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City of Riverside
LONG-RANGE LOAD FORECAST

February 1st, 2008

by Ron Barry, Principal Power Resource Analyst

A. TASK AND PURPOSE

The load forecast is an integral part of the Riverside Public Utilities' power resource planning process, where forecasted peak demands and energy requirements are vital for determining resource acquisitions and MRTU strategies. It is also an effective document for determining future retail sales revenue and strategic planning for the electric distribution system.

B. METHODOLOGY

SUMMARY

The objective of the load forecast model is to produce monthly system energy requirements and monthly peak demands. This is achieved by analyzing data of customer class components and examining trends in customer growth and energy use. Forecasts of customer growth are then developed using population and/or employment projections. This method applies to Residential and Commercial classes. The Miscellaneous class, which makes up 2% of the system energy requirements, is modeled as a simple function of City population. Monthly peak demands are then derived by applying monthly load factors to the monthly energy requirements.

CUSTOMER CLASSES

To analyze historical energy usage, customers were divided into three classes:

- Residential: Includes all rate subclasses.
- Commercial: Includes all commercial, industrial and large time-of-use customers. It was impossible to refine the data into smaller granularity due to significant customer migration between subclasses over the past few years.
- Miscellaneous: Includes outdoor lighting, street lights and traffic signals.

INDEPENDENT VARIABLES

A variety of independent variables and combinations of variables were evaluated in the customer energy use sub-models to identify which ones were most significant for each customer class. The historical data selected for independent variables, in order of significance, were: city population, heating and cooling degree-days, county employment, retail price of electricity and city per-capita income.

STATISTICAL ANALYSIS

Linear regressions of energy sales were run for Residential and Commercial classes using monthly historical data from January 2002 through December 2007. The linear equations developed from these regressions were then used to project monthly energy sales by customer class for 2008 through 2026. Linear regressions on the small Miscellaneous class were not viable due to significant migration of accounts to the Commercial class over the past few years.

C. ENERGY SALES BY CUSTOMER CLASS

RESIDENTIAL

The residential rate class makes up 90% of the City's electric customers and accounts for 35% of total energy sales. Over the past ten years, (1998-2007), energy sales grew at an average annual rate of 2.6%. During the same period, City population—the primary driver for this class—grew at an average annual rate of 1.9%. This would conclude that energy use per customer is increasing.

Population, electricity price, and cooling and heating degree-days were the independent variables used in the historical energy sales regression analysis, where:

Monthly Residential Energy Sales =
(Population * 0.7590) + (CDD * 92) + (HDD * 36) – (Price * 1,353,977)

Applying this equation to the forecast model, residential energy sales are expected to grow at an average annual rate of 1.8% between 2008 and 2017. Over the same period, City population is projected to grow at an average annual rate of 1.6%.

COMMERCIAL

The commercial rate classes make up 10% of the City's electric customers, but account for 63% of total energy sales. Over the past ten years, (1998-2007), energy sales grew at an average annual rate of 3.0%. During the same period, County employment—the primary driver for this class—grew at an average annual rate of 3.8%.

Employment, cooling and heating degree-days were the independent variables used in the historical energy sales regression analysis, where:

Monthly Commercial Energy Sales = (Employ * 0.1248) + (CDD * 48) – (HDD * 20)

Applying this equation to the forecast model, commercial energy sales are expected to grow at an average annual rate of 2.2% between 2008 and 2017. Over the same period, County employment is projected to grow at an average annual rate of 2.3%.

MISCELLANEOUS

The miscellaneous rate class accounts for only 2% of total energy sales. Due to a significant migration of meters into the commercial class the past few years, it was impossible to perform regression analysis on this data. Therefore the miscellaneous class was forecasted as a simple function of City population, starting with 2007 data, where:

Monthly Miscellaneous Energy Growth Rate = City Population Growth Rate

Applying this equation to the forecast model, miscellaneous energy sales are expected to grow at an average annual rate of 1.6% between 2008 and 2017.

