

Albany Climate Action Plan - Draft GHG Reduction Strategies 4/29/09

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	Percent of Total CAP Reduction Capacity (Quantified Measures)	Participation Rate	Simplified Cost Estimate*	City Staff Feasibility Ranking	
TL-1.1	Create complete streets throughout the City.	BMP (Sacramento, NYC)	921	5%	NA	High	Medium
TL-1.2	Conduct pedestrian obstacle study that analyzes the condition of the pedestrian infrastructure and identifies potential barriers.	ASR	Indirect	Indirect	NA	Low	Medium
TL-1.3	Strictly enforce pedestrian rights laws on City streets.	ACGT	Indirect	Indirect	NA	Low	High
TL-1.4	Install bicycle racks in commercial and civic areas of City where racks do not currently exist.	AG, CAPCOA	190	1%	NA	Low	High
TL-1.5	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 small business incentivization programs, land use/zoning/code changes, etc.	AG, BMP	1151	7%	1% Increase in Diversity	Medium	Low to Medium

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

Measure	Origin of Measure	GHG Reduction Capacity	Percent of Total CAP Reduction Capacity (Quantified Measures)	Participation Rate	Simplified Cost Estimate*	City Staff Feasibility Ranking	
TL-2.1	Conduct public transit gap study that analyzes strategies for increasing transit use within the City and identifies funding sources for transit improvements.	AG	Indirect	Indirect	NA	Low	Medium
TL-2.2	Partner with BART and AC Transit to provide shuttles between BART stations, residential neighborhoods and commercial centers.	CAP SRV, AG, BMP (Berkeley)	28	0.2%	NA	High	Medium
TL-2.3	Provide passes and shuttles to transit to encourage use of alternative transportation by City employees.	ACGT, AG	Not Quantified	Not Quantified	NA	Low	Medium
TL-2.4	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	115	1%	NA	Low	High
TL-2.5	Work with AC transit to extend Bus Line 18 to commercial retail on Eastshore Highway.	City Staff	Not Quantified	Not Quantified	NA	Low	High

Objective TL-3: Promote transit oriented development

Measure	Origin of Measure	GHG Reduction Capacity	Percent of Total CAP Reduction Capacity (Quantified Measures)	Participation Rate	Simplified Cost Estimate*	City Staff Feasibility Ranking	
TL-3.1	Update specific plans, design guidelines, zoning regulations, development standards to promote high-quality, mixed-use, pedestrian- and transit-oriented development in the neighborhood commercial districts along San Pablo Avenue and Solano Avenue.	BMP (Portland)	691	4%	1% Increase in Design	Low	High
TL-3.2	Provide incentives for projects that promote mixed use, higher density development in neighborhood commercial districts along San Pablo Avenue and Solano Avenue transit corridors.	AG, CAPCOA	1151	7%	1% Increase in Density	Low	High
TL-3.3	Evaluate GHG emissions associated with development proposals and work with applicants to reduce emissions during project review.	BMP (Berkeley)	Indirect	Indirect	NA	Low	Medium
TL-3.4	Provide public education about benefits of well-designed, higher-density housing and relationship between land use and transportation.	AG	42 (Combined educational programs total)	0.2%	NA	Low	High

