ANALYSIS OF OPTIONS TO FUND IMPLEMENTATION OF THE ALBANY CLIMATE ACTION PLAN

Summary

In 2007, Albany adopted a greenhouse gas (GHG) reduction target, requiring the community's GHG emissions to be reduced by 25 percent, or 17,450 metric tons (MT) carbon dioxide equivalent (CO2e), below 2004 baseline emission levels by 2020 (Albany Climate Action Plan, April, 2010). Because the original GHG baseline inventory projected a "business-as-usual" increase to 72,000 MT CO2e in 2020, the Climate Action Plan (CAP) report estimated that the necessary reductions would actually need to total 19,600 MT CO2e. The Albany 2010 CAP report details a set of local actions that have been estimated to yield 15,660 MT CO2e of GHG reductions, which if achieved would put Albany GHG emissions 19 percent below 2004 baseline levels by 2020.

The 2010 CAP report anticipated that City actions would complement actions taken by the state of California to reduce statewide GHG emissions (p. I-12):

> "Legislation such as SB 107 and AB 1493 establish performance standards for GHG emissions from electric utilities and motor vehicles. As the regulatory framework surrounding AB 32 grows, other future laws will help further reduce GHG emissions statewide. The timing and synergy between State regulations and CAP measures is uncertain. However, since the CAP focuses on actions the City of Albany can take to reduce community-wide emissions, reductions achieved by the City's actions were determined independent from statewide reductions."

AB 32 and other state measures require that the statewide GHG emission level in 2020 shall be no greater than it was in 1990 (http://www.arb.ca.gov/cc/cc.htm), which represents an approximately 13% statewide GHG emission reduction between 2004 and 2020 (http://www.arb.ca.gov/cc/inventory/data/data.htm). The state's long-term goal is to achieve by 2050 a reduction of GHG emissions to a level 80 percent below 1990 levels.

The City of Albany Sustainability Committee seeks clarification from the Albany City Council to confirm that Council intends to implement the measures included in the approved CAP independent of state GHG emission reductions, as indicated in the CAP report. For the purposes of this analysis, the Sustainability Committee has assumed that the Council did not intend to achieve the 2020 CAP goal exclusively or even primarily on the basis of actions taken by the state. A combination of local and state actions yielding in excess of a 25 percent reduction of Albany GHG emissions by 2020 is assumed to contribute to the long-term state goal of 80 percent reduction by 2050.

The Albany Sustainability Committee has re-analyzed Albany GHG emissions from 2004 to 2012, and has developed new emission projections through 2020. Between 2004 and 2012, Albany GHG emissions declined by 15 percent, due to a combination of local actions and rapid implementation of statewide measures. Local actions tend to affect activity levels, such as the amount of electricity and natural gas consumed, or the number of vehicle miles traveled (VMT). State actions tend to affect the amount of GHG emissions per unit of activity (e.g., pounds of CO2e per kW-hour electricity or per vehicle mile). Consequently, state and local actions are complementary (actually, multiplicative). The 2004 – 2012 Albany GHG emission decline resulted in part from reductions in the use of electricity (by 2 percent), natural gas (by 8 percent), and vehicle miles (by 4 percent). Local efforts, such as installation of LED lighting and more bicycling, contributed to these reductions in demand. Waste Management of Alameda County reduced its GHG emissions by 42 percent. State regulations required increasing use of renewable energy sources for generating electricity, which reduced the emissions per unit electricity by 31 percent.

Increased funding could enhance Albany's efforts to reduce GHG-generating activities. Albany City Council requested that the Albany Sustainability Committee provide an overview of possible funding mechanisms for implementing the measures identified in the Albany Climate Action Plan (CAP), with analysis of the advantages and disadvantages of each.

The committee has explored four options for funding:

(1) grants,

(2) voluntary donations,

(3) a new parcel tax, and

(4) an increase in the Utility Users' Tax (UUT).

The advantages and disadvantages of each approach are summarized here.

The City has successfully obtained several grants and in-kind contributions to commence implementation of the CAP. However, grant funding is limited, and preparation of grant applications requires significant staff time.

A voluntary, donation-based approach to raising funds to implement CAP measures has an important advantage: it could be structured to engage the community. The main disadvantages of a donation-based approach are:

(1) the volunteer effort required is extensive and ongoing,

(2) the amount that could be raised to support CAP implementation cannot be expected to match the amounts that have been raised by established Albany organizations, and

(3) many Albany residents already donate to established organizations.

