

AD HOC COMMITTEE ON SUSTAINABILITY

June 22, 2015 10:00--11:00 A.M. 651 Pine Street, Room 101, Martinez

Supervisor John Gioia, Chair Supervisor Federal D. Glover, Vice Chair

Agenda Items:

Items may be taken out of order based on the business of the day and preference of the Committee

- 1. Introductions
- 2. Public comment on any item under the jurisdiction of the Committee and not on this agenda (speakers may be limited to three minutes).
- 3. REVIEW and ACCEPT the Record of Action from the May 11, 2015 meeting of the Ad Hoc Sustainability Committee.
- 4. ACCEPT the report from the Public Works Department regarding County Facility and Public Infrastructure Sustainability and PROVIDE direction to staff, as needed.
- 5. ACCEPT the report on the Department of Conservation & Development's energy efficiency programs and services, and PROVIDE direction to staff as needed.
- 6. **The next meeting is not currently scheduled**. This Committee is an Ad Hoc Committee and, as such, does not have a regular meeting schedule.
- 7. Adjourn

The Ad Hoc Committee on Sustainability will provide reasonable accommodations for persons with disabilities planning to attend Ad Hoc Committee on Sustainability meetings. Contact the staff person listed below at least 72 hours before the meeting.

Any disclosable public records related to an open session item on a regular meeting agenda and distributed by the County to a majority of members of the Ad Hoc Committee on Sustainability less than 96 hours prior to that meeting are available for public inspection at 651 Pine Street, 10th floor, during normal business hours.

Public comment may be submitted via electronic mail on agenda items at least one full work day

For Additional Information Contact:

Lara De Laney, Committee Staff Phone (925) 335-1097, Fax (925) 646-1353 lara.delaney@cao.cccounty.us



Contra Costa County Board of Supervisors

Subcommittee Report

AD HOC COMMITTEE ON SUSTAINABILITY

Meeting Date: 06/22/2015

Subject: Record of Action

Submitted For: Supervisors John Gioia and Federal D. Glover,

Department: County Administrator

Referral No.:

Referral Name: Record of Action

Presenter: L. DeLaney Contact: L. DeLaney, 925-335-1097

Referral History:

This record was prepared pursuant to the Better Government Ordinance 95-6, Article 25-205 (d) of the Contra Costa County Ordinance Code. Any handouts or printed copies of testimony distributed at the meeting will be attached to this meeting record.

Referral Update:

The Draft Record of Action for the May 11, 2015 meeting is attached for the Committee's review and acceptance.

Recommendation(s)/Next Step(s):

REVIEW and ACCEPT the Record of Action from the May 11, 2015 meeting.

Attachments

Draft Record of Action

DRAFT



Agenda Items:

Present:

AD HOC COMMITTEE ON SUSTAINABILITY

May 11, 2015 11:00 A.M. 651 Pine Street, Room 101, Martinez

Supervisor John Gioia, Chair Supervisor Federal D. Glover, Vice Chair

Items may be taken out of order based on the business of the day and preference of the Committee

Absent: Federal D. Glover, Supervisor, District V

Staff Present: Lara DeLaney, Sr. Deputy Count Administrator

John Gioia, Supervisor, District I

William Nelson, Principal Planner, DCD

John Kopchik, Director, Department of Conservation & Development

Jason Crapo, Deputy Director, Department of Conservation & Development

Jamar Stamps, Senior Planner, DCD

Attendees: Charles Davidson

- 1. Introductions
- 2. Public comment on any item under the jurisdiction of the Committee and not on this agenda (speakers may be limited to three minutes).

A member of the public expressed concern about building codes in Hercules.

- **3.** REVIEW and ACCEPT the Record of Action from the March 23, 2015 meeting.
 - Supervisor Gioia reviewed and accepted the Record of Action.
- **4.** ACCEPT the report on the status of the CAP; PROVIDE direction to staff as necessary.

Supervisor Gioia accepted the report and requested that the item return to the Committee before the CEQA review is completed.

