AD HOC COMMITTEE ON SUSTAINABILITY

Agenda

May 11, 2015
11:00 A.M.
651 Pine Street, Room 108, 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 March 23, 2015 meeting of the Ad Hoc Sustainability Committee.**

4. **ACCEPT the report on the status of the County Climate Action Plan and PROVIDE direction, as needed.**

5. **ACCEPT the report on 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.**

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

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

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 prior to the published meeting time.

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:	05/11/2015
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 March 23, 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 March 23, 2015 meeting.

Attachments

Draft Record of Action

D R A F T

AD HOC COMMITTEE ON SUSTAINABILITY

March 23, 2015
11:00 A.M.
651 Pine Street, Room 101, Martinez

Agenda

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

Present: John Gioia, Supervisor, District I

Absent: Federal D. Glover, Supervisor, District V

Staff Present: Lara DeLaney, Sr. Deputy County Administrator
Jason Crapo, Deputy Director, Department of Conservation & Development
John Kopchik, Director, Department of Conservation & Development
Kara Douglas, Housing Manager, DCD
Joe Yee, Public Works
William Nelson, Principal Planner, DCD
Ed Diokno, Senior District Representative, District V

Attendees: Supervisor Dave Pine

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).

   No public comment was given.

3. REVIEW the programs identified in the report and DIRECT staff to provide additional information at a future meeting.

   The Committee directed that a County staff lead is to be identified for each of the GGRF programs to ensure that funding opportunities that become available to the County are identified and pursued.

4. ACCEPT the report on the status of the County Climate Action Plan;
   DIRECT DCD staff to convene the Interdepartmental Working Group; and
   PROVIDE direction to staff as appropriate.

The Committee accepted the report and provided direction to staff regarding the possibility of workshops and the schedule for the Plan development.

5. Based on the experience of neighboring cities and counties, staff believes Contra Costa County would benefit from a designated County Sustainability Coordinator, with responsibilities as described above. DCD recommends the Ad Hoc Committee on Sustainability direct DCD to prepare a Board Order seeking the Board's authorization to establish this new position and the associated funding to be included in DCD's budget for fiscal year 2015-16.

   The Committee requested that the Board Order to establish the position be provided to the Committee in advance, for input.

6. The next meeting is not currently scheduled. This meeting is Ad Hoc and does not have a set meeting schedule.

7. Adjourn

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"Item II"

↑ Clockwise, top left: Stephen Stolte, Eddie Ashley, Kyle Ramey, Joe La Mariana, Elizabeth (Ellie) Dallman, Krista Kuehnhackl, Susan Wright, Erin McNichol, Kim Springer, Kirsten Pringle, Jacki Falconio, Lori Pastorelli, Ashley Quintana, Jim Eggemeyer (Director of OOS), Gordon Tong, Andrea Chow. Not shown: Gerald Schwartz, Ellen Barton

Office of Sustainability

OUR MISSION

The San Mateo County Office of Sustainability is committed to exploring policies and programs that promote and lead the way toward a sustainable future. We put our mission into action by providing the resources to foster and protect the environment, health, and safety of our community on an ongoing basis.

The new Office of Sustainability (OOS), under the County Manager's Office, oversees, coordinates, and centralizes County sustainability initiatives. The four core work functions and responsibilities are storm water management, sustainability projects, the Commute Alternatives Program, and Climate Plan Implementation. New projects include community choice aggregation, sea level rise/climate change adaptation, ground water management collaboration with SMC Environmental Health, environmental purchasing policy, and battery recycling/purchasing program. OOS outreach and education will extend to employees, residents, schools, and community stakeholders.

RecycleWorks will be joining efforts and operating within OOS. RecycleWorks creates, delivers, and promotes recycling, composting, waste prevention, procurement, sustainability and green building programs and outreach at County facilities and for residents, employees, businesses and visitors in the unincorporated area of the county. Throughout San Mateo County, and when appropriate, RecycleWorks encourages, facilitates, and achieves resource conservation and the practice of responsible environmental stewardship–maintaining compliance with the California Integrated Waste Management Act (AB 939).

Joining OOS, the San Mateo County Commute Alternatives Program (CAP) provides cash subsidies to county employees who commute to work by public transit, vanpool, carpool, bike or by walking. We also provide resources for our Emergency Ride Home program, carpool-only parking facilities, and bike lockers. Over the past 20 years, CAP has helped employees increase their use of high-occupancy commute modes, curbed millions of pounds of pollutants from being emitted into the air, and has reduced millions of vehicle miles of travel on Bay Area roads.

PROGRAMS

The Office of Sustainability is exploring the feasibility of a Community Choice Aggregation (CCA) program for San Mateo County. In a CCA, a local government or group of local governments pool (aggregate) the electricity demands of their community and purchase electricity on their behalf. CCAs in California offer their customers electricity purchased from a higher percentage of renewable resources. Thus, CCAs help reduce greenhouse gas emissions and support the growth of renewable energy projects in their community and throughout California. With the approval of the County Board of Supervisors, the Office of Sustainability is currently reaching out to the County's incorporated cities and other stakeholder organizations to discuss CCA as a potential option for San Mateo County.

In collaboration with five other County departments, the OOS ensures that San Mateo County is in compliance with the provisions of it regional storm water permit, and coordinates with these departments to ensure all permit provisions are being carried out and is responsible for completing a report on the storm water program that is submitted to the Regional Water Quality Control Board every year.

Bay Area Regional Energy Network (BayREN) is offering rebates and assistance to both homeowners and multi-family property owners for energy-efficient home improvements. More info can be found at **www.bayren.org**

...Continued on next page

In effort to address illegal dumping in San Mateo County, the Office of Sustainability is launching a mobile app that empowers residents to report illegal dumping in the unincorporated County. County staff is able to respond directly to resident reports and address illegal dumping issues quickly and efficiently. This app was launched in February 2015.

