

# Albany Climate Action Plan - Preliminary Draft GHG Reduction Strategies 3/13/09

## Transportation and Land Use Strategy - *Create an interconnected transportation system and land use pattern that shifts travel from auto to walking, biking and public transit*

### Objective TL-1: Facilitate walking and biking in the community

Measure	Origin of Measure	GHG Reduction Capacity	Cost Estimate	Feasibility Assessment	Responsible Agency	
<b>TL-1.1</b>	Create complete streets throughout the City	BMP (Sacramento, NYC)	1450	To be determined	M	To be determined
<b>A</b>	Improve/expand bike lanes and bicycle/pedestrian path network	ACGT, CAP SRV, ASR, AG, BMP	Combined total		H	
<b>B</b>	Incorporate bicycle-friendly intersections into street design	AG, BMP (Portland)	Combined total		M	
<b>C</b>	Connect parks and publicly accessible open spaces through shared pedestrian/bicycle paths and trails	CAP SRV, AG	Combined total		H	
<b>TL-1.2</b>	Strictly enforce pedestrian rights laws on City streets	ACGT	Indirect		H	
<b>TL-1.3</b>	Require all new commercial and public buildings (and major renovations when feasible) to provide adequate bicycle parking near entrances and require buildings with more than 50 employees to provide end-of-trip facilities for bicycle commuters (e.g. showers, lockers, and secure covered bicycle parking)	AG, CAPCOA	239		H	
<b>TL-1.4</b>	Install bicycle racks in commercial and civic areas of City where racks do not currently exist.	BMP	Combined total			
<b>TL-1.5</b>	Encourage additional neighborhood serving commercial uses and mixed use development within City's existing commercial districts. Strive to provide access to daily goods and services within 1/4 mile of residences through land use/zoning changes.	AG, BMP	Need more data		L/M	

### Objective TL-2: Make public transit more accessible and user-friendly

Measure	Origin of Measure	GHG Reduction Capacity	Cost Estimate	Feasibility Assessment	Responsible Agency	
<b>TL-2.1</b>	Conduct public transit gap study that analyzes strategies for increasing transit usage within the City and identifies funding sources for transit improvements	AG	Indirect		M	
<b>TL-2.2</b>	Partner with BART and AC Transit to provide shuttles between BART stations, residential neighborhoods and commercial centers	CAP SRV, AG, BMP (Berkeley)	Not Quantified		M	
<b>TL-2.3</b>	Work with the school district to improve/expand school bus services and safe routes to school program	CAP SRV, AG	Not Quantified		H	
<b>TL-2.4</b>	Provide passes and shuttles to transit to encourage use of alternative transportation by City employees	ACGT, AG	Not Quantified		M	
<b>TL-2.5</b>	Work with Caltrans and AC Transit to develop BRT stations on San Pablo in City	ACGT(2.e)	Not Quantified		L	

TL-2.6	Work with AC transit to provide transit stops with safe and convenient bicycle and pedestrian access and essential improvements such as shelters, route information, benches and lighting.	ACGT(2.f), AG, CAPCOA	145		H	
TL-2.7	Work with AC transit to increase transit headways to every fifteen minutes at peak commute hours	CAP SRV, BMP	145		H	
<b>Objective TL-3: Promote transit oriented development</b>						
Measure	Origin of Measure	GHG Reduction Capacity	Cost Estimate	Feasibility Assessment	Responsible Agency	
TL-3.1	Establish design guidelines for transit and pedestrian oriented development within the City	BMP (Portland)	1013		H	
TL-3.2	Allow greater residential and commercial density within 1/2 mile of transit corridors	AG, BMP	1448		H	
TL-3.3	Provide incentives (e.g. reduced developer fees, fast-tracking, reducing processing fees, infrastructure loans, etc) for projects that promote mixed use, higher density development within 1/2 mile of transit corridors.	AG, CAPCOA	Combined total		H	
TL-3.4	Evaluate GHG emissions associated with development proposals and work with applicants to reduce emissions during project review	BMP (Berkeley)	Indirect		M	
TL-3.5	Provide public education about benefits of well-designed, higher-density housing and relationship between land use and transportation.	AG	ED		H	
<b>Objective TL-4: Reduce vehicle emissions and trips</b>						
Measure	Origin of Measure	GHG Reduction Capacity	Cost Estimate	Feasibility Assessment	Responsible Agency	
TL-4.1	Work with ABAG and neighboring cities to create jobs-housing balance within existing transit corridors	BMP	869		H	
TL-4.2	Improve the fuel efficiency of City fleet by purchasing low or zero emission vehicles when vehicles are retired from service.	ACGT(C.1.a)	Not Quantified		H	
TL-4.3	Develop electric plug-in auto charging station infrastructure	AG	Not Quantified		M/H	
TL-4.4	Synchronize traffic signal timing on arterial intersections to reduce vehicle idling	AG	Not Quantified		H	
TL-4.5	Adopt a 3-minute idling time maximum ordinance	AG, BMP (Berkeley)	Not Quantified		H	
TL-4.6	Create and implement a transportation demand management program that reduces weekday peak period trips by at least 20% (applies to commute trips only)	AG, CAPCOA	1911		M	
TL-4.7	Facilitate ride-share programs	ACGT(2.c), AG	Combined total		H	
TL-4.8	Work with existing companies to expand car-share opportunities in the community	CAP SRV, AG	Combined total		H	