5. ACCEPT the report on the statewide mandatory standards for electric vehicle service equipment ("EVSE"), or DIRECT the Department Conservation and Development Director to recommend the Board of Supervisors amend the County Ordinance Building Code to incorporate and ADOPT the California Green Building Code Tier 1 or Tier 2 standards for EVSE.

Supervisor Gioia accepted the report from staff and directed that staff return with a Draft Ordinance. Direction included on Multi-Family developments to include the Voluntary Measures of Tier 1 and to require that the parking space requirements be applied to all, not just 17+ units. For Non-Residential developments, direction included the Tier 2 requirements.

6. ACCEPT the report on the Greenhouse Gas Reduction Fund Program Leads and PROVIDE direction to staff, as needed.

Supervisor Gioia accepted the report.

- 7. **The next meeting is not currently scheduled.** This Committee is an Ad Hoc Committee and, as such, does not have a regular meeting schedule.
- 8. Adjourn

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Contra Costa County Board of Supervisors

Subcommittee Report

AD HOC COMMITTEE ON SUSTAINABILITY

Meeting Date: 06/22/2015

Subject: County Facility and Public Infrastructure Sustainability Update

Department: Public Works

Referral No.:

Referral Name: County Facility and Public Infrastructure Sustainability Update

Presenter: Brian Balbas Contact: Brian Balbas, (925) 313-2284

Referral History:

Supervisor Gioia requested that staff provide information to the Committee regarding the County's current efforts to improve energy efficiency and foster sustainability in County buildings and public infrastructure maintained by the County.

Referral Update:

The Public Works Department operates and maintains over 200 County owned buildings. These buildings include office space, hospitals, clinics, detention facilities and various other building uses. In addition, our Department maintains a variety of public infrastructure including roads, street lights, traffic signals, parks, landscaping, flood control facilities, etc. for use and enjoyment by the citizens of Contra Costa County.

The Public Works Department has continually researched, evaluated and implemented sustainability efforts in various aspects of the planning, design, operation and maintenance of the infrastructure for which the Department is responsible. This report provides a summary of many of the efforts we have undertaken to date and areas we will continue to pursue opportunities in the future.

In 2010 the Contra Costa County Board of Supervisors approved the LEED Sustainable Building Policy. The purpose of this policy was to establish the use of sustainable building practices in the design of county building improvement projects in order to reduce pollution (Green House Gas (GHG) reduction), protect natural resources, enhance asset value, optimize building performance, and create healthier workplaces for county employees and the public. The policy incorporated, by reference, the latest version of the LEED TM rating system, a nationally recognized standard used to rate the performance of buildings and guide project design and construction, in order to achieve the benefits of sustainable buildings. The LEED rating system components include sustainable site design, water and energy efficiency, indoor environmental quality, and materials and resources. The use of LEED criteria reduces operating costs, enhances asset value, optimizes building performance and creates healthier workplaces for County employees and visitors. By adoption of this policy and the guidelines the County declared its intent to promote sustainable building practices and low impact development in the design, construction and management of all

County--owned capital facilities. The County has attained LEED Gold or Silver ratings on several buildings since that time.

I. County Buildings (Energy Conservation, Green House Gas reduction)

A. HVAC

The County has invested approximately \$4 million of capital improvements in equipment replacement and improvement, operational improvements and building management controls using energy settlement funds, grants such as ARRA and rebate incentives since 2004. These improvements have been completed at various facilities including West County Detention Facility, Contra Costa Regional Medical Center, Pittsburg Health Center, and the Juvenile Hall Facility.

B. Lighting

Approximately \$1.5 million of capital improvements have been completed to improve lighting in and around buildings over the last 10 years. Improvements include: high efficiency fluorescent lighting, high efficiency controls, daylight control systems, LED lighting conversions. Funding for these improvements is through energy settlement funds, grants, rebate programs and utility on-bill financing. These improvements have been done throughout many buildings and we continue to complete them regularly.

C. Cogeneration Projects

We have completed cogeneration systems at four County facilities that account for \$3.7 million in capital improvements. These projects are located at Juvenile Hall, Martinez Detention Facility, West County Detention Facility and Contra Costa Regional Medical Center and were funded by California Energy Commission low interest loans. These systems provide both building water and space heat and electricity.