Within the OOS, the Active Transportation Coordinator administers the Transportation Development Act Article 3 grant program for the City/ County Association of Governments, and staffs the County-wide Bicycle and Pedestrian Advisory Committee. Active Transportation is human-powered transportation: walking, skateboarding, walking to the bus or train, cycling, using a wheelchair, even roller-blading. The goal of the Active Transportation position is to make it easy for everyone to make some of their daily short trips by walking or riding transit or bicycles.

RECYCLEWORKS PROGRAMS INCLUDE:

Solid Waste Planning. The *Countywide Integrated Waste Management Plan (CIWMP)* for San Mateo County outlines the strategy for the cities and the County to achieve compliance with AB 939, and addresses waste management conditions within the county. It also provides an overview of the actions and programs that will be undertaken to achieve diversion requirements and to maintain a minimum of 15 years' solid waste disposal capacity (within or outside of the county) for the jurisdictions.

The RecycleWorks Volunteer Academy (RVA) is designed to train ambassadors within our County to outreach within their communities and to help cities and the County maintain the ongoing demands of AB 939 and AB 341. The RVA program will provide training to passionate residents and business owners, park and recreation leaders, or building managers with an understanding that attendees will volunteer time back to their communities in San Mateo County by educating other citizens at events or their businesses, and/or setting up diversion programs at multi-family dwellings and commercial properties.

The Public Education and Outreach Program is one of the primary programs of RecycleWorks. Its purpose is to educate, promote, and collaborate with other agencies on concepts such as Reuse, Source Reduction, Recycling, the use of Recycled Content materials, and Resource Conservation. It promotes these concepts to residents, businesses, schools and visitors to the unincorporated areas as well as countywide. This program was created to assist the County and the cities in meeting and maintaining the targets and goals as stated in the CIWMP, AB 939, and the cities' AR.

The Green Building Program consists of efforts only related to Green Building and solid waste diversion; primarily providing outreach materials associated with deconstruction (as opposed to demolition), and using recycled content building materials and fixtures.

County Facilities Waste Reduction and Recycling Program leverages RecycleWorks staff to reduce disposal at all County facilities. Staff provides audits, training and materials (such as recycling containers) to either improve existing or establish new diversion programs. The goal is for all county facilities to leverage available diversion programs at their sites, as feasible, and to maximize the effectiveness of the site staff efforts. The desired outcome is to reduce cost to County departments as a result of reduced disposal and meet to the goals of AB 939 and AB 341.

Green Business Program activities include but are not limited to: Certifying small-to medium-sized businesses in San Mateo County who meet a standard for green business, providing consumers with a recognized brand for businesses that are "green", and supporting economic development in San Mateo County by helping businesses compete against other regionally certified green businesses.

The San Mateo County Energy Watch Program (SMCEW) is a Local Government Partnership between C/CAG and Pacific Gas and Electric Company (PG&E). Staffed by RecycleWorks for both management and administration of the program, this is accomplished through a contractual agreement between C/CAG and the County Department of Public Works. SMCEW's goals are to reduce millions of kilowatt hours of electricity use among municipalities, nonprofits, and small businesses, special districts. The program offers information and project support to municipalities (including our County facilities) on available programs and maximizes rebates for energy efficiency projects.

C/CAG Resource Management and Climate Protection Committee (RMCP) scope is a contractual agreement between C/CAG and the County for staff support to C/CAG for the following: Develop staff reports and documentation related to C/CAG as the Solid Waste Local Task Force, and provide staff support and project management for the RMCP committee. The main functions of the committee is overseeing the San Mateo County Energy Watch program and updating the San Mateo County Energy Strategy document.

C/CAG Regionally Integrated Climate Action Planning Suite (RICAPS) committee is a contractual agreement between C/CAG and the County to assist the 20 cities in the County to complete and implement their Climate Action plans. Each city in San Mateo County has the opportunity to develop its own Climate Action Plan (CAP) using tools developed by C/CAG. This project was funded by grants from the Bay Area Air Quality Management District (BAAQMD) and Pacific Gas and Electric Company (PG&E). Climate Action Plans developed from these tools will meet BAAQMD's California Environmental Quality Act (CEQA) guidelines for a Qualified Greenhouse Gas Reduction Strategy.

NORTH FAIR OAKS FORWARD

Outreach Coordinators for North Fair Oaks Forward (NFO Forward), **Ellie Dallman** and **Ashley Quintana** are dedicated to getting people involved in future developments within North Fair Oaks. A San Mateo County initiative, Ellie and Ashley partner with community organizations, local youth, and residents, to strive to ensure that changes made within the community reflect the needs and desires of the people who live, work and play in North Fair Oaks. The North Fair Oaks Community Plan guides the work of NFO Forward and envisions North Fair Oaks as a complete and vital community that is safe, accessible and healthy for all. NFO Forward projects include Friendship Park, Middlefield Road Redesign, the Fair Oaks Health Center, and the reduction of illegal dumping. For more information, visit **www.nfoforward.org**

To find out more, go to https://green.smcgov.org

Contra Costa County Board of Supervisors

Subcommittee Report

AD HOC COMMITTEE ON SUSTAINABILITY

Meeting Date:	05/11/2015
Subject:	Update on Status of County Climate Action Plan
Department:	Conservation & Development
Referral No.:	2015-02
Referral Name:	Update on Status of County Climate Action Plan
Presenter:	Will Nelson, DCD Staff **Contact:** Will Nelson, (925) 674-7791

Referral History:

In April 2012 the Board of Supervisors directed the Department of Conservation and Development (DCD) to prepare a community-wide Climate Action Plan (CAP) to address climate change impacts by reducing greenhouse gas (GHG) emissions. In response to the Board's direction, DCD retained Pacific Municipal Consultants (PMC), conducted public outreach, and worked with other County departments to prepare a CAP that would serve as the County's roadmap for reducing GHG emissions within the unincorporated areas. In December 2012 DCD released the Draft CAP for public review, but the document was never completed. In January 2015 DCD reengaged PMC with the intention of completing the CAP in 2015.