TL-4.9	Provide public education regarding reducing motor vehicle-related greenhouse gas emissions.	AG, BMP (Berkeley)	Combined total		H	
TL-4.10	Encourage a regional Bay Area fee system for daily use of vehicles.	BMP (Santiago, London)	Combined total		L	

**Objective TL-5: Create disincentives for use of single-occupancy private automobiles**

Measure	Origin of Measure	GHG Reduction Capacity	Cost Estimate	Feasibility Assessment	Responsible Agency
TL-5.1	Consider a tiered residential parking fee that increases with vehicle size	AG, BMP (Berkeley)	521	L	
TL-5.2	Provide preferential street parking spaces for electric and plug-in electric hybrid vehicles	BMP	Combined total	L/M	
TL-5.3	Eliminate minimum parking standards and initiate a City-sponsored shared parking program.	BMP (Ventura)	Not Quantified	M	
TL-5.4	Enforce 3-ton gross vehicle weight limit on City residential streets.	State Law, BMP	Not Quantified		

**Buildings and Energy Strategy - Minimize energy consumption, create high performance buildings, and transition to clean renewable energy sources**

**Objective BE-1: Lead by example with zero-emission City buildings by 2015**

Measure	Origin of Measure	GHG Reduction Capacity	Cost Estimate	Feasibility Assessment	Responsible Agency
BE-1.1	Install cost-effective renewable energy systems on all city buildings and purchase remaining electricity from renewable sources	CAP SRV, ACGT, BMP (Portland)	Need more data	H	
BE-1.2	Require all public buildings to install building performance data (energy + water) displays	BMP	Not Quantified	M	
BE-1.3	Implement paperless office policies in all feasible City operations	BMP	Not Quantified	H	

**Objective BE-2: Retrofit existing residential buildings**

Measure	Origin of Measure	GHG Reduction Capacity	Cost Estimate	Feasibility Assessment	Responsible Agency
BE-2.1	Incentivize residents to participate in free home energy audit programs and encourage implementation of audit findings.	CAP SRV, ACGT, BMP	3373	H	
BE-2.2	Identify and develop financial incentives and low-cost financing tools to encourage investment in energy efficiency and renewable energy for existing residential buildings.	ACGT, BMP (Berkeley)	Combined total	H	
BE-2.3	Enforce California Green Building Code energy efficiency standards for residential remodels and renovations	BMP	Combined total	H	
BE-2.4	Develop, implement, and incentivize performance-based point-of-sale energy and water efficiency upgrade requirements	BMP (Berkeley)	Combined total	H	
BE-2.5	Identify and implement opportunities to improve efficiency improvements in rental units	BMP (Berkeley)	Combined total	H	
BE-2.6	Partner with PG&E to provide public education campaign that encourages residential energy efficiency improvements	ACGT, BMP (Burlington)	Educational	H	