The main benefits of funding the CAP using a parcel assessment are

(1) the method provides a steady revenue stream, since it is not tied to property values or the consumption of energy,

(2) a parcel tax could be incorporated by the Alameda County Assessor into property tax bills, as currently done with many other assessments,

(3) exemptions could be provided for seniors, and

(4) the method would be favorable to small business, since it equalizes the payment by each tax payer.

The principal disadvantages of funding CAP implementation with a parcel tax are:

(1) successful passage of a parcel tax measure is a substantial effort,

(2) the tax burden is placed on residential property owners, which many regard as a regressive tax structure, and

(3) the tax is not linked to greenhouse gas emissions, and therefore creates no incentive to reduce GHG emissions.

The advantages of using an increase in the UUT to finance CAP implementation are:

(1) funding is tied directly to a climate action goal (reduced energy consumption),

(2) PG&E has indicated that it could collect a UUT increase as part of the current UUT collection on utility bills,

(3) a UUT increase to 9.0% would add an average of $20.93 per year to the typical residential customer ($1.74 per month),

(4) businesses would incur an average cost increase of $199.96 per year ($16.66 per month) from a UUT increase to 9.0%,

(5) a UUT increase from 7% to 9.0% would generate approximately $200,000 per year, and

(6) a UUT for Climate Action could be structured with a sunset, perhaps coinciding with the adopted 2020 reduction time frame.

The principal disadvantage of a UUT increase is that a successful campaign for approval by voters would be a substantial effort.

Only the parcel tax and the UUT would generate ongoing revenue streams in excess of $100,000 per year.

Background – The Albany Climate Action Plan

In 2007, Albany set a goal of reducing its 2020 total greenhouse gas emissions by 25 percent compared to 2004. To achieve this goal, Albany City Council adopted the Climate Action Plan (CAP) in April, 2010. City Council has requested that the Albany Sustainability Committee provide an assessment of possible funding mechanisms for implementing the measures identified in the CAP.

Since 2010, the Sustainability Committee has prepared an update of the original 2004 base inventory of greenhouse gas (GHG) emissions in Albany, which documents progress through 2012 and projects 2020 GHG emissions (Figure 1). Key findings are:

- Between 2004 and 2012, Albany GHG emissions declined by 15 percent. The decline resulted in part from reductions in the use of electricity (by 2 percent), natural gas (by 8 percent), and vehicle miles (by 4 percent). Local efforts, such as installation of LED lighting and more bicycling, contributed to these reductions. Waste Management of Alameda County reduced its GHG emissions by 42 percent. State regulations, which required increasing renewable energy sources to generate electricity, reduced emissions per unit of electricity by 31 percent.
- The projected decline by 2020 is 26 percent, a hypothetical projection to illustrate the emissions that would occur due to state and federal regulations, without any further changes in the amounts of electricity, natural gas, or vehicle miles. Emissions from electricity use would decline to half the 2004 level as utilities implement a state requirement of 30 percent renewables. Vehicle emissions would decline by 23 percent compared with 2004 due to state and federal programs. Emissions from natural gas use would be unchanged, unless new programs were put into place to improve the energy efficiency of existing buildings.
- Growth in population or commercial activity (including the UC Village project) would increase emissions by about 1 percent compared with the projection, still achieving the target reduction of 25 percent (Belmont Village would generate 143 MT CO2e in 2020, based on 2020 PG&E emission rates; the total increase by 2020 could be ~300 – 500 MT CO2e including Sprouts Market, 1 small commercial development per year, and 6-35 housing units per year).