D. Solar Energy Projects

We installed solar PV systems on 16 County facilities between 2010 and 2014. Twelve of the sites were selected as a result of a Solar PV Site Assessment performed by a consultant that was paid through a government grant. These twelve were installed under a third party owned power purchase agreement (Main Street Power). Two were installed through a large rebate program and California Energy Commission loan. The other two were installed primarily with BAAQMD grants and incentives.

We are currently constructing 6 additional Solar PV projects through the Regional Renewable Energy Procurement (RREP) Program. The RREP programs comprised 19 government agencies to leverage combined projects and administrative knowledge to get installation cost reductions. The 6 sites will cost \$5.8 million and is being funded by County financing, being repaid through energy savings. These projects will receive over \$1 million in California State incentives.

II. Public Infrastructure (Energy Conservation, Green House Gas Reduction)

A. Traffic Signals

Over the last 10 years we have been converting the traffic signal lighting to LED. The installation of LED lighting on street lights saves energy and reduces maintenance costs given LED lighting lasts longer. This process has been on-going and we look for incentives and funding opportunities

to expedite this effort.

B. Street Lights

We are working with PG&E to replace all PG&E and County owned street lights in unincorporated areas by the end of 2016. This process is being funded in a partnership with PG&E and will be paid for through our street lighting rates. Several communities are complete or in the process of being done currently.

III. On-going Efforts

Commissioning: The County, through a state funded program, has received both technical and financial assistance to examine ways to improve HVAC operations. This program provides expertise to analyze energy data, building data, publicly available information and mapping software to determine ways to adjust equipment schedules and improve operations. Many of the recommendations that result can be performed through the County's building management systems. Analysis has determined significant potential savings at specific buildings simply by making adjustments to operations and scheduling while still providing the heating and cooling necessary for comfort. The costs are fully funded by the special program.

With assistance from East Bay Energy Watch, the County has been using US EPA's Portfolio Manager to provide energy benchmarking to target County facilities that show high energy usage compared to similar buildings in the database. This software will aid in targeting resources to maximize energy and GHG savings.

With a focus on LED lighting technology, the County is continuing with its efforts to covert lighting. The West County Detention Facility (WCDF) is an example of significant improvements being made with LED exterior lighting. The WCDF exterior lighting conversion to LED is estimated to cost \$200,000 and save \$33,000 in energy costs. In areas of long hours of operation we are also replacing WCDF interior fixtures with LED lighting. Through a rebate program that reduces the cost of replacement LED lamps for recessed can fixtures to \$4.00, we are replacing most of these in County facilities. We are also pursuing additional exterior LED application at County parking lots. As LED technology improves in efficiency, color rendering, its application to interior lighting grows. We will be examining LED lighting for general office lighting as it promises to be more efficient and longer lived than the incumbent fluorescent technology with better light quality. Currently we are looking to utility On-bill financing and for these projects as they tend to have short paybacks that meet the financing criterion. Specialized rebate programs will also be pursued.

We will be examining other sites and funding opportunities for solar projects. Other sites on the aforementioned Solar PV Site Assessment that weren't pursued initially may be good candidates in the current climate. Unfortunately the State Incentives are no longer available at this time.

IV. Additional Sustainability Efforts

In addition to those sustainability efforts surrounding GHG reduction, the Public Works Department has initiated other sustainability efforts related to water conservation and better overall administration of the facilities and infrastructure we plan, design, operate and maintain.

A. Water conservation

Over the last two years our landscape maintenance team has been reducing water use by

incorporating better irrigation systems, replacing landscape materials with native drought tolerant plantings and reducing watering as appropriate. Per the Governors recent Executive Order, we have instituted appropriate watering levels to meet the order. We are looking for rebates and funding opportunities to replace high water use landscaping such as turf with drought tolerant native material. Available funding for these kinds of projects is extremely limited for all of our landscaped areas, but we are researching rebate and incentives for this kind of conversion. We are reviewing our guidelines and standards for new landscape construction to incorporate more drought tolerant native materials.