Referral Update:

At the first meeting of the Sustainability Committee on March 23, 2015, DCD staff updated the Committee on its renewed effort to complete the CAP. The following has occurred since the March meeting:

- DCD finalized its contract renewal with PMC to complete the CAP. PMC is currently working on the updated County GHG inventory. The inventory will provide the starting point for identifying the reduction measures necessary to reach Assembly Bill 32's goal of reducing GHG emissions to 1990 levels by 2020;

- On April 28 DCD hosted the first meeting of the Interdepartmental Working Group consisting of County departments anticipated to be responsible for implementing the CAP's GHG reduction measures. The meeting was attended by staff of DCD, the County Administrator's Office, Public Works Department, Agriculture Department, Health Services Department, and PMC. The meeting included review of the statutes related to GHG reduction efforts in California, discussion of the continued applicability of the GHG reduction measures identified in the 2012 Draft CAP, and discussion of some of the County's current GHG reduction efforts.

The next meeting of the Working Group is scheduled for May 28. The primary focus of that

meeting will be identifying new GHG reduction measures to be incorporated into the CAP.

For additional information:

http://www.contracosta.ca.gov/4554/Climate-Action-Plan (This is DCD's CAP project page)

http://ca-contracostacounty.civicplus.com/DocumentCenter/Home/View/9013 (This is the draft CAP only)

Recommendation(s)/Next Step(s):

ACCEPT the report on the status of the CAP; PROVIDE direction to staff as necessary.

Fiscal Impact (if any):

The renewed contract with PMC is for an amount not to exceed $54,995.00, which is being funded out of DCD's current year budget.

Attachments

No file(s) attached.

Contra Costa County Board of Supervisors

Subcommittee Report

AD HOC COMMITTEE ON SUSTAINABILITY

Meeting Date:	05/11/2015
Subject:	Electric Vehicle Service Equipment ("EVSE") Infrastructure Requirements
Department:	Conservation & Development
Referral No.:	2015-10
Referral Name:	Electric Vehicle Service Equipment ("EVSE") Infrastructure Requirements
Presenter:	Jamar Stamps **Contact:** Jamar Stamps, (925) 674-7832

Referral History:

The referral regarding this item on electric vehicle infrastructure requirements came from the Board of Supervisors on 3/31/15 (item C.132).

Item C.132: http://10.10.11.216/frs/print/ag_memo_pdf_popup.cfm?seq=21028&rev_num=0&mode=pdf

Referral Update:

Background

In February 2013, the California Public Utilities Commission ("CPUC") adopted "zero-net-energy" goals for new construction in California[1]. These policy goals intend to achieve zero-net-energy building standards by 2020 for low-rise residential buildings and by 2030 for commercial buildings. A "Zero-Net-Energy Code Building" is one where the net amount of energy produced by on-site renewable energy resources is equal to the value of the energy consumed annually by the building. State legislation would follow aimed at aggressively implementing these energy policies.

On September 28, 2013 the Governor signed into law Assembly Bill ("AB") 1092 (Levine), which required the California Building Standards Commission ("CBSC") to adopt, approve, codify, and publish mandatory building standards for the installation of future electric vehicle charging infrastructure for parking spaces in residential and nonresidential development. In order to ensure success in meeting the zero-net-energy goals and the intent of legislation like AB 1092, the CBSC and Department of Housing and Community Development ("HCD") have developed building standards for electric vehicle service equipment ("EVSE"). These standards will be incorporated into the California Building Standards Code and will become effective statewide in 2015. All construction projects applying for building permits in Contra Costa County after July 1, 2015 will be required to comply with these standards.

Discussion

The CBSC is in their 2016 Triennial Code Adoption Cycle. Various State agencies have submitted proposed code changes for the CBSC to consider including in the 2016 Building Standards Code. Various sections of the California Building Standards Code are being updated to implement policies for achieving the zero-net-energy goals for new construction (e.g. building code, residential building code, electrical code, mechanical code, plumbing code, energy code, fire code, green building standards code). EVSE charging requirements are just a portion of updates to the Building Standards Code to take effect either July 1, 2015 (Statewide effective date of the 2013 California Code Supplements) or January 1, 2017 (Statewide Effective Date of the 2016 California Building Standards Code).

Therefore, it's important to note that the updates to the Building Standards Code will mandate additional building and construction requirements that would ultimately impact the total cost of residential and non-residential development. With that in mind, the CBSC worked collaboratively with State agencies (HCD, Division of the State Architect, Office of Statewide Health Planning and Development) to thoughtfully develop updates to the California Green Building Standards Code. The EVSE requirements have been developed to be reasonably effective in achieving the State's zero-net-energy goals, while at the same time not imposing onerous and cost prohibitive mandates that would create challenges for the building industry and in turn the consumer market.

Effective July 1, 2015[1], newly constructed one- and two-family residences will be required to provide a dedicated raceway or conduit in their design and construction to accommodate a dedicated 208/240-volt branch circuit for EV charging. Multi-family and non-residential development will be required to provide the same basic EV charging infrastructure based on a percentage of the total required parking. A summary of the Green Building Standards Code's statewide mandatory, Tier 1, and Tier 2 EVSE standards are shown in the table in "**Exhibit A**."