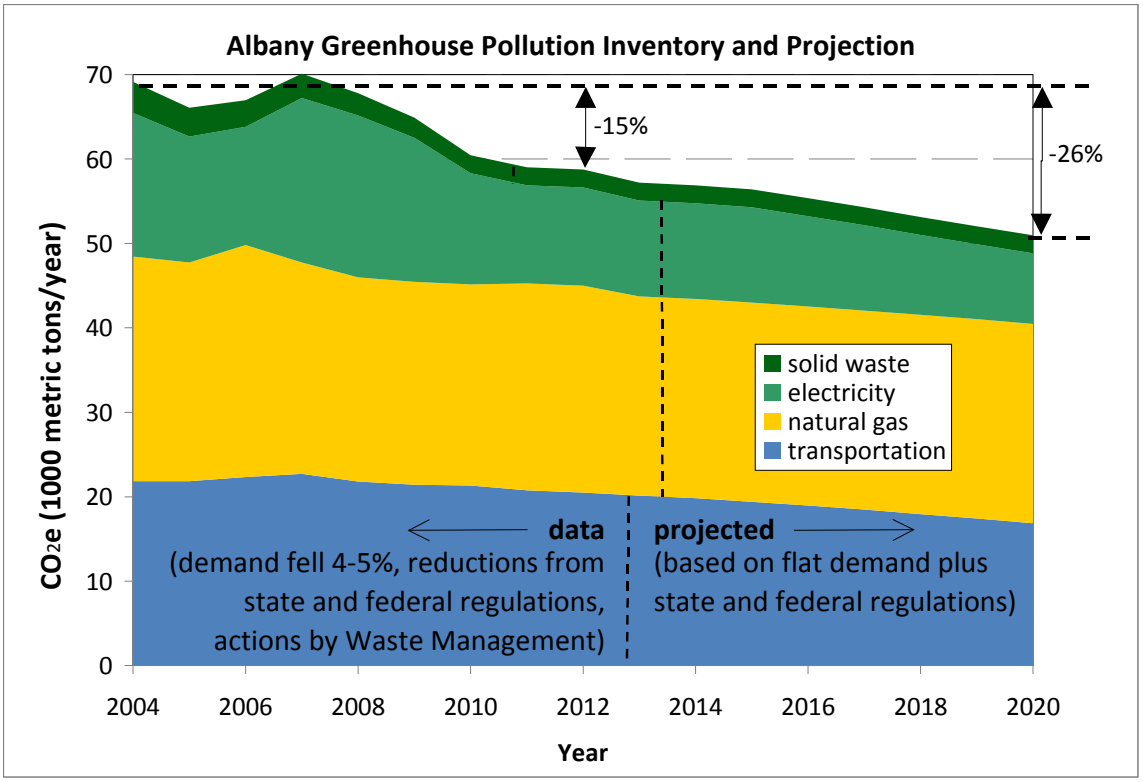

Figure 1. Albany GHG inventory prepared by the Sustainability Committee, showing progress through 2012 and projections to 2020.

About half the reduction in GHG emissions between 2004 and 2012 can be attributed to a combination of GHG reductions by Waste Management and to decreases in electricity use, natural gas consumption, and VMT (Figure 2). As indicated in Figure 2, if state actions were not decreasing the emission intensities of transportation and electricity, and if there were no new increases in electricity use, natural gas consumption, and VMT, Albany would achieve a 9 percent reduction in GHG emissions by 2020. The difference between the 26 percent reduction shown in Figure 1 and the 9 percent reduction shown in Figure 2 is due to state programs that affect transportation and electricity emission factors.