D. SYSTEM ENERGY FORECAST

SYSTEM ENERGY REQUIREMENTS

Once the monthly energy sales forecast model for the three customer classes is completed, the data is summed to obtain total annual energy sales. To obtain a total system energy requirement, distribution losses of 5% are added to the total energy sales, where:

Monthly System Energy Requirement = Monthly Energy Sales * 1.05

System energy requirements are forecasted to grow at an average annual rate of 2.1% between 2008 and 2017. For comparison, the annual growth rate averaged 2.7% from 1998 to 2007.

MONTHLY PEAK DEMANDS

Average monthly load factors were developed from historical energy and peaks (1991-2007), where:

$$\textit{Monthly Load Factor} = \frac{\textit{Monthly Peak Load (MW)}}{\textit{Monthly Energy (MWh)}}$$

Forecasted monthly peak demands were then calculated by multiplying the respective month's load factor by the forecasted monthly energy requirement, where:

Monthly Peak Load = Monthly Energy Requirement * Monthly Load Factor

E. SCENARIO ANALYSIS

ADVERSE WEATHER

In the forecast model, “normalized” monthly cooling degree-days and heating degree-days were used as independent variables. Therefore, the energy and peaks in the forecast expect “normal” weather throughout the years. However, weather conditions play a significant role in how the City’s customers use energy. Summer heat waves especially have a big impact due to increased air conditioning load. For this reason, two model scenarios were run to reflect adverse hot and adverse cool weather conditions.

HOT SCENARIO

For the effects of adverse warm weather, cooling and heating degree-days from the warmest year in the past twenty were used in the forecast model. The outcome demonstrated that adverse warm weather can increase annual energy requirements by 4.4% and annual peak loads by 7.4%.

COOL SCENARIO

For the effects of adverse cool weather, cooling and heating degree-days from the coolest year in the past twenty were used in the forecast model. The outcome demonstrated that adverse cool weather can reduce annual energy requirements by 2.3% and annual peak loads by 6.8%.

F. FORECAST TABLES AND GRAPHS

MONTHLY ENERGY (MWh)

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
2008	173,635	172,490	172,440	170,016	180,288	200,682	225,784	229,187	213,055	184,289	174,489	178,466	**2,274,821**
2009	177,532	176,390	176,350	173,928	184,209	204,612	229,722	233,138	217,014	188,255	178,464	182,463	**2,322,077**
2010	181,515	180,377	180,348	177,928	188,217	208,629	233,748	237,178	221,060	192,310	182,526	186,548	**2,370,383**
2011	185,586	184,452	184,434	182,016	192,315	212,735	237,862	241,307	225,197	196,454	186,679	190,725	**2,419,762**
2012	189,748	188,619	188,610	186,195	196,503	216,933	242,069	245,528	229,425	200,690	190,924	194,993	**2,470,237**
2013	194,003	192,877	192,880	190,467	200,784	221,223	246,368	249,842	233,747	205,021	195,263	199,357	**2,521,832**
2014	198,351	197,230	197,244	194,833	205,161	225,609	250,763	254,252	238,165	209,447	199,699	203,816	**2,574,571**
2015	202,797	201,680	201,705	199,297	209,634	230,092	255,255	258,760	242,680	213,971	204,232	208,375	**2,628,480**
2016	207,340	206,228	206,265	203,859	214,207	234,675	259,847	263,368	247,296	218,596	208,867	213,035	**2,683,584**
2017	211,985	210,877	210,926	208,523	218,881	239,359	264,541	268,078	252,014	223,323	213,603	217,797	**2,739,909**
2018	216,732	215,630	215,691	213,290	223,659	244,147	269,339	272,892	256,837	228,155	218,445	222,665	**2,797,482**
2019	221,585	220,487	220,561	218,163	228,542	249,041	274,243	277,813	261,766	233,094	223,394	227,641	**2,856,331**
2020	226,545	225,452	225,538	223,144	233,534	254,044	279,256	282,843	266,804	238,142	228,453	232,727	**2,916,482**
2021	231,615	230,527	230,626	228,235	238,636	259,157	284,380	287,984	271,954	243,302	233,623	237,925	**2,977,965**
2022	236,797	235,715	235,827	233,438	243,852	264,384	289,617	293,239	277,218	248,576	238,908	243,238	**3,040,808**
2023	242,094	241,017	241,143	238,757	249,182	269,726	294,970	298,610	282,599	253,967	244,309	248,669	**3,105,041**
2024	247,508	246,437	246,576	244,194	254,631	275,186	300,441	304,099	288,098	259,476	249,830	254,219	**3,170,696**
2025	253,042	251,976	252,129	249,751	260,200	280,767	306,034	309,711	293,719	265,108	255,474	259,892	**3,237,802**
2026	258,698	257,638	257,806	255,430	265,892	286,472	311,750	315,446	299,464	270,864	261,241	265,690	**3,306,391**