Objective TL-4: Reduce vehicle emissions and trips

Measure	Origin of Measure	GHG Reduction Capacity	Percent of Total CAP Reduction Capacity (Quantified Measures)	Participation Rate	Simplified Cost Estimate*	City Staff Feasibility Ranking	
TL-4.1	Work with ABAG and neighboring cities to improve jobs-housing balance within existing transit corridors.	BMP	691	4%	Increase ratio from 0.53 to 0.64	Low	High
TL-4.2	Improve fuel efficiency of City fleet by purchasing low or zero emission vehicles when vehicles are retired from service.	ACGT(C.1.a)	Not Quantified	Not Quantified	NA	Low	High
TL-4.3	Develop electric plug-in auto charging station infrastructure.	AG	Not Quantified	Not Quantified	NA	Low	M/H
TL-4.4	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	1520	9%	20% trip reduction	Low	M
TL-4.5	Facilitate ride-share programs.	ACGT(2.c), AG	Combined total	Combined total	NA	Low	High
TL-4.6	Work with the school district to improve/expand walking school bus, safe routes to school program, and school bus services.	CAP SRV, AG	Combined total	Combined total	NA	Low	High
TL-4.7	Work with existing companies to expand car-share opportunities in the community.	CAP SRV, AG	Not Quantified	Not Quantified	NA	Low	High
TL-4.8	Provide public education regarding reducing motor vehicle-related greenhouse gas emissions.	AG, BMP (Berkeley)	Combined educational programs total	Combined educational programs total	NA	Low	High

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

Measure	Origin of Measure	GHG Reduction Capacity	Percent of Total CAP Reduction Capacity (Quantified Measures)	Participation Rate	Simplified Cost Estimate*	City Staff Feasibility Ranking
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TL-5.1	Create commercial district parking fee.	BMP	1212	7%	75¢ per hour	Low	Medium
TL-5.2	Provide preferential street parking spaces for electric and plug-in electric hybrid vehicles.	BMP	Not Quantified	Not Quantified	NA	Low	Low to Medium
TL-5.3	Encourage MTC to establish a regional Bay Area cordon fee system for daily use of vehicles.	BMP (Santiago, London)	Not Quantified	Not Quantified	NA	Low	Medium

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	Percent of Total CAP Reduction Capacity (Quantified Measures)	Participation Rate	Simplified Cost Estimate*	City Staff Feasibility Ranking	
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)	150	1%	100%	Low	High
BE-1.2	Require all public buildings to install building performance data (energy + water) displays.	BMP	Indirect	Indirect	NA	Low	Medium

Objective BE-2: Retrofit existing residential buildings

Measure	Origin of Measure	GHG Reduction Capacity	Percent of Total CAP Reduction Capacity (Quantified Measures)	Participation Rate	Simplified Cost Estimate*	City Staff Feasibility Ranking	
BE-2.1	Develop and implement point-of-sale residential energy and water efficiency upgrade requirements.	BMP (Berkeley)	2494	15%	56%	Low	High
BE-2.2	Identify and develop financial incentives and low-cost financing products and programs to encourage investment in energy efficiency and renewable energy for existing residential buildings.	ACGT, BMP (Berkeley)	Combined total	Combined total	NA	Low to Medium (depending on funding strategy)	High
BE-2.3	Identify and implement opportunities to improve efficiency improvements in rental units.	BMP (Berkeley)	Combined total	Combined total	NA	Low	High
BE-2.4	Educate residents about the availability of free home energy audit programs and encourage implementation of audit findings.	CAP SRV, ACGT, BMP	Combined educational programs total	Combined educational programs total	NA	Low	High
BE-2.5	Partner with PG&E to provide public education campaign that encourages residential energy efficiency improvements.	ACGT, BMP (Burlington)	Combined educational programs total	Combined educational programs total	NA	Low	High

Objective BE-3: Retrofit existing commercial buildings

Measure	Origin of Measure	GHG Reduction Capacity	Percent of Total CAP Reduction Capacity (Quantified Measures)	Participation Rate	Simplified Cost Estimate*	City Staff Feasibility Ranking	
BE-3.1	Develop and implement point-of-sale commercial energy efficiency upgrade requirements.	BMP (Berkeley)	477	3%	29%	Low	High
BE-3.2	Identify and develop financial incentives and low-cost financing products and programs to encourage investment in energy efficiency and renewable energy for existing commercial buildings.	ACGT, BMP (Berkeley)	Combined total	Combined total	NA	Low to Medium (depending on funding strategy)	High
BE-3.3	Incentivize businesses to participate in free building energy audit programs and encourage implementation of audit findings.	BMP (Burlington)	Combined educational programs total	Combined educational programs total	NA	Low	High
BE-3.4	Partner with PG&E to provide a business education program that encourages commercial energy efficiency improvements.	AG, BMP (Burlington)	Combined educational programs total	Combined educational programs total	NA	Low	High