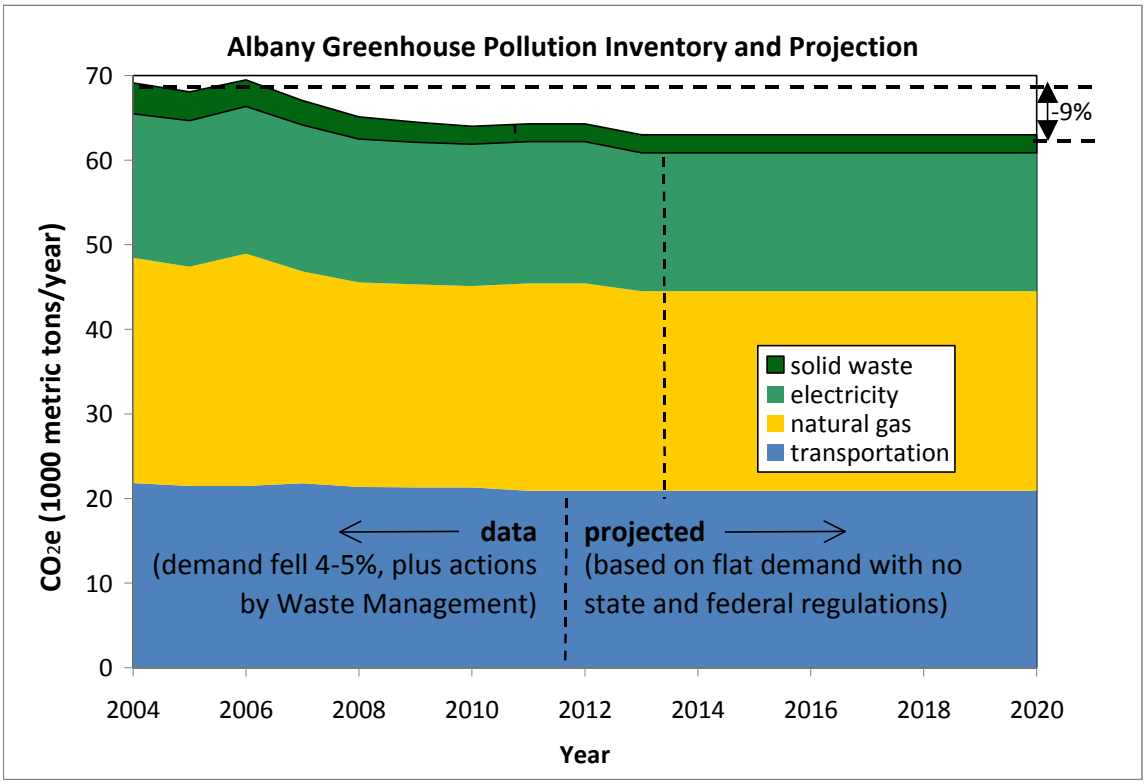

Figure 2. Albany GHG inventory prepared by the Sustainability Committee, showing progress through 2012 and projections to 2020 that are related to actions by Waste Management and to decreases in electricity use, natural gas consumption, and VMT. These emission estimates were compiled by using the 2004 electricity and transportation emission factors for all years.

Local programs specified in the CAP provide an opportunity to accommodate additional growth. The CAP and its Implementation Plan contain a wide range of local programs and initiatives that require varying public capital investment and/or operating costs (e.g., personnel and materials) to implement. These include, for example, creating a continuous community outreach and education program, establishing a set of energy-efficiency standards applied to residential units upon resale, improvement of major streets as pedestrian-friendly "complete streets," and low-cost audits of residential and commercial buildings' energy use and retrofit measures. Although the City has successfully obtained several grants and in-kind contributions to commence implementation of the CAP

(Appendix A), achieving its measures and effecting additional emission reductions will require a continuous, reliable source of funding for personnel, vendors, equipment, and capital improvements. Several CAP measures and policies are in place, but other CAP measures need funding to implement.

The Albany Sustainability Committee has explored four options for funding:

(1) additional grants,
(2) voluntary donations,
(3) a new parcel tax, and
(4) an increase in the Utility Users' Tax (UUT).

The advantages and disadvantages of each approach are summarized in the following sections.

Grants

Grants have provided total revenue of [$TBD] to date. Their principal advantage is that they provide funding without additional taxes. Their disadvantages are that funding is limited, and that preparation of grant applications requires significant staff time.

Voluntary Donations

Various organizations actively seek donations to support community and educational activities in Albany, including the Albany Community Foundation, Albany Education Foundation, SchoolCARE, and Albany Music Fund. These organizations successfully raise amounts individually ranging from thousands to hundreds of thousand dollars each year.

A voluntary approach to raising funds and implementing CAP measures has an important advantage: it could be structured to engage the community. This advantage aligns with the Council goal to "Engage Our Diverse Community." In keeping with this goal, the Sustainability Committee intends to bring Council a proposal to form an Albany Green Coalition to conduct citywide outreach and education campaigns to implement the following CAP measures:

(1) reduce auto trips,
(2) increase energy conservation at home and work, particularly natural gas-based heating, and
(3) increase energy efficiency at home and work, particularly natural gas-based heating.

The proposed Albany Green Coalition is not intended as a fundraising effort, but could include elements of fundraising for specific projects.

The main disadvantages of a donation-based approach to raising funds are:

(1) the volunteer effort required is extensive and ongoing,
(2) the amount that could be raised to support CAP implementation cannot be expected to match the amounts that have been raised by established Albany organizations, and
(3) many Albany residents already donate to the established organizations.

These disadvantages pose a significant barrier to successful voluntary fundraising for CAP implementation.

The City could also set up a voluntary fund that would be a checkbox on each utility bill, with payments passed along to the City. The advantage of this voluntary approach is that little ongoing effort is required. The disadvantages are

(1) it does not actively engage the community, and
(2) it cannot be expected to generate significant revenues.