MONTHLY PEAKS (MW)

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	0.001791	0.001780	0.001840	0.002100	0.002271	0.002440	0.002500	0.002530	0.002530	0.002200	0.001976	0.001800
2008	311	307	317	357	409	490	564	**580**	539	405	345	321
2009	318	314	324	365	418	499	574	**590**	549	414	353	328
2010	325	321	332	374	427	509	584	**600**	559	423	361	336
2011	332	328	339	382	437	519	595	**611**	570	432	369	343
2012	340	336	347	391	446	529	605	**621**	580	442	377	351
2013	347	343	355	400	456	540	616	**632**	591	451	386	359
2014	355	351	363	409	466	550	627	**643**	603	461	395	367
2015	363	359	371	419	476	561	638	**655**	614	471	404	375
2016	371	367	380	428	486	573	650	**666**	626	481	413	383
2017	380	375	388	438	497	584	661	**678**	638	491	422	392
2018	388	384	397	448	508	596	673	**690**	650	502	432	401
2019	397	392	406	458	519	608	686	**703**	662	513	441	410
2020	406	401	415	469	530	620	698	**716**	675	524	451	419
2021	415	410	424	479	542	632	711	**729**	688	535	462	428
2022	424	420	434	490	554	645	724	**742**	701	547	472	438
2023	434	429	444	501	566	658	737	**755**	715	559	483	448
2024	443	439	454	513	578	671	751	**769**	729	571	494	458
2025	453	449	464	524	591	685	765	**784**	743	583	505	468
2026	463	459	474	536	604	699	779	**798**	758	596	516	478

SCENARIO: MONTHLY ENERGY (MWh) in Adverse Hot Weather

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
2008	173,635	173,970	176,141	177,417	185,469	215,189	242,216	246,063	232,596	190,507	181,891	178,466	**2,373,560**
2009	177,489	177,831	180,009	181,293	189,351	219,079	246,113	249,967	236,508	194,426	185,817	182,401	**2,420,283**
2010	181,429	181,778	183,964	185,254	193,320	223,055	250,097	253,959	240,507	198,432	189,831	186,423	**2,468,047**
2011	185,457	185,813	188,006	189,304	197,377	227,120	254,169	258,039	244,594	202,527	193,934	190,535	**2,516,875**
2012	189,575	189,938	192,139	193,443	201,525	231,275	258,332	262,210	248,773	206,714	198,128	194,738	**2,566,788**
2013	193,784	194,154	196,363	197,675	205,764	235,523	262,587	266,474	253,045	210,993	202,415	199,034	**2,617,812**
2014	198,086	198,465	200,682	202,001	210,098	239,865	266,938	270,833	257,411	215,368	206,798	203,427	**2,669,971**
2015	202,485	202,871	205,096	206,423	214,529	244,303	271,384	275,288	261,875	219,840	211,278	207,916	**2,723,289**
2016	206,981	207,375	209,609	210,944	219,058	248,841	275,930	279,843	266,438	224,411	215,858	212,506	**2,777,792**
2017	211,577	211,979	214,222	215,565	223,687	253,479	280,577	284,499	271,102	229,084	220,540	217,197	**2,833,506**
2018	216,275	216,686	218,937	220,288	228,420	258,220	285,327	289,258	275,870	233,861	225,325	221,993	**2,890,458**
2019	221,078	221,497	223,757	225,117	233,257	263,066	290,182	294,123	280,744	238,743	230,217	226,894	**2,948,674**
2020	225,987	226,414	228,684	230,052	238,202	268,020	295,145	299,095	285,726	243,734	235,217	231,905	**3,008,182**
2021	231,005	231,441	233,721	235,097	243,256	273,084	300,218	304,178	290,818	248,836	240,328	237,027	**3,069,010**
2022	236,134	236,580	238,869	240,254	248,423	278,261	305,404	309,374	296,023	254,051	245,553	242,262	**3,131,188**
2023	241,377	241,832	244,131	245,526	253,704	283,552	310,705	314,685	301,344	259,381	250,893	247,614	**3,194,745**
2024	246,737	247,201	249,510	250,914	259,103	288,960	316,124	320,114	306,783	264,830	256,352	253,084	**3,259,711**
2025	252,215	252,689	255,008	256,422	264,621	294,488	321,662	325,663	312,342	270,400	261,932	258,675	**3,326,117**
2026	257,814	258,299	260,628	262,052	270,261	300,139	327,323	331,336	318,025	276,092	267,635	264,390	**3,393,994**