The mandatory standards ("**Exhibit B**") will be automatically adopted statewide on July 1, 2015. However, the HCD and CBSC also provided two additional tiers of compliance for EVSE, which gives a jurisdiction the option of adopting slightly more stringent ordinance standards ("**Exhibits C and D**").

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[1] The HCD submitted the proposed code amendments during the "Intervening Code Adoption Cycle." Therefore, the proposed code amendments will take effect July 1, 2015.

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[1] *Integrated Energy Policy Report* – California Energy Commission (2013)

Recommendation(s)/Next Step(s):

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.

Fiscal Impact (if any):

The mandatory standards will be automatically adopted statewide on July 1, 2015. However, the two additional tiers of compliance for EVSE, which gives a jurisdiction the option of adopting slightly more stringent ordinance standards, would require an amendment to the County Ordinance Building Code and would necessitate additional costs for staff and builders.

Attachments

Exhibits A, B, C, D

Exhibit A

<table>
<tr><th colspan="7">2013 Title 24, Part 11, California Green Building Code Summary Table</th></tr>
<tr><th></th><th colspan="2">MANDATORY MEASURES
(effective July 1, 2015)</th><th colspan="2">VOLUNTARY MEASURES
TIER 1</th><th colspan="2">VOLUNTARY MEASURES
TIER 2</th></tr>
<tr><td>One-and Two-Family w/attached private garages</td><td colspan="6">For each dwelling unit, install a listed raceway to accommodate a dedicated 208/240-volt branch circuit</td></tr>
<tr><td>Multi-family</td><td colspan="2">17+ multifamily units, 3 percent of total parking spaces (minimum 1 space) shall be capable of supporting future electric vehicle charging stations (EVCS)</td><td colspan="4">17+ multifamily units, 5 percent of total parking spaces (minimum 1 space) shall be capable of supporting future electric vehicle charging stations (EVCS)</td></tr>
<tr><td rowspan="9">Non-Residential</td><td colspan="6">Construction shall facilitate future installation of electric vehicle supply equipment (EVSE)</td></tr>
<tr><td colspan="2">MANDATORY</td><td colspan="2">TIER 1</td><td colspan="2">TIER 2</td></tr>
<tr><td>TOTAL NUMBER OF PARKING SPACES</td><td>NUMBER OF REQUIRED EV CHARGING SPACES</td><td>TOTAL NUMBER OF PARKING SPACES</td><td>TIER 1 NUMBER OF REQUIRED EV CHARGING SPACES</td><td>TOTAL NUMBER OF PARKING SPACES</td><td>TIER 2 NUMBER OF REQUIRED EV CHARGING SPACES</td></tr>
<tr><td>0-50</td><td>0</td><td>0-50</td><td>1</td><td>0-50</td><td>2</td></tr>
<tr><td>51-75</td><td>1</td><td>51-75</td><td>2</td><td>51-75</td><td>3</td></tr>
<tr><td>76-100</td><td>2</td><td>76-100</td><td>3</td><td>76-100</td><td>4</td></tr>
<tr><td>101-200</td><td>3</td><td>101-200</td><td>5</td><td>101-200</td><td>7</td></tr>
<tr><td>201+</td><td>3%*</td><td>201+</td><td>4%*</td><td>201+</td><td>6%*</td></tr>
<tr><td colspan="6">*Calculation for spaces shall be rounded up to the nearest whole number.</td></tr>
</table>

EXHIBIT B
CALIFORNIA GREEN BUILDING STANDARDS CODE
ELECTRIC VEHICLE MANDATORY MEASURES

4.106.4. Electric vehicle (EV) charging for new construction. New construction shall comply with Sections 4.106.4.1 and 4.106.4.2 to facilitate future installation and use of EV chargers. Electric vehicle supply equipment (EVSE) shall be installed in accordance with the California Electrical Code, Article 625.

Exceptions: On a case-by-case basis, where the local enforcing agency has determined EV charging and infrastructure are not feasible based upon one or more of the following conditions:

1. Where there is no commercial power supply.

2. Where there is evidence substantiating that meeting the requirements will alter the local utility infrastructure design requirements on the utility side of the meter so as to increase the utility side cost to the homeowner or the developer by more than $400.00 per dwelling unit.

4.106.4.1 New one- and two-family dwellings and townhouses with attached private garages. For each dwelling unit, install a listed raceway to accommodate a dedicated 208/240-volt branch circuit. The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter). The raceway shall originate at the main service or subpanel and shall terminate into a listed cabinet, box or other enclosure in close proximity to the proposed location of an EV charger. Raceways are required to be continuous at enclosed, inaccessible or concealed areas and spaces. The service panel and/or subpanel shall provide capacity to install a 40-ampere minimum dedicated branch circuit and space(s) reserved to permit installation of a branch circuit overcurrent protective device.

4.106.4.1.1 Identification. The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging as “EV CAPABLE”. The raceway termination location shall be permanently and visibly marked as “EV CAPABLE”.

4.106.4.2 New multifamily dwellings. Where 17 or more multifamily dwelling units are constructed on a building site, 3 percent of the total number of parking spaces provided for all types of parking facilities, but in no case less than one, shall be electric vehicle charging stations (EVCS) capable of supporting future EVSE and shall be identified on construction documents. Calculations for the number of EVCS shall be rounded up to the nearest whole number.

Note: Construction documents are intended to demonstrate the project’s capability and capacity for facilitating future EV charging. There is no requirement for EVCS to be constructed or available until EV chargers are installed for use.

4.106.4.2.1 Electric vehicle charging station (EVCS) locations. Construction documents shall indicate the location of proposed EVCS. At least one EVCS shall be located in common use areas and available for use by all residents.