An example of a positive step in these efforts is the current project to replace a large amount of turf landscaping at the Pittsburg Health Center with drought tolerant planting. This will reduce maintenance costs and water usage significantly for this area. We are looking to employ this strategy at other County building sites as well pending funding opportunities.

Another example of exploring new unique ways to reduce maintenance and watering is the artificial turf we placed on a small median island in Pacheco. This synthetic turf is much more aesthetically pleasing than turf used years ago, it is more durable, looks more natural and doesn't require any maintenance or watering. The cost associated with this type of alternative is relatively high, so its use is somewhat limited at this time.

B. Materials conservation

Materials recycling efforts continue from our Department on many different levels including our Countywide recycling efforts through our Materials Management. We also practice recycling efforts on projects such as cold-in place pavement recycling. This saves natural resources and reduces greenhouse gases because less equipment and trucking is necessary to complete these jobs than a regular paving project. We recycle tree trimmings for use as mulch in our landscape areas, reducing weed growth, reducing water needs and beautifying the planters in the areas it is used.

C. County Asset Management

The Department is reviewing our asset management systems to establish a database of all County assets that can be used by our Department to streamline the way we operate, maintain and manage our facilities. These efforts will allow us to better track all of our assets and determine the most cost effective and efficient way to manage them. These efforts will be beneficial from a sustainability standpoint because we will have better, more reliable information to make strategic decisions on the best way to address maintenance issues, dispose of underutilized assets and determine capital improvement projects that are the highest priority. This is an on-going effort and is already proving to be beneficial by providing more reliable information about County assets.

In conclusion, the Public Works Department has been engaged in the sustainability of the facilities and infrastructure that we operate and maintain. We have been proactive in researching and applying for funding opportunities by engaging the various funding agents available to local government. As part of our strategic planning effort we will need to set obtainable metrics and regularly monitor our progress.

The attached spreadsheet (*Attachment A*) summarizes some of the data referenced above and shows the GHG reductions for the various improvements we have accomplished.

Recommendation(s)/Next Step(s):

ACCEPT the report from the Public Works Department regarding County Facility and Public Infrastructure Sustainability and PROVIDE direction to staff, as needed.

Fiscal Impact (if any):

Information about the annual energy savings from the various sustainability projects Public Works has implemented is included in the report.

Attachments							
Attachment A							



Julia R. Bueren, Director

Deputy Directors Brian M. Balbas Stephen Kowalewski Stephen Silveira Joe Yee

Memo

June 15, 2015

TO: Lara DeLaney, Senior Deputy County Administrator

FROM: Andy Green, Energy Program Manager

SUBJECT: County Facility Sustainability – Attachment to Brian Balbas' Memo

dated 6/11/2015

County Buildings (Energy Conservation, Greenhouse Gas Reduction)

Building Efficiency Efforts (2005-2015)

Туре	Project Costs		One-Time Incentives		Total Net Project Costs		Annual Energy Savings		Annual GHG Reduction (lbs. CO2)	Average Overall Payback (yrs.)
HVAC Projects	\$	3,684,435	\$	476,140	\$	3,208,295	\$	778,578	2,601,768	4.1
Lighting Improvements	\$	1,405,489	\$	308,053	\$	1,097,436	\$	370,775	1,326,845	3.0
On-site Cogeneration	\$	3,651,496	\$	433,230	\$	3,218,266	\$	350,124	4,737,247	9.2
Rate Auditing	\$	-	\$	-	\$	-	\$	260,000	-	-
Professional Services & Management	\$	1,506,100	\$	310,000	\$	1,196,100	\$	-	-	-
ENERGY EFFICIENCY PROJECT TOTALS	\$	10,247,520	\$	1,527,423	\$	8,720,097	\$	1,759,477	8,665,861	5.0

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Renewable Energy Projects (2005-2015)