SCENARIO: MONTHLY PEAKS (MW) in Adverse Hot Weather

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	0.001791	0.001780	0.001840	0.002100	0.002271	0.002440	0.002500	0.002530	0.002530	0.002200	0.001976	0.001800
2008	311	310	324	373	421	525	606	**623**	588	419	359	321
2009	318	317	331	381	430	535	615	**632**	598	428	367	328
2010	325	324	338	389	439	544	625	**643**	608	437	375	336
2011	332	331	346	398	448	554	635	**653**	619	446	383	343
2012	340	338	354	406	458	564	646	**663**	629	455	392	351
2013	347	346	361	415	467	575	656	**674**	640	464	400	358
2014	355	353	369	424	477	585	667	**685**	651	474	409	366
2015	363	361	377	433	487	596	678	**696**	663	484	417	374
2016	371	369	386	443	497	607	690	**708**	674	494	427	383
2017	379	377	394	453	508	618	701	**720**	686	504	436	391
2018	387	386	403	463	519	630	713	**732**	698	514	445	400
2019	396	394	412	473	530	642	725	**744**	710	525	455	408
2020	405	403	421	483	541	654	738	**757**	723	536	465	417
2021	414	412	430	494	552	666	751	**770**	736	547	475	427
2022	423	421	440	505	564	679	764	**783**	749	559	485	436
2023	432	430	449	516	576	692	777	**796**	762	571	496	446
2024	442	440	459	527	588	705	790	**810**	776	583	507	456
2025	452	450	469	538	601	719	804	**824**	790	595	518	466
2026	462	460	480	550	614	732	818	**838**	805	607	529	476