Parcel Tax

This method of financing the CAP would assess each property owner on a per-parcel basis, similar to some other existing assessments already paid by Albany's property owners. Recent court decisions indicate that residential and commercial property cannot be treated differently at present. A viable parcel tax would therefore tax each parcel the same amount, regardless of parcel size.

The main benefits of funding the CAP using a parcel assessment are:

- Steady Revenue Stream. This method provides a steady revenue stream, since it is not tied to property values or the consumption of energy, and the number of parcels in Albany is relatively unchanged over time. Inflation factors can also be incorporated easily.
- Cost to Collect. Could likely be easily incorporated by Alameda County Assessor into property tax bills, as currently done with many other assessments.
- Exemptions for Seniors. This method can follow similar other assessment methods to exempt seniors (recent court rulings preclude low income exemption).
- Less Impact on Small and Medium-Sized Businesses. This method, depending on how it is structured, would be favorable to small business, since it equalizes the payment by each taxpayer.

The disadvantages of parcel tax funding are:

- Successful passage of a parcel tax measure represents substantial effort.
- The tax burden is placed on residential property owners.
- The tax is not linked to greenhouse gas emissions, and therefore creates no incentive to reduce GHG emissions.

An example assessment is shown in Appendix B, with calculations based on an inventory of parcels there. The table below summarizes this example.

Example Estimated Revenue from Simple Parcel Assessment

(based on parcel list, see Appendix B)

Category	Number of Parcels	Annual Assessment ($45 per parcel)
Residential Parcels	5,253	$ 236,385
Parcels	301	$ 13,545
Exempt Parcels	184	-
Total Revenue Per Year	-	$ 249,930

Utility Users Tax (UUT)

The City of Albany, similar to many cities in California, charges its residential and commercial utility customers a Utility Users Tax (UUT), which is collected by PG&E in customers' monthly utility bills, and forwarded to the City. At present, the Albany UUT is 7.0 percent of gas and electricity charges. Many cities in the East Bay charge similar or higher UUT's for municipal programs, with rates ranging from 5.5 percent (Emeryville) to 10.0 percent (Richmond). Berkeley, Oakland, and Piedmont charge 7.5 percent, and El Cerrito's rate is 8.0 percent.

As shown in Appendix C, an increase from the existing UUT of 7.0% to a possible 9.0% would raise the average residential utility bill by $1.74 per month, or $20.93 per year. The cost to business (commercial) is higher than residential, due to higher underlying average utility bills in Albany. The impacts of various levels of UUT increase are summarized in the table below.

Estimated Average Utility Bill with Varying Levels of UUT

Total (Electric + Gas)	**No UUT**	**7.0% UUT**	**7.5% UUT**	**8.0% UUT**	**8.5% UUT**	**9.0% UUT**
Avg. Residential Bill	$87.19					
Amount of UUT		$6.10	$6.54	$6.98	$7.41	$7.85
Bill with UUT		$93.30	$93.73	$94.17	$94.60	$95.04
Monthly Increase			$0.44	$0.87	$1.31	$1.74
Annual Increase			$5.23	$10.46	$15.69	$20.93
Avg. Commercial Bill	$833.15					
Amount of UUT		$58.32	$62.49	$66.65	$70.82	$74.98
Bill with UUT		$891.47	$895.64	$899.80	$903.97	$908.14
Monthly Increase			$4.17	$8.33	$12.50	$16.66
Annual Increase			$49.99	$99.98	$149.97	$199.96

A UUT increase to 9.0% to finance the CAP's implementation measures would raise approximately $200,000 per year, as summarized in the table below.

New Revenue From UUT Increase to 9.0%

Percent	**UUT Rate x PG&E Rev**	**Est Exempt from UUT (existing public agency exemptions)**	**Est UUT Rev for City***	**Est UUT Rev for City if CARE exempt**
7%	$872,247	$164,756	$707,491	$673,540
9%	$1,121,461	$211,829	$909,632	$865,980
Difference	$249,214	$47,073	$202,141	$192,440

* Estimated UUT revenue for city at current 7% and possible 9% rates (2013 data)
Source: PG&E

The advantages of using an increase in the UUT to finance CAP implementation are:

- Financing Tied Directly to Climate Action Goal (Reduced Energy Consumption). A UUT increase has the benefit of discouraging energy consumption while raising revenues to further reinforce consumption reductions. The direct relationship to energy consumption also enables the consumer to manage the expenditure, including the UUT. If the CAP implementation is successful, however, the funding stream will decline over future years.
- No Cost Collection and Administration. PG&E has indicated that it could collect the UUT increase as part of their current UUT collection on utility bills.
- Small Cost per Household. As shown, the UUT increase to 9.0% would add an average of $20.93 per year to the typical residential customer.
- Moderate Cost per Business. As shown above, due to higher average energy consumption by business compared to households in Albany, businesses would incur an average increase from the a UUT increase to 9.0% of $199.96 per year.
- Sunset Option. The UUT for Climate Action could be structured with a sunset, perhaps coinciding with the adopted 2020 reduction time frame

The principal disadvantage of a UUT increase is that a successful campaign for approval by the voters represents a substantial effort.

Additional consideration is needed regarding exemptions for low-income households within the PG&E CARE program. The estimated revenue would decrease by approximately $10,000 if CARE customers were exempt.

The current UUT is based on energy cost, since PG&E cannot tax electric and gas use at different rates. The use of electricity from PG&E creates less GHG emissions per unit of energy than does natural gas. Should PG&E change its billing capabilities, a modification to reflect an emissions-based tax could be considered.

Uses of Climate Action Fund

The proposed uses of new revenues are important to consider because it is not expected that any revenue measure would generate sufficient funds to implement the entire CAP, and therefore the City will have to make strategic decisions to implement certain measures while continuing to seek additional grants and other funding sources. Additionally, the Committee expects that identifying revenue uses will be an essential component of appealing to voters in favor of enacting a tax increase, if tax options are considered. Although these considerations apply also to donation-based fundraising, annual fund-raising drives have the flexibility to change their targeted uses from year to year in a way that a tax measure does not. The Committee examined three options for identifying how increased tax revenues would be used:

Option 1: Specific Allocations of Fund. This option would identify specific, discrete measures that would be funded with tax revenue, and ensure that the revenue is earmarked for these purposes. Specific allocation would give clear direction to City staff, and may have the benefit of providing voters with concrete reasons to vote in favor of a tax increase. However, this option limits flexibility over time, including limiting the City's ability to respond opportunistically to outside funding sources and low-cost implementation options.

Option 2: Unrestricted Fund Allocation. Unrestricted allocation places no restrictions on the use of revenue, except for CAP implementation. It provides the City with maximum

flexibility to efficiently implement CAP measures. At the same time, it may be difficult to communicate to voters how their taxes would be spent, which could be a barrier to generating voter support. In order to help explain a proposed tax increase to voters, the City could provide illustrative examples of how revenues would be spent to implement the CAP, without committing itself to funding specific CAP measures.

Option 3: Allocate Fund By Benefiting Category. This approach would dedicate a specific percentage of revenue to each of several defined sectors (i.e. residential, commercial, municipal, and possibly non-profit). It could provide sufficient information to voters, while also offering flexibility over time to the City. Funds allocated to non-profit organizations could be distributed back to community organizations via "mini-grants," using a process similar to the Albany Education Foundation. Encouraging community groups to undertake community projects could, in turn, engage larger segments of Albany, enhancing outreach and participation.

Appendix A – CAP Projects Implemented with Grant Funding

Project	**Detail**	**Funding Source**	**Outcome**
LED street light replacement	Replacement of all high pressure sodium vapor cobra head street lights to LED	ARRA energy efficiency grant and loan	Project complete
Residential "Green House Calls"	Contract with Rising Sun Energy Center to implement minor energy efficiency improvements	Climate showcase grant funds	Project complete; 113 homes visited
Residential Energy Efficiency Rebate Program	Rebate for energy efficiency audits and upgrades to residential homes (up to $590)	Climate showcase grant funds and regional grant funds	Project ongoing
Commercial Energy Efficiency Rebate Program	Rebate for energy efficiency upgrades to commercial buildings (up to $2000)	Climate showcase grant funds	Project ongoing
Municipal Building Upgrades	Heating upgrade – Childcare Center	Climate showcase grant funds	Project design phase
Municipal Building Alternative Energy	Solar Panels on City facilities	Climate showcase grant funds	RFQ/RFP packet under preparation
Zero Waste Planning	Identification of materials and sectors to target	Alameda County Measure D	Project ongoing
Residential/Commercial Energy Efficiency Ordinances	Development of requirements for energy upgrades	PG&E Pilot Innovator/Stopwaste.Org	Preliminary planning to determine regional opportunities
Energy Management Planning	Collaborative program with local small cities to analyze energy usage within City facilities and identify energy management opportunities/improvement	PG&E Pilot Innovator	3 interns retained to serve the collaborative