Solar PV Projects	Ca	apital Costs	Funding By Others	Ele	Annual ectricity Cost Savings	Annual GHG Reduction (lbs. CO2)
MSP Power Purchase Agreement (12 Sites)	\$	15,200,000	\$ 15,200,000	\$	195,000	1,424,000
Fire Station #78	\$	108,800	\$ 107,675	\$	5,570	15,949
151 Linus Pauling	\$	1,155,000	\$ 1,105,000	\$	64,525	184,773
RREP (6 Sites)	\$	6,000,000	\$ 1,100,000	\$	402,732	1,153,255
SOLAR PV TOTALS	\$	22,463,800	\$ 17,512,675	\$	667,827	2,777,977

c: J. Bueren, Director

B. Balbas, Deputy Director



Contra Costa County Board of Supervisors

Subcommittee Report

AD HOC COMMITTEE ON SUSTAINABILITY

Meeting Date: 06/22/2015

Subject: Energy Efficiency Programs and Services of the Department of

Conservation & Development

Submitted For: Supervisors John Gioia and Federal D. Glover,

Department: County Administrator

Referral No.:

Referral Name: Energy Efficiency Programs and Services of DCD

Presenter: Jason Crapo Contact: Jason Crapo, (925) 674-7722

Referral History:

Supervisor Gioia requested that information related to the County's current energy efficiency programs and services be provided to the Committee.

Referral Update:

The Department of Conservation and Development (DCD) operates several programs that provide energy efficiency services to the public. These programs include the Weatherization Program, the Bay Area Regional Energy Network (BayREN) and East Bay Energy Watch (EBEW). DCD also enforces sections of the California Building Standards Code that promote energy efficiency: the Energy Code and the Green Building Standards Code.

Weatherization Program

The Department of Conservation and Development has operated the County Weatherization Program for over 25 years. The Weatherization Program provides free home energy efficiency improvements to low-income residents throughout the County. Weatherization Program services focus on measures that seal a residence from outside air intrusion, resulting in reduced energy consumption, reduced Greenhouse Gas Emissions, and improved indoor air quality.

Measures that may be performed for a residence include weather stripping, window repair or replacement, door repair or replacement, caulking exterior, installation of mechanical ventilation, ceiling fans, filter replacement in heating/cooling appliances, duct sealing or replacement, kitchen exhaust repair or replacement and other repairs to stop air infiltration and improve indoor air quality. Additional repairs may be made on a case by case basis.

Other energy savings measures that target Greenhouse Gas Emissions include refrigerator repair or replacement, LED light bulbs, LED nightlights, occupancy sensors, thermostatic shower valves, and installation of Solar Water Heaters.

The Weatherization work is performed by County staff or referred to licensed contractors that have been approved by the County.

Weatherization services also address health and safety issues such as testing all the gas appliances in the residence for carbon monoxide levels. The program also repairs or replaces heating appliances, hot water heaters and air conditioners (for clients with medically necessary conditions such as asthma or other serious illness) that have failed. Weatherization also makes sure that the residence meets local code for carbon monoxide detectors and smoke alarms.

The Weatherization Program receives the following funding through the California Department of Community Services and Development:

- U. S. Department of Energy Weatherization Assistance Program (DOE) (Program Year 2014-15 Allocation \$128, 758);
- U. S. Department of Health and Human Services Low-Income Home Energy Assistance Program and Weatherization Assistance Program (LIHEAP) (Program Year 2015-16 Allocation \$1,076,832); and
- California Cap and Trade funds for the Low Income Weatherization Program (LIWP) (First Program Year 2015-16 Allocation \$537,538).

In Program Year 2013-14, the LIHEAP served 251 units and in PY 2014-15 served 218 units. The DOE contract served 33 units in Program Year 2014-15.

The LIWP program is projected to serve 318 single family homes and install 20 Solar Water Heaters in FY 2015-16. All LIWP units served will have funding leveraged with LIHEAP to maximize the range of improvements that can be offered and will serve residents located in disadvantaged communities, as identified by California Communities Environmental Health Screening Tool Version 2.0 (CALENVIROSCREEN 2.0). This is the first year of LIWP funding, and all indicators from the Cap and Trade Auctions suggest that revenues from this funding source will increase in coming years.

Bay Area Regional Energy Network (BayREN)

In July 2012, the County entered into a Memorandum of Understanding (MOU) with the Bay Area Regional Energy Network (BayREN), a collaborative partnership among the nine (9) Bay Area counties (Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma Counties) led by ABAG, which focuses on implementing energy efficiency programs throughout the Bay Area. DCD staff represent the County for BayREN.