Objective BE-3: Retrofit existing commercial buildings					
Measure	Origin of Measure	GHG Reduction Capacity	Cost Estimate	Feasibility Assessment	Responsible Agency
BE-3.1	Incentivize businesses to participate in free building energy audit programs and encourage implementation of audit findings.	BMP (Burlington)	702	H	
BE-3.2	Identify and develop financial incentives and low-cost financing tools to encourage investment in energy efficiency and renewable energy for existing commercial buildings.	ACGT, BMP (Berkeley)	Combined total	H	
BE-3.3	Require lighting system upgrades to employ high efficiency technology within commercial and industrial remodels, renovations or tenant improvements for commercial and industrial buildings	AG, BMP	Combined total	H	
BE-3.4	Encourage existing non-residential buildings to install ENERGY STAR-rated cool roof materials	AG, BMP (Santa Monica)	342	H	
BE-3.5	Partner with PG&E to provide a business education program that encourages commercial energy efficiency improvements	AG, BMP (Burlington)	Educational	H	
Objective BE-4: Require Energy Performance in New Construction					
Measure	Origin of Measure	GHG Reduction Capacity	Cost Estimate	Feasibility Assessment	Responsible Agency
BE-4.1	Ensure compliance with California Green Building Code Standards	BMP	533		
BE-4.2	Provide incentives, such as priority permitting, carbon feebates and density bonuses for buildings that exceed the City's minimum green building requirements	CAP SRV, BMP	Not Quantified		
BE-4.3	Require solar orientation, daylighting and natural ventilation in new construction when feasible	AG, BMP (San Jose)	Not Quantified	M	
BE-4.4	Require street, parking lot, and sidewalk paving to use materials with an albedo of 0.3 (30 percent) or greater	AG	Not Quantified	M	
BE-4.5	Require use of programmable thermostats in all new construction	BMP	236	M	
BE-4.6	Incentivize the incorporation of green roofs in new construction	BMP (Chicago, Portland)	Not Quantified	M	
BE-4.7	Require that all new multi-tenant buildings be sub-metered to allow each tenant the ability to monitor their own energy and water consumption	BMP (Berkeley)	Not Quantified	M	
Objective BE-5: Maximize use of renewable energy					
Measure	Origin of Measure	GHG Reduction Capacity	Cost Estimate	Feasibility Assessment	Responsible Agency
BE-5.1	Develop comprehensive renewable energy financing and informational program for residential and commercial uses	CAP SRV, ACGT, AG, BMP (Berkeley)	3882	H	

<b>BE-5.2</b>	Identify and facilitate solar energy empowerment districts in commercial, industrial, mixed-use portions of City	BMP (NYC)	Combined total		H	
<b>BE-5.3</b>	Join Bay Area efforts to ensure green public transit energy sourcing	ACGT	Not Quantified		H	

**Objective BE-6: Community energy management**

Measure	Origin of Measure	GHG Reduction Capacity	Cost Estimate	Feasibility Assessment	Responsible Agency
<b>BE-6.1</b>	Evaluate potential of district heating and cooling infrastructure within the City and create implementation plan for cost-effective systems	AG, BMP	Not Quantified	need clarification	
<b>BE-6.2</b>	Partner with other neighboring Cities and PG&E to fast-track "Smart Grid" integration in City. Require use of smart meters and smart appliances in new commercial and residential construction and major renovations when technology becomes available	BMP (Boulder)	Not Quantified	L/M	
<b>BE-6.3</b>	Work with County to convert all street lights to LED bulbs or LED-Solar systems/ Require all new development to install LED or LED solar systems.	ACGT, AG, BMP	Need more data	H	
<b>BE-6.4</b>	Encourage utility providers (PG&E and EBMUD) to provide comparative energy and water conservation metrics on utility bills	BMP	Not Quantified	M	
<b>BE-6.5</b>	Join the Community Choice Aggregation efforts of Berkeley, Oakland, and Emeryville	ACGT	Not Quantified	H	

**Waste and Water Strategy - Eliminate the concept of waste and celebrate water as a essential community resource**

**Objective WW-1: Become a zero waste community**

Measure	Origin of Measure	GHG Reduction Capacity	Cost Estimate	Feasibility Assessment	Responsible Agency
<b>WW-1.1</b>	Establish 90% waste reduction target for 2030 and work with Alameda County, neighboring cities, Ecology Center and other organizations to leverage zero waste effort and provide public education regarding zero waste strategies	ACGT (d.5.c), BMP (Mountain View)	Not Quantified	H	
<b>WW-1.2</b>	Partner with the City of Berkeley on the creation of a food industries grease- to-biodiesel recycling program	BMP (Berkeley)	Not Quantified	M	

**Objective WW-2: Conserve water resources**

Measure	Origin of Measure	GHG Reduction Capacity	Cost Estimate	Feasibility Assessment	Responsible Agency
<b>WW-2.1</b>	Encourage residential and commercial users to participate in EBMUD free water audit program and provide incentives for implementation of appropriate water conservation improvements	CAP SRV, AG, BMP	Not Quantified	H	
<b>WW-2.2</b>	Require water efficiency training and certification for irrigation designers and installers, and property managers	AG, CAPCOA, BMP	Not Quantified	L	

<b>WW-2.3</b>	Encourage use of greywater and rainwater collection in residential and commercial uses. Require rainwater collection in new construction.	AG, BMP	943		H	
<b>WW-2.4</b>	Develop a climate station and web-based irrigation control service for both City and private use	BMP	Not Quantified		M	
<b>WW-2.5</b>	Partner with EBMUD to provide water conservation outreach programs	AG	Educational		H	

