

GHG Reduction Measures

The following tables list all greenhouse gas (GHG) reduction measures considered by Contra Costa County as of December 2008. For the purposes of this report, *existing measures* are those that were implemented prior to the [2006 inventory](#). *Planned measures* are those that will be implemented in the near future without further consideration. *Potential measures* are additional measures to further reduce GHG emissions that are suggested in the County's [Municipal Climate Action Plan \(MCAP\)](#) dated December 2008.

Potential GHG Reduction Measures

Table 1 lists the potential measures by number from the County's [MCAP](#) (see Section 6 for detailed description and estimated reductions for each measure).

Table 1 – Potential Measures

Energy Efficiency and Renewable Energy	
1	Expand HVAC re-commissioning program to 50 additional County buildings
2	Expand lighting improvement program to 30 additional County buildings
3	Create an employee energy awareness program to promote energy conservation and efficient use of County facilities
4	Install LEDs in all county-owned streetlights (if pilot studies are successful)
5	Install additional solar systems at the West County Detention Facility, the Buchanan Airport Field, the Pleasant Hill Library, and the Elections Office
6	Install thermally resistant window films on 30 additional existing County facilities
Vehicle Fleet	
7	Purchase 100 more hybrid vehicles for the fleet
8	Purchase 50 more CNG vehicles for the fleet
9	Install an above-ground 5,000-gallon E85 ethanol fuel tank for the County's 70 FlexFuel vehicles as well as other users (CHP and CALTRANS)
Employee Commute	
10	Institute a user fee for parking spaces owned or leased by the County and allocate the surplus revenue to incentives for use of commute alternatives
11	Allow County employees to use pre-tax dollars to pay for mass transit or carpool expenses
12	Institute compressed work weeks in all County departments
13	Expand the telecommuting program by identifying opportunities to increase employee participation to 30%
Waste Reduction and Recycling	
14	Set the default on all copying/printing machines to duplex (double-sided) mode for all print jobs and possibly copy jobs
15	Divert organic waste from parks and landscaping to on-site compost

Existing & Planned GHG Reduction Measures

Table 2 lists the existing measures by number from the County's [Climate Protection Report](#) dated November 2005 (or by a dash if they were assigned no number) and planned measures are indicated by the letter P. Potential GHG reductions have been calculated for most measures, however some were not included in calculations due to lack of data or inconsistency with [baseline inventory](#). See Section 5 of the [MCAP](#) for additional details about many of these existing and planned measures.

Table 2 – Existing & Planned Measures

Energy Efficiency and Renewable Energy	
6a	Performed seven facility-level and two county-wide energy assessments
3a	Installed direct digital control (DDC) systems for heating, ventilating and air conditioning (HVAC) systems in (33) major County facilities and new County buildings & remodels
3b	Improved, retrofitted and replaced HVAC systems in (15) selected County buildings
-	Implemented heat recovery projects for the Regional Medical Center and the Pittsburg Health Center
4a	Installed state-of-the-art lighting technology and systems in (7) selected County facilities
P	Expanding lighting retrofit program to (14) additional County buildings
13a	Participate in energy demand response programs for (20) selected County facilities
5a	Installed variable frequency motor drive technology in most possible (9) buildings
5b	Installed vending misers on (60) vending machines
-	Install LEDs in (50%) building exit signs
P	Will install LEDs in the remaining (50%) building exit signs
17	Use LEDs in all possible traffic signals
18	Installed LEDs in selected (70%) pedestrian signals
P	Installing LEDs in the remaining (30%) pedestrian signals as they fail.
P	Conducting pilot studies on LED streetlight technology.
7a	Designed/installed cogeneration plants for the Martinez Detention Facility and the West County Detention Facility
P	Designing and installing cogeneration plants for the Regional Medical Center and the Juvenile Hall, which operate 24-hours per day.
8a	Installed solar panels on the rooftops of the Martinez Detention Facility and 50 Douglas
Green Buildings	
2a	Design energy usage in (3) new County buildings to be at least 10% below California's Title 24 requirements
10a	Use cool roofing systems for selected County buildings
10b	Standard for cool roofing systems in new County buildings and remodels
12a	Install thermally resistant window films on selected County facilities
25	Use water conserving landscaping and irrigation systems
Climate-friendly Procurement*	
41	Include pricing for environmental specifications in the process of requiring bids for building materials
42a	Require contractors/vendors to provide recycled-content/recyclable products
38	Standard for Allsteel 50% recycled-content, 99% recyclable office furniture.
40	Purchased (100,000 square yards) 50% recycled-content, 100% recyclable carpeting for all General Services Department buildings
37c	As of August 2007, more than 100 items on the county office supply contract have been replaced with recycled-content equivalents
37b	Purchased recycled-content office paper (35% of paper)
37a	Purchased recycled-content toner cartridges (45% of cartridges)
36a	Require that all County business cards produced by Central Services be printed on recycled-content paper (some departments print outside the County, but the County is slowly transferring all business card production to central services).
P	Purchasing high efficiency motors, appliances, and equipment as they fail.
P	All county copier contracts require the placement of Energy Star copiers.
P	Standard for EPEAT certified Dell desktop computers.