Objective BE-4: Require Energy Performance in New Construction

Measure	Origin of Measure	GHG Reduction Capacity	Percent of Total CAP Reduction Capacity (Quantified Measures)	Participation Rate	Simplified Cost Estimate*	City Staff Feasibility Ranking	
BE-4.1	Ensure new construction complies with Green California Green Building Code Standards and Albany Green Building Ordinance.	BMP	787	5%	100%	Low	High
BE-4.2	Require roofing and street, parking lot, and sidewalk paving to use materials with an albedo of 0.3 (30 percent) or greater.	AG	Combined total	Combined total	100%	Low	Medium
BE-4.3	Provide incentives, such as priority permitting for buildings that considerably exceed the City's minimum green building requirements.	CAP SRV, BMP	Not Quantified	Not Quantified	NA	Low	Medium
BE-4.4	Require solar orientation, daylighting and natural ventilation in new construction when feasible.	AG, BMP (San Jose)	Not Quantified	Not Quantified	NA	Low	Medium
BE-4.5	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	Not Quantified	NA	Low	Medium

Objective BE-5: Maximize use of renewable energy

Measure	Origin of Measure	GHG Reduction Capacity	Percent of Total CAP Reduction Capacity (Quantified Measures)	Participation Rate	Simplified Cost Estimate*	City Staff Feasibility Ranking	
BE-5.1	Develop comprehensive renewable energy financing and informational program for residential and commercial uses.	CAP SRV, ACGT, BMP (Berkeley)	2316	14%	20%	Low	High
BE-5.2	Identify and facilitate solar energy empowerment districts in commercial, industrial, mixed-use portions of City.	BMP (NYC)	Combined total	Combined total	40% in Districts	Low	High
BE-5.3	Join Bay Area efforts to ensure green public transit energy sourcing.	ACGT	Indirect	Indirect	NA	Low	High

Objective BE-6: Community energy management

Measure	Origin of Measure	GHG Reduction Capacity	Percent of Total CAP Reduction Capacity (Quantified Measures)	Participation Rate	Simplified Cost Estimate*	City Staff Feasibility Ranking
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BE-6.1	Evaluate potential of district heating and cooling infrastructure within the City and create implementation plan for cost-effective systems.	AG, BMP	Not Quantified	Not Quantified	NA	Low	Medium
BE-6.2	Partner with other neighboring Cities and PG&E to fast-track "Smart Grid" integration in City.	BMP (Boulder)	129	0.8%	NA	Low	Low to Medium
BE-6.3	Work with County to convert all street lights to LED bulbs or LED-Solar systems.	ACGT, AG, BMP	65	0.4%	NA	Low	High
BE-6.4	Encourage utility providers (PG&E and EBMUD) to provide comparative energy and water conservation metrics on utility bills.	BMP	Not Quantified	Not Quantified	NA	Low	Medium
BE-6.5	Join the Community Choice Aggregation efforts of Berkeley, Oakland, and Emeryville.	ACGT	Indirect	Indirect	NA	Low	High

Waste and Water Strategy - *Minimize waste and celebrate water as a essential community resource*

Objective WW-1: Become a zero waste community

Measure	Origin of Measure	GHG Reduction Capacity	Percent of Total CAP Reduction Capacity (Quantified Measures)	Participation Rate	Simplified Cost Estimate*	City Staff Feasibility Ranking	
WW-1.1	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 (Mt.View)	2,210	13.0%	NA	Low	High
WW-1.2	Implement paperless office policies in all feasible City operations.	BMP	Not Quantified	Not Quantified	NA	Low	High
WW-1.3	Partner with the City of Berkeley on the creation of a food industries grease- to-biodiesel recycling program.	BMP (Berkeley)	Not Quantified	Not Quantified	NA	Low	Medium