## Green Infrastructure Strategy - Conserve, create, and enhance natural assets that improve community quality of life.

### Objective GI-1: Utilize natural stormwater management systems

Measure	Origin of Measure	GHG Reduction Capacity	Cost Estimate	Feasibility Assessment	Responsible Agency
<b>GI-1.1</b>	Establish communitywide water sensitive urban design strategies that would include the following:	Need more data			
<b>A.</b>	Require "low-impact development" practices in all new construction	ACGT(4.c), BMP	Need more data	M	
<b>B.</b>	Incentivize "low-impact development" retrofits in existing residential and commercial uses	ACGT(4.c)	Need more data	H	
<b>C.</b>	Develop green streets retrofit program for City streets	ACGT(4.c), BMP	Need more data	L/M	
<b>D.</b>	Facilitate and encourage the integration of green roofs into new construction or major remodels	BMP	Need more data	L/M	

### Objective GI-2: Expand and enhance urban forestry

Measure	Origin of Measure	GHG Reduction Capacity	Cost Estimate	Feasibility Assessment	Responsible Agency
<b>GI-2.1</b>	Enhance street tree program to reduce urban heat island effect and provide carbon sequestration	ACGT, AG, BMP	Not Quantified	H	
<b>GI-2.2</b>	Evaluate the potential for carbon sequestration in urban forest and natural areas within City	ACGT, AG, BMP	Not Quantified	H	

### Objective GI-3: Increase and enhance urban green space, including urban farm area

Measure	Origin of Measure	GHG Reduction Capacity	Cost Estimate	Feasibility Assessment	Responsible Agency
<b>GI-3.1</b>	Expand community garden program to increase local food security and provide local recreation amenity	ACGT, BMP	Not Quantified	H	
<b>GI-3.2</b>	Encourage UC Berkeley to create urban farm at Gill Tract	ACGT	Not Quantified	H	
<b>GI-3.3</b>	Ensure that well-designed green space is provided within 1/4 mile of higher density transit-oriented development	BMP	Not Quantified	H	

## Sea Level Rise Strategy - Adapt to the reality of sea level rise

### Objective SLR-1: Protect community from sea level rise

Measure	Origin of Measure	GHG Reduction Capacity	Cost Estimate	Feasibility Assessment	Responsible Agency
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<b>SLR-1.1</b>	Work with BCDC and other agencies to create Sea Level Rise Risk Assessment and Strategic Plan that would: a) identify areas at risk of sea level rise and significant structural, environmental, aesthetic, social, cultural and historic resources that must be protected from inundation; b) identify areas that are inappropriate for protection from inundation; c) identify areas that are most suitable for ecological restoration; d) identify strategies that will make future projects more resilient to sea level rise	CAP SRV, BCDC	Non-GHG		M	
<b>SLR-1.2</b>	Use areas at risk of sea level rise inundation as open space assets	BMP	Non-GHG		H	
<b>SLR-1.3</b>	Develop community education and outreach program regarding sea level rise	BCDC	Non-GHG		M	

**Objective SLR-2: Facilitate ecosystem adaptation to sea level rise**

Measure	Origin of Measure	GHG Reduction Capacity	Cost Estimate	Feasibility Assessment	Responsible Agency	
<b>SLR-2.1</b>	Develop shoreline open space management plan for areas subject to sea level rise inundation (including the Bulb and other shoreline areas) in order to facilitate ecosystem protection and recreational goals of the community, region, and state.	BMP	Non-GHG		M/H	

**Economic Development Strategy** - Create community prosperity by embracing the opportunities within today's challenges

**Objective ED-1: Develop awareness of climate change in within the business community**

Measure	Origin of Measure	GHG Reduction Capacity	Cost Estimate	Feasibility Assessment	Responsible Agency
<b>ED-1.1</b>	Increase commercial development opportunities within City to improve jobs-housing balance	BMP	Non-GHG		
<b>ED-1.2</b>	Establish workshops to educate businesses about effects of climate change and climate change policies on their business	BMP	Non-GHG		H

**GHG Reduction Sum = 17,475.89**  
Tonnes CO2E/Year

**Legend for Origin of Policies:**

- ACGT** Albany Clean and Green Task Force
- CAP SRV** CAP Online Survey
- ASR** Albany Strollers and Rollers
- BMP** Best Management Practices
- AG** Attorney General
- CAPCOA** 2007 CAPCOA Report