Appendix B: Detailed Parcel List

Estimate of Parcel Assessment Per Year

Parcel Type	Number of Parcels	Annual Assessment ($45.00 per parcel)
Exempt Properties (Estimate)		
Exempt public agencies	166	
Restricted income properties	1	
Property owned by a public utility	17	
Subtotal Exempt	184	$ -
Residential Parcels		
Vacant residential land zoned for < four units	24	
Single fami ly residential home used as such	3663	
Single fami ly residential home wI 2nd living unit	28	
Single family residential home w/slight comrn . use	1	
Planned development (townhouse type)	7	
Planned development commo n area (townhou se type)	1	
Planned development (tract type) with common area	10	
Planned development commo n area (tract type)	6	
Two three or four single fami ly homes	55	
Double or duplex	129	
Triplex; double or duplex w single Fam Res home	3 9	
Four living units; e9 fourplex; triplex w/S F Res	6 1	
Residential property of 2 living units val<code 22	2 3	
Residential property of 3 living units val<code 23	6	
Residential property converted to 5 or more units	4	
Condominiums	1077	
Common area of condominium or planned development	31	
Multiple residential properties > 5 units	88	
Subtotal Residential	5253	$236,385
Commercial Parcels		
Vacant commercial land (may include misc. imps)	10	
One -story store 7 8		
Store on 1st fI w/office or apts on 2nd or 3rd fls	34	
Miscellaneous commercial (improved)	15	
Discount House	8	
Restaurant	15	
Supermarket	1	
Commercial or industrial condominium to sale of 1unit	6	
Vacant industrial land (may include misc imps)	2	
Warehouse	1	
light Industrial	5	

Heavy industrial(factories batching plants etc)	3	
Nurseries	1	
Schools	3	
Churches	6	
Lodgehalls and clubhouses	2	
Car washes	1	
Commercial garages (repair)	19	
Automobile dealerships	2	
Parking Lots	16	
Service stations	5	
Nursing or boarding homes	1	
Banks	5	
Medical-Dental	29	
1 to 5 story offices	25	
Bowling alleys	1	
Theaters (walk-in)	3	
Other recreational: rinks; stadiums; race tracks	4	
Subtotal Commercial	301	$13,545
Total Revenue Per Year		$249,930

Appendix C: UUT Detail

Average UUT Increase Per Customer Per Month

	Existing UUT	Possible UUT	Change	Change
	7.0%	9.0%	Per Month	Per Year
Electric				
Residential Per Month				
Avg. Bill without UUT	$49.63	$49.63	$0.00	
Amount of UUT	$3.47	$4.47	$0.99	
Avg. Total Bill	$53.11	$54.10	$0.99	**$ 11.91**
Commercial Per Month				
Avg. Bill without UUT	$615.76	$615.76	$0.00	
Amount of UUT	$43.10	$55.42	$12.32	
Avg. Total Bill	$658.87	$671.18	$12.32	**$ 147.78**
Gas				
Residential Per Month				
Avg. Bill without UUT	$37.56	$37.56	$0.00	
Amount of UUT	$2.63	$3.38	$0.75	
Avg. Total Bill	$40.19	$40.94	$0.75	**$ 9.01**
Commercial Per Month				
Avg. Bill without UUT	$217.39	$217.39	$0.00	
Amount of UUT	$15.22	$19.57	$4.35	
Avg. Total Bill	$232.61	$236.96	$4.35	**$ 52.17**
Total (Electric + Gas)				
Residential Per Month				
Avg. Bill without UUT	$87.19	$87.19	$0.00	
Amount of UUT	$6.10	$7.85	$1.74	
Avg. Total Bill	$93.30	$95.04	$1.74	**$ 20.93**
Commercial Per Month				
Avg. Bill without UUT	$833.15	$833.15	$0.00	
Amount of UUT	$58.32	$74.98	$16.66	
Avg. Total Bill	$891.47	$908.14	$16.66	**$ 199.96**

Source: PG & E data provided to City of Albany