On July 9, 2013, the County entered into a subcontract agreement with ABAG, which provided the County CPUC grant funding for providing marketing, education and outreach to support BayREN endeavours.

On November 24, 2014, the CPUC issued a 2015 Decision (D.14-10.046) that approved additional BayREN funding for calendar year 2015. As a result, BayREN allocated a total of \$180,834 to Contra Costa County for calendar year 2015 to cover its costs to continue promoting the following four (4) existing BayREN subprograms that were previously funded under the 2013-2014 subcontract agreement with ABAG:

1. Single-Family Housing,

- 2. Multi-Family Housing,
- 3. Building Codes and Standards, and
- 4. Energy Efficiency Financing.

Both the Single-Family and Multi-Family subprograms offer free technical services and financial incentives (rebates) to property owners who make energy efficiency improvements to existing residential buildings. Since 2013, 432 Home Upgrade & Advanced Home Upgrade projects have been completed in Contra Costa for the Single Family program. These 432 projects have provided \$642,906 dollars in rebates to property owners, accounting for 27% of the total rebates distributed throughout the Bay Area. The Multifamily program has upgraded over 1,543 units in Contra Costa through 2014 and provided \$1,157,250 in rebates to property owners. This accounts for almost 19% of the total rebates provided through the Multi-family program covering the nine-county region. Data for 2015 is currently being collected and analyzed.

The Codes and Standards subprogram offers various resources (including training) to support local government officials with code compliance and enforcement. Other efforts, including educational forums, are held throughout the Bay Area, while other programs, such as Assistive Regional Plan Check, are under development. The Energy Efficiency Financing subprogram focuses on marketing various financing options to diverse commercial and residential consumer markets throughout the Bay Area.

The County's subcontract agreement with ABAG allows the County to continue to access CPUC grant funds awarded to ABAG for the purpose of promoting BayREN subprograms offered in Contra Costa County. The cost of rebates is funded separately by CPUC.

East Bay Energy Watch (EBEW)

East Bay Energy Watch (EBEW) is a collaboration between Pacific Gas and Electric Company, local governments, non-profit and for-profit energy service providers in the East Bay. EBEW conducts local marketing of PG&E's energy efficiency services, and provides energy efficiency solutions for residents and businesses in communities throughout Alameda and Contra Costa Counties. Since 2006, thousands of businesses and over 20,000 east bay homes have participated in the program to eliminate the unnecessary use of energy and improve the efficiency and quality of their home and work environments. DCD has represented Contra Costa County on the EBEW steering committee since 2012.

California Building Standards Code

The California Building Standards Code (CBC) is State law that establishes standards for construction in California. DCD is responsible for enforcing the CBC for most construction on private property within the unincorporated area of the County, and within six cities where DCD provides building inspection services on a contract basis. Enforcement of the CBC occurs through the County's issuance of building permits.

Two of the eleven volumes of the CBC have a strong focus on energy efficiency. These are the Energy Code and the Green Building Standards Code.

The CBC is typically updated on a three-year cycle. The current version is the 2013 CBC, which became effective statewide on January 1, 2014.

The 2013 Energy Code contains requirements that represent a 25% increase in energy efficiency compared to the prior version of the Energy Code. The energy code contains energy efficiency requirements related to windows, roofing materials, insulation, lighting, heating, air conditioning, and other building components for both residential and commercial construction.

The Green Building Standards Code, also known as CalGreen, was first established in 2010 and is designed to promote more environmentally sustainable construction by requiring energy and water conserving practices and encouraging the use of renewable, recyclable and recycled materials in the building process. The 2013 Green Building Standards Code includes additional measures beyond the 2010 Code to promote water-efficient plumbing fixtures and landscaping practices. Recent amendments to CalGreen that become effective July 1, 2015, require the installation of electrical infrastructure to support electric vehicle charging stations in new residential and commercial construction.

Recommendation(s)/Next Step(s):

ACCEPT the report on the Department of Conservation & Development's energy efficiency programs and services, and PROVIDE direction to staff as needed.

Attachments

No file(s) attached.