When EV chargers are installed, EVCS required by Section 4.106.2.2, Item 3, shall comply with at least one of the following options:

1. The EVCS shall be located adjacent to an accessible parking space meeting the requirements

of the California Building Code, Chapter 11A, to allow use of the EV charger from the accessible parking space.

2. The EVCS shall be located on an accessible route, as defined in the California Building Code, Chapter 2, to the building.

4.106.4.2.2 Electric vehicle charging station (EVCS) dimensions and slope. The EVCS shall be designed to comply with the following:

1. The minimum length of each EVCS shall be 18 feet (5486 mm).

2. The minimum width of each EVCS shall be 9 feet (2743 mm).

3. One in every 25 EVCS, but not less than one EVCS, shall also have an 8-foot (2438 mm) wide minimum aisle. A 5-foot (1524 mm) wide minimum aisle shall be permitted provided the minimum width of the EVCS is 12 feet (3658 mm).

    a. Surface slope for this EVCS and the aisle shall not exceed 1 unit vertical in 48 units horizontal (2.083 percent slope) in any direction.

4.106.4.2.3 Single EVCS required. Install a listed raceway capable of accommodating a 208/240-volt dedicated branch circuit. The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter). The raceway shall originate at the main service or subpanel and shall terminate into a listed cabinet, box or enclosure in close proximity to the proposed location of the EVCS. Construction documents shall identify the raceway termination point. The service panel and/or subpanel shall provide capacity to install a 40-ampere minimum dedicated branch circuit and space(s) reserved to permit installation of a branch circuit overcurrent protective device.

4.106.4.2.4 Multiple EVCS required. Construction documents shall indicate the raceway termination point and proposed location of future EVCS and EV chargers. Construction documents shall also provide information on amperage of future EVSE, raceway method(s), wiring schematics and electrical load calculations to verify that the electrical panel service capacity and electrical system, including any on-site distribution transformer(s), have sufficient capacity to simultaneously charge all EVs at all required EVCS at the full rated amperage of the EVSE. Plan design shall be based upon a 40-ampere minimum branch circuit. Raceways and related components that are planned to be installed underground, enclosed, inaccessible or in concealed areas and spaces shall be installed at the time of original construction.

4.106.4.2.5 Identification. The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging purposes as "EV CAPABLE" in accordance with the California Electrical Code.

Notes:

1. The California Department of Transportation adopts and publishes the "California Manual on Uniform Traffic Control Devices (California MUTCD)" to provide uniform standards and specifications for all official traffic control devices in California. Zero Emission Vehicle

Signs and Pavement Markings can be found in the New Policies & Directives Number 13-01. Website: www.dot.ca.gov/hq/traffops/signtech/signdel/policy.htm.

2. See Vehicle Code Section 22511 for EV charging space signage in off-street parking facilities and for use of EV charging spaces.

3. The Governor's Office of Planning and Research (OPR) published a "Zero-Emission Vehicle Community Readiness Guidebook" which provides helpful information for local governments, residents and businesses. Website: http://opr.ca.gov/docs/ZEV_Guidebook.pdf.

4. The Governor's Office of Planning and Research (OPR) has developed draft guidelines, "Plug-In Electric Vehicles: Universal Charging Access Guidelines and Best Practices", addressing physical accessibility standards and design guidelines for EVs. Website: http://opr.ca.gov/docs/PEV_Access_Guidelines.pdf.

NONRESIDENTIAL MANDATORY MEASURES

5.106.5.3 Electric vehicle (EV) charging. [N] Construction shall comply with Section 5.106.5.3.1 or Section 5.106.5.3.2 to facilitate future installation of electric vehicle supply equipment (EVSE). When EVSE(s) is/are installed, it shall be in accordance with the California Building Code, the California Electrical Code and as follows:

5.106.5.3.1 Single charging space requirements. [N] When only a single charging space is required per Table 5.106.5.3.3, a raceway is required to be installed at the time of construction and shall be installed in accordance with the California Electrical Code. Construction plans and specifications shall include, but are not limited to, the following:

1. The type and location of the EVSE.

2. A listed raceway capable of accommodating a 208/240-volt dedicated branch circuit.

3. The raceway shall not be less than trade size 1."

4. The raceway shall originate at a service panel or a subpanel serving the area, and shall terminate in close proximity to the proposed location of the charging equipment and into a listed suitable cabinet, box, enclosure or equivalent.

5. The service panel or subpanel shall have sufficient capacity to accommodate a minimum 40-ampere dedicated branch circuit for the future installation of the EVSE.

5.106.5.3.2 Multiple charging space requirements. [N] When multiple charging spaces are required per Table 5.106.5.3.3 raceway(s) is/are required to be installed at the time of construction and shall be installed in accordance with the California Electrical Code. Construction plans and specifications shall include, but are not limited to, the following:

1. The type and location of the EVSE.

2. The raceway(s) shall originate at a service panel or a subpanel(s) serving the area, and shall terminate in close proximity to the proposed location of the charging equipment and into listed suitable cabinet(s), box(es), enclosure(s) or equivalent.

3. Plan design shall be based upon 40-ampere minimum branch circuits.

4. Electrical calculations shall substantiate the design of the electrical system, to include the rating of equipment and any on-site distribution transformers and have sufficient capacity to simultaneously charge all required EVs at its full rated amperage.

5. The service panel or subpanel(s) shall have sufficient capacity to accommodate the required number of dedicated branch circuit(s) for the future installation of the EVSE.

5.106.5.3.3 EV charging space calculation. [N] Table 5.106.5.3.3 shall be used to determine if single or multiple charging space requirements apply for the future installation of EVSE.

