toilets.

Develop a recycled water system for city facilities and adopt tougher water conservation ordinances including a water-conserving rate structure. Also increase public awareness of the value of water and the importance of water conservation and landscape water use efficiency.

Offer financial incentives and rebates to offset the purchase price of water conserving products such as high-efficiency washing machines and low flow water fixtures.

Update General Plans, (land use, circulation, housing, conservation, open space, noise and safety), and municipal codes to include water conservation policies and support the new state-mandated landscape guidelines.

CONSERVE WATER BY
14.8 GALLONS PER
CAPITA PER DAY



COLLABORATION

GOAL - San Mateo County will partner with the public utilities and work across city boundaries to address environmental challenges more effectively and efficiently.

STRATEGY - Collaborate with public utilities for mutual benefit.

ACTIONS:

Review quarterly updates from PG&E about future utility projects and take action as required.

Support passage of net-metering legislation to allow cities to "sell" their excess self-generated energy to the utility and apply the credits to other government accounts.

Establish a San Mateo County Energy Watch program through a Local Government Partnership with PG&E.

PARTNER WITH THE
PUBLIC UTILITIES AND
WORK ACROSS CITY
BOUNDARIES

STRATEGY - Collaborate with other jurisdictions to save time and resources.

ACTIONS:

Collaborate with other jurisdictions that have similar results from their baseline inventories.

ECONOMIC OPPORTUNITIES

GOAL - Support the clean technology sector to strengthen the long-term economic health of San Mateo County.

STRATEGY - Encourage clean technology businesses to locate in San Mateo County.

ACTIONS:

Invite venture capitalists to speak at local forums to educate the broader community about the importance of the clean and green technology sectors.

When in the market for alternative energy or energy-saving products, buy from local companies and take advantage of technical evaluations and group discounts.



STRATEGY - Help accelerate the adoption of clean technologies, both locally and globally.

ACTIONS:

- Recognize or feature local green businesses at City Council meetings or other public venues.
- Provide discounts/rebates on business license fees if Green Business Certification is achieved.
- Initiate competition among different retail districts or office parks to encourage businesses to become certified as a Green Business. Urge consumers to patronize local green businesses.

ACCELERATE THE
ADOPTION OF CLEAN
TECHNOLOGIES TO
SUPPORT ECONOMIC
GROWTH

LEADERSHIP FROM THE TOP

GOAL - San Mateo County will encourage environmental leadership from the top in the public sector, the business community and with its residents to achieve the goals of the Energy Strategy.

STRATEGY - Invest in environmental expertise in local government.

ACTIONS:

- Identify and train a point person for environmental issues on City Council and on staff. Take advantage of free or low-cost training opportunities offered by Energy Watch, the Pacific Energy Center, RecycleWorks, Build It Green and other organizations.
- Share a single resource among several cities with a similar energy profile and establish an Energy Task Force to identify, analyze, plan, prioritize and implement energy-saving measures in civic facilities and the broader community.
- Invest in additional staff rather than making this part of existing staff responsibilities.

ENCOURAGE
LEADERSHIP FROM THE
TOP IN ALL SECTORS

STRATEGY - Recruit and support community leaders at every level.

ACTIONS:

- Partner with businesses, local Chambers of Commerce, nonprofits, schools and other groups to influence resource-efficient behavior in all parts of the community.
- Leverage and support state and regional public outreach and education programs.
- Post energy efficiency information and materials available through all venues and encourage a competition between neighborhoods for the most innovative energy and water saving ideas.



NEXT STEPS:

The City/County Association of Governments (C/CAG) proposes the following next steps to move this important project forward:

C/CAG will provide presentations to the cities, asking that they adopt this document, commit to working collaboratively with the cities and the County, and release energy use information to support these goals.

C/CAG will work with County staff to fund a position to support the cities in this effort.

C/CAG will schedule quarterly, relevant educational presentations, bi-monthly information sharing meetings, and an annual progress report to the C/CAG board of directors.

C/CAG will provide incentives to promote the completion of government operation inventories for all cities in the County by the end of March 2009.

CONCLUSION:

The San Mateo County Energy Strategy recommends immediate action to promote energy efficiency and water conservation measures. Working collaboratively, we can do a lot to reduce costs, save our resources and the environment. Critical to achieving the goals set forth in the San Mateo County Energy Strategy is to engage all the cities and the County in adopting and implementing the proposed strategies. The San Mateo County Energy Strategy also strongly urges the creation of new sources of alternative energy generation and the exploration of new water sources including recycled water.