P	Adopted an Environmentally Preferable Purchasing Policy.
Vehicle Fleet	
34	Minimize purchase of sport utility vehicles
35	Capture evacuated mobile air conditioning emissions **
-	All (168) diesel fleet switched to B20 biodiesel fuel in September 2006
29	Purchased (12) electric vehicles
30a	Purchased (86) hybrid (gasoline and electric) fleet vehicles
32a	Install a "fast fill" CNG fueling facility
31a	Purchased (39) compressed natural gas (CNG) vehicles
P	Purchased 29 FlexFuel vehicles, and 13-14 patrol cars with be replaced with FlexFuel equivalents each year.
P	Considering the installation of an above-ground 5,000-gallon E85 ethanol fuel tank for the County's 29 (and growing) FlexFuel vehicles as well as other users (CHP and CALTRANS).
Employee Commute	
51a	Offer financial incentives to County employees for using transit or forming a new carpool
50a	Provide financial incentives to County employees participating in a vanpool (25% off monthly costs)
55a	Provide (30) free preferred parking stalls for County employees' vehicles used for carpooling
56a	Provide bicycle lockers and/or racks at work sites to encourage County employees to bike to work
57a	Provide shower facilities at certain work sites to encourage County employees to bike, walk or run to work
52a	Allow County employees to work using flex schedules and compressed work weeks
49a	Implement Telecommuting Program for employees to reduce vehicle trips
Waste Reduction and Recycling***	
47a	Recycle paper from (~200) County buildings
47b	Collect and recycle beverage containers from (~20) County buildings & parks
44a	Conduct ongoing program to facilitate reuse and recycling of office furniture and equipment from County buildings
48	Recycle municipal landscaping debris
45b	Direct consulting architects and engineers to reuse as much of the existing structures and building materials as possible
45a	Require contractors to recycle waste from building/remodeling projects whenever feasible
Land Use	
20a	Use the minimum amount of pavement necessary for safety and durability
27a	Maintain existing trees located on County owned and/or maintained land

* As the [baseline GHG inventory](#) does not include a lifecycle analysis of GHG emissions from procurement activities, it would be inconsistent to credit emissions reductions from the purchase of products with recycled-content materials or otherwise environmentally-friendly manufacturing processes. However, it should be noted that environmentally preferable purchasing holds great potential to reduce emissions from the manufacturing process. Emissions reductions from the purchase of products with the potential to reduce energy use are credited because energy use is included in the [baseline GHG inventory](#).

** The emissions factors used for vehicle transportation in ICLEI's tool do not include emissions from mobile air conditioning, so emissions from mobile air conditioning are not included in the [GHG inventory](#). Thus, it would be inconsistent to include reductions from measures aimed to reduce mobile air conditioning emissions.

*** As the [baseline GHG inventory](#) only considers methane production from landfilled waste, for consistency, the reductions in the waste sector only include avoided methane. However, it should be noted that recycling and waste reduction also hold other reduction potentials, including the carbon sequestration of trees that are not consumed for paper production, the avoided energy use of new paper production, and the avoided transportation to landfill sites.

This & companion documents are available on-line at <http://www.cccounty.us/toolkit>.

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