Exceptions: On a case-by-case basis where the local enforcing agency has determined EV charging and infrastructure is not feasible based upon one or more of the following conditions:

1. Where there is insufficient electrical supply.

2. Where there is evidence suitable to the local enforcing agency substantiating that additional local utility infrastructure design requirements, directly related to the implementation of Section 5.106.5.3, may adversely impact the construction cost of the project.

TABLE 5.106.5.3.3

TOTAL NUMBER OF PARKING SPACES	NUMBER OF REQUIRED EV CHARGING SPACES
0-50	0
51-75	1
76-100	2
101-200	3
201 and over	3%*

*Calculation for spaces shall be rounded up to the nearest whole number

5.106.5.3.4 [N] Identification. The service panel or subpanel(s) circuit directory shall identify the reserved overcurrent protective device space(s) for future EV charging as “EV CAPABLE”. The raceway termination location shall be permanently and visibly marked as “EV CAPABLE.”

5.106.5.3.5 [N] Future charging spaces qualify as designated parking as described in Section 5.106.5.2 Designated parking.

Notes:

1. The California Department of Transportation adopts and publishes the California Manual on Uniform Traffic Control Devices (California MUTCD) to provide uniform standards and specifications for all official traffic control devices in California. Zero Emission Vehicle Signs and Pavement Markings can be found in the New Policies & Directives number 13-01. www.dot.ca.gov/hq/traffops/policy/13-01.pdf.

2. See Vehicle Code Section 22511 for EV charging spaces signage in off-street parking facilities and for use of EV charging spaces.

3. The Governor's Office of Planning and Research published a Zero-Emission Vehicle Community Readiness Guidebook which provides helpful information for local governments, residents and businesses. www.opr.ca.gov/docs/ZEV_Guidebook.pdf.

EXHIBIT C
CALIFORNIA GREEN BUILDING STANDARDS CODE
ELECTRIC VEHICLE
RESIDENTIAL TIER 1 AND 2

A4.106.8 Electric vehicle (EV) charging for new construction. New construction shall comply with Sections A4.106.8.1 and A4.106.8.2 to facilitate future installation and use of electric vehicle chargers. Electric vehicle supply equipment (EVSE) shall be installed in accordance with the California Electrical Code, Article 625.

A4.106.8.1 New one- and two-family dwellings and townhouses with attached private garages.

Tier 1 and Tier 2. For each dwelling unit, a dedicated 208/240-volt branch circuit shall be installed in the raceway required by Section 4.106.4.1. The branch circuit and associated overcurrent protective device shall be rated at 40 amperes minimum. Other electrical components, including a receptacle or blank cover, related to this section shall be installed in accordance with the California Electrical Code.

A4.106.8.1.1 Identification. The service panel or subpanel circuit directory shall identify the overcurrent protective device designated for future EV charging purposes as "EV READY" in accordance with the California Electrical Code. The receptacle or blank cover shall be identified as "EV READY."

A4.106.8.2 New multifamily dwellings.

Tier 1 and Tier 2. Where 17 or more multifamily dwelling units are constructed on a building site, 5 percent of the total number of parking spaces provided for all types of parking facilities, but in no case less than one, shall be electric vehicle charging stations (EVCS) capable of supporting future EVSE and shall be identified on construction documents. Calculations for the number of EVCS shall be rounded up to the nearest whole number.

See Section 4.106.4.2 for additional requirements related to EVCS for multifamily dwellings.

Notes:

1. The California Department of Transportation adopts and publishes the "California Manual on Uniform Traffic Control Devices (California MUTCD)" to provide uniform standards and specifications for all official traffic control devices in California. Zero Emission Vehicle Signs and Pavement Markings can be found in the New Policies & Directives Number 13-01. Website: www.dot.ca.gov/hq/traffops/signtech/signdel/policy.htm.

2. See Vehicle Code Section 22511 for EV charging space signage in off-street parking facilities and for use of EV charging spaces.

3. The Governor's Office of Planning and Research (OPR) published a "Zero-Emission Vehicle Community Readiness Guidebook" which provides helpful information for local governments, residents and businesses. Website: http://opr.ca.gov/docs/ZEV_Guidebook.pdf.

4. The Governor's Office of Planning and Research (OPR) has developed draft guidelines, "Plug-In Electric Vehicles: Universal Charging Access Guidelines and Best Practices", addressing physical accessibility standards and design guidelines for EVs. Website: http://opr.ca.gov/docs/PEV_Access_Guidelines.pdf.

EXHIBIT D
CALIFORNIA GREEN BUILDING STANDARDS CODE
ELECTRIC VEHICLE
NON-RESIDENTIAL TIER 1 AND 2

A5.106.5.3 Electric vehicle (EV) charging. Construction shall comply with Section A5.106.5.3.1 and A5.106.5.3.2 to facilitate future installation of electric vehicle supply equipment (EVSE). When EVSE(s) is/are installed, it shall be in accordance with the California Building Code Section 406.9, the California Electrical Code and as follows:

A5.106.5.3.1 Tier 1. Table A5.106.5.3.1 shall be used to determine if single or multiple charging space requirements apply for future installation of EVSE. When a single charging space is required per Table A5.106.5.3.1, refer to Section 5.106.5.3.1 for design requirements. When multiple charging spaces are required, refer to Section 5.106.5.3.2 for design requirements.

A5.106.5.3.2 Tier 2. Table A5.106.5.3.2 shall be used to determine the number of multiple charging spaces required for future installation of EVSE. Refer to Section 5.106.5.3.2 for design space requirements.