Objective WW-2: Conserve water resources

Measure	Origin of Measure	GHG Reduction Capacity	Percent of Total CAP Reduction Capacity (Quantified Measures)	Participation Rate	Simplified Cost Estimate*	City Staff Feasibility Ranking	
WW-2.1	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	Not Quantified	NA	Low	High
WW-2.2	Require residential remodels and renovations to improve plumbing fixture and fixture-fitting water efficiency by 20% above the California Building Standards Code water efficiency standards.	BMP	27	0.2%	56%	Low	Medium
WW-2.3	Encourage use of greywater and rainwater collection in existing residential and commercial uses.	AG, BMP	566	3%	50%	Low	High
WW-2.4	Require use of greywater and rainwater collection systems in new construction.	AG, BMP	Combined total	Combined total	100%		
WW-2.5	Develop a climate station and web-based irrigation control service for both City and private use.	BMP	Not Quantified	Not Quantified	NA	Low	Medium
WW-2.6	Partner with EBMUD and Stopwaste.org to provide water conservation outreach programs.	AG	Combined educational programs total	Combined educational programs total	NA	Low	High

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

Objective GI-1: Expand and enhance urban forestry

Measure	Origin of Measure	GHG Reduction Capacity	Percent of Total CAP Reduction Capacity (Quantified Measures)	Participation Rate	Simplified Cost Estimate*	City Staff Feasibility Ranking	
GI-1.1	Enhance street tree program to reduce building energy consumption and provide carbon sequestration.	ACGT, AG, BMP	122	1%	500 trees/yr	Low	High

Objective GI-2: Increase and enhance urban green space, including urban farm area

Measure	Origin of Measure	GHG Reduction Capacity	Percent of Total CAP Reduction Capacity (Quantified Measures)	Participation Rate	Simplified Cost Estimate*	City Staff Feasibility Ranking	
GI-2.1	Expand community garden program to increase local food security and provide local recreation amenity.	ACGT, BMP	Not Quantified	Not Quantified	NA	Low	High
GI-2.2	Ensure that well-designed green space is provided within 1/4 mile of higher density transit-oriented development.	BMP	Not Quantified	Not Quantified	NA	Low	High

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	Percent of Total CAP Reduction Capacity (Quantified Measures)	Participation Rate	Simplified Cost Estimate*	City Staff Feasibility Ranking	
SLR-1.1	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	Non-GHG	NA	Medium	Medium
SLR-1.2	Develop community education and outreach program regarding sea level rise.	BCDC	Non-GHG	Non-GHG	NA	Low	Medium

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

Measure	Origin of Measure	GHG Reduction Capacity	Percent of Total CAP Reduction Capacity (Quantified Measures)	Participation Rate	Simplified Cost Estimate*	City Staff Feasibility Ranking	
SLR-2.1	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	Non-GHG	NA	Medium	Medium to High

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	Percent of Total CAP Reduction Capacity (Quantified Measures)	Participation Rate	Simplified Cost Estimate*	City Staff Feasibility Ranking	
ED-1.1	Increase commercial development opportunities within City to improve jobs-housing balance.	BMP	See Measure TL 4.1	See Measure TL 4.1	NA	Medium	Medium
ED-1.2	Establish workshops to educate businesses about effects of climate change and climate change policies on their business.	BMP	Non-GHG	Non-GHG	NA	Low	High

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

*** Simplified Cost Estimate Classifications**

- Low** Less than 1% of CIP or Com Dev Operating Budget
- Medium** 1 to 5% of CIP or Com Dev Operating Budget
- High** Greater than 5% of CIP or Com Dev Operating Budget

**GHG Reduction Sum
% Below 2005 Baseline**

**17,057 Metric Tons CO2E/Year
28.2%**