TABLE A5.106.5.3.1	
TOTAL NUMBER OF PARKING SPACES	**TIER 1 NUMBER OF REQUIRED EV CHARGING SPACES**
0-50	1
51-75	2
76-100	3
101-200	5
201 and over	4%*
*Calculation for spaces shall be rounded up to the nearest whole number	

TABLE 5.106.5.3.2	
TOTAL NUMBER OF PARKING SPACES	**TIER 2 NUMBER OF REQUIRED EV CHARGING SPACES**
0-50	2
51-75	3
76-100	4
101-200	7
201 and over	6%*
*Calculation for spaces shall be rounded up to the nearest whole number	

A5.106.5.3.3 Identification. The service panel or subpanel circuit directory shall identify the reserved overcurrent protective device space(s) for future EV charging as “EV CAPABLE.” The raceway termination location shall be permanently and visibly marked as “EV CAPABLE.”

A5.106.5.3.4 Future charging spaces qualify as designated parking as described in Section A5.106.5.1 Designated parking.

Notes:

1. The California Department of Transportation adopts and publishes the California Manual on Uniform Traffic Control Devices (California MUTCD) to provide uniform standards and specifications for all official traffic control devices in California. Zero Emission Vehicle Signs and Pavement Markings can be found in the New Policies & Directives number 13-01. www.dot.ca.gov/hq/traffops/policy/13-01.pdf.

2. See Vehicle Code Section 22511 EV charging spaces signage in off-street parking facilities and for use of EV charging spaces.

3. The Governor's Office of Planning and Research published a Zero-Emission Vehicle Community Readiness Guidebook which provides helpful information for local governments, residents and businesses. www.opr.ca.gov/docs/ZEV_Guidebook.pdf.

Contra Costa County Board of Supervisors

Subcommittee Report

AD HOC COMMITTEE ON SUSTAINABILITY

Meeting Date:	05/11/2015		
Subject:	Greenhouse Gas Reduction Fund Programs		
Department:	Conservation & Development		
Referral No.:	2015-01		
Referral Name:	Greenhouse Gas Reduction Fund Programs		
Presenter:	Jason Crapo	**Contact:**	Jason Crapo, (925) 674-7722

Referral History:

At the Committee meeting on March 23, 2015, the Department of Conservation and Development (DCD) provided a report on this subject. The Committee requested that DCD identify a County staff person as the primary point of contact for all Greenhouse Gas Reduction Fund (GGRF) programs (listed on Attachment A) where the County may have an opportunity to seek funding.

Referral Update:

Attached to this report is a list of County staff identified as program leads for each GGRF program (Attachment B).

Recommendation(s)/Next Step(s):

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

Fiscal Impact (if any):

Identified GGRF program leads will monitor their assigned GGRF programs for funding opportunities. Should funding opportunities become available under the various GGRF programs, programs leads will develop funding applications.

Attachments

Attachment A
Attachment B

Status of FY2013-14 and FY2014-15 Greenhouse Gas Reduction Fund Appropriations (as of 1-30-2015)

Agency / Program	Appropriations 2013-14 ($M)	Appropriations 2014-15 ($M)	Program Categories Identified by Implementing Agencies	Agency Allocation of Funds by Project ($M)	Expenditure Record	Type of Award Process	Program Guidelines	Solicitation of Proposals	Award of Funding
High Speed Rail (HSRA) Construction of the initial construction segment in the Central Valley and further environmental and design work on the statewide system. The Budget also provides an ongoing commitment that allows for the advancement of the project on multiple segments concurrently, which yields cost savings and creates an opportunity for earlier potential private sector investment.		$59	Planning/Design	$59	Complete	State Implemented	N/A	N/A	N/A
		$191	Right-of-way acquisition and construction of Initial Operating Segment	$191					
Transit and Intercity Rail Capital Program (CalSTA) Competitive grant program for rail and bus transit operators for capital improvements to integrate state and local rail and other transit systems, including those located in disadvantaged communities, and those that provide connectivity to the high-speed rail system.		$25	Connectivity to existing/future rail and transit systems Increase service and reliability of rail and transit Encourage multi-modal transit via integration of transit and rail systems	$25		Competitive	Feb 2015	Feb-Apr 2015	August 2015
Low Carbon Transit Operations Program (Caltrans to local agencies) Support new or expanded bus and rail services, with an emphasis on disadvantaged communities. Expenditures are required to result in an increase in transit ridership and a decrease in GHG emissions.		$25	New/expanded bus or rail services or expanded intermodal transit facilities Service or facility improvements, e.g. equipment, fueling, and maintenance, and operation	$25	Submitted	Formula based list of acceptable projects	Dec 2014	Feb 2015- April 2015	June 2015
Affordable Housing and Sustainable Communities (SGC and member agencies) Implementation of sustainable communities strategies required by SB 375, and to provide similar support to other areas with GHG reduction policies, but not subject to SB 375 requirements. Projects that benefit disadvantaged communities will be given priority. Also, projects will reduce GHG emissions by increasing transit ridership, active transportation (walking/biking), affordable housing near transit stations, preservation of agricultural land, and local planning that promotes infill development.		$130	Transit-oriented development, e.g. affordable housing near transit Transit capital projects Active transportation/complete streets	$125		Competitive	Jan 2015	Jan-Apr 2015	June 2015
			Agricultural land preservation	$5					
Low Carbon Transportation (ARB) Accelerate the transition to low carbon freight and passenger transportation, with a priority for disadvantaged communities. This investment will also support the Administration's goal to deploy 1.5 million zero-emission vehicles in California by 2025. ARB administers existing programs that provide rebates for zero-emission cars and vouchers for hybrid and zero-emission trucks and buses. These expenditures will respond to increasing demand for these incentives, as well as provide incentives for the pre-commercial demonstration of advanced freight technology to move cargo in California, which will benefit communities near freight hubs.	$20	$111	Passenger ZEV rebates	$131	Complete	First-Come First-Served	N/A	Ongoing	Ongoing
	$10	$5	Heavy duty hybrid/ZEV trucks and buses	$15		First-Come First-Served		Ongoing	Ongoing
		$50	Freight demonstration projects	$50		Competitive		Spring 2015	June 2015
		$9	Light Duty Pilot projects in disadvantaged communities (e.g. car sharing, financing.)	$9		Competitive		Spring 2015	June 2015
		$25	Truck and bus pilot projects in disadvantaged communities	$25		Competitive		Spring 2015	June 2015

Status of FY2013-14 and FY2014-15 Greenhouse Gas Reduction Fund Appropriations (as of 1-30-2015)

Agency / Program	Appropriations 2013-14 ($M)	Appropriations 2014-15 ($M)	Program Categories Identified by Implementing Agencies	Agency Allocation of Funds by Project ($M)	Expenditure Record	Type of Award Process	Program Guidelines	Solicitation of Proposals	Award of Funding
Weatherization Upgrades/Renewable Energy (CSD) Installation of energy efficiency and renewable energy projects in single and multifamily low-income housing units within disadvantaged communities. Weatherization measures typically include weather-stripping, insulation, caulking, water heater blankets, windows, refrigerators electric water heaters and heating and cooling systems. Renewable measures include installation of solar water heater systems and photovoltaic systems.		$75	Single-family weatherization and solar hot water heating	$75	Complete	Existing Service Providers	Jan 2015	N/A	March 2015
			Multi-family weatherization			Competitive	June 2015	Feb-Mar 2015	June 2015
			Solar Photovoltaics			Competitive	Jan 2015	August 2014	February 2015
Energy Efficiency in Public Buildings (CEC) Energy efficiency and energy generation projects in public buildings, including the University of California, the California State University, and courts. Energy savings projects will include lighting systems, energy management systems and equipment controls, building insulation and heating, ventilation, and air conditioning equipment.		$20	Building retrofits for energy efficiency	$20		First-Come First-Served	N/A	March 2015	July 2015
			Energy generation						
Agricultural Energy and Operational Efficiency (CDFA) Projects that reduce GHG emissions from the agriculture sector by capturing greenhouse gases, harnessing greenhouse gases as a renewable bioenergy source, improving agricultural practices and promoting low carbon fuels, agricultural energy, and operational efficiency.	$10	$15	Water use efficiency	$10	JLBC Notice	Competitive	Fall 2014 (1st Round)	Aug-Sept 2014	Oct 2014
							Winter 2014 (2nd Round)	Oct-Dec 2014	Jan 2015
			Dairy digesters	$12	Complete	Competitive	Jan 2015	Jan-Feb 2015	June 2015
			Alternative and renewable fuels	$3	Complete	State Implemented	N/A	N/A	N/A
Water Action Plan - Water-Energy Efficiency (DWR) Funding for grants that support water use efficiency and conservation projects, and leak detection and repair projects that reduce GHG emissions, with additional consideration given to disadvantaged communities. The funding will also support projects at the Thermalito and Hyatt State Water Project facilities.	$30		Efficient hydro energy turbines	$10		State Implemented	N/A	N/A	N/A
			Water conservation & efficiency grants	$20	JLBC Notice	Competitive	Oct 2014	Oct-Dec 2014	April-May 2015
Water Action Plan - Wetlands and Watershed Restoration (DFW) Implement projects that provide carbon sequestration benefits, including restoration of wetlands (including those in the Delta), coastal watersheds and mountain meadows.		$25	Delta coastal wetlands	$25	Submitted	Competitive	Nov 2014	Nov 2014	March 2015
			Mountain meadows						
			Water efficiency on DFW lands						
Sustainable Forests (CAL FIRE) Urban forests in disadvantaged communities and forest health restoration and reforestation projects that reduce wildfire risk and increase carbon sequestration. These expenditures will enhance forest health and reduce fuel loads in light of climate change increasing wildfire intensity and damage.		$42	Forest Legacy	$24	Submitted	Competitive	October 2014	Oct 2014-Mar 2015	August 2015
			Forest Pest Control			Competitive		Oct 2014-Mar 2015	August 2015
			Fuels Reduction			Competitive		Oct 2014-Mar 2015	August 2015
			Programmatic Timberland EIRs					To be Announced	
			Reforestation			Competitive		Oct 2014-Mar 2015	August 2015
			Research			Competitive		Oct 2014-Mar 2015	June 2015
			Urban Forestry	$18		Competitive		Oct 2014-Mar 2015	May 2015
Waste Diversion (CalRecycle) Financial incentives for capital investments that expand waste management infrastructure, with a priority in disadvantaged communities.		$25	Organics composting/digestion grants	$15	Complete	Competitive	Mar 2014	May-Jun 2014	Nov 2014
			Increased recycling manufacturing	$5				Jun-Jul 2014	Nov 2014
			Organics and recycling project loans	$5				Nov-Feb 2015	April 2015
Total	$70	$832							

Note: Future dates are estimates and subject to change

Greenhouse Gas Reduction Fund Program	County Staff Leads
Low Carbon Transit Operations Program	John Cunningham, DCD
Affordable Housing and Sustainable Communities	Kara Douglas, DCD Maureen Toms, DCD John Cunningham, DCD Jerry Fahy, PW
Low Carbon Transportation	Joe Yee, PW
Weatherization Upgrades/Renewable Energy	Laura Glass, DCD
Energy Efficiency in Public Buildings	Brian Balbas, PW Andy Green, PW
Agricultural Energy and Operational Efficiency	Chad Godoy, Agriculture
Water Action Plan - Watlands and Watershed Restoration	Abby Fateman, DCD Mike Carlson, PW
Sustainable Forests	George Laing, CCCFPD
Waste Diversion	Deidra Dingman, DCD