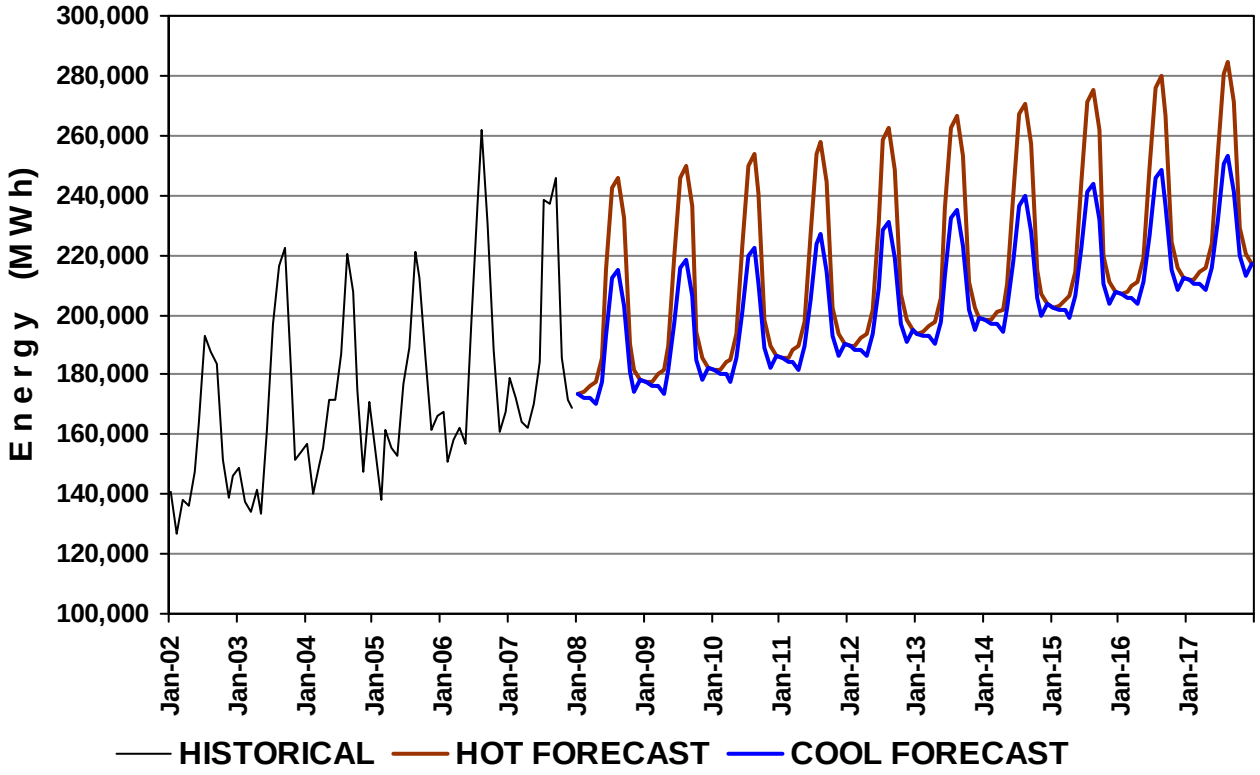
SCENARIO: MONTHLY ENERGY (MWh) in Adverse Cool Weather

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
2008	173,635	172,490	172,440	170,016	177,499	193,006	212,061	214,812	202,700	181,103	174,489	178,466	**2,222,716**
2009	177,489	176,351	176,308	173,891	181,382	196,895	215,958	218,716	206,611	185,022	178,415	182,401	**2,269,439**
2010	181,429	180,298	180,263	177,852	185,351	200,871	219,941	222,708	210,610	189,028	182,429	186,423	**2,317,203**
2011	185,457	184,333	184,305	181,902	189,408	204,936	224,014	226,788	214,698	193,123	186,532	190,535	**2,366,030**
2012	189,575	188,457	188,438	186,042	193,555	209,091	228,177	230,959	218,877	197,310	190,726	194,738	**2,415,944**
2013	193,784	192,674	192,662	190,273	197,795	213,339	232,432	235,223	223,148	201,589	195,014	199,034	**2,466,968**
2014	198,086	196,984	196,981	194,599	202,129	217,681	236,782	239,582	227,515	205,964	199,396	203,427	**2,519,127**
2015	202,485	201,390	201,395	199,021	206,559	222,120	241,229	244,037	231,979	210,436	203,877	207,916	**2,572,445**
2016	206,981	205,895	205,908	203,542	211,088	226,657	245,775	248,592	236,541	215,007	208,456	212,506	**2,626,948**
2017	211,577	210,499	210,521	208,163	215,718	231,295	250,422	253,247	241,206	219,680	213,138	217,197	**2,682,662**
2018	216,275	215,205	215,236	212,886	220,450	236,036	255,172	258,007	245,974	224,457	217,923	221,993	**2,739,613**
2019	221,078	220,016	220,056	217,715	225,288	240,883	260,027	262,871	250,847	229,339	222,815	226,894	**2,797,829**
2020	225,987	224,934	224,983	222,650	230,232	245,837	264,990	267,844	255,829	234,330	227,815	231,905	**2,857,337**
2021	231,005	229,961	230,020	227,696	235,287	250,901	270,063	272,927	260,922	239,432	232,926	237,027	**2,918,166**
2022	236,134	235,099	235,168	232,853	240,454	256,077	275,249	278,123	266,127	244,647	238,151	242,262	**2,980,344**
2023	241,377	240,352	240,430	238,124	245,735	261,368	280,550	283,434	271,448	249,978	243,491	247,614	**3,043,901**
2024	246,737	245,721	245,809	243,513	251,133	266,776	285,968	288,863	276,886	255,426	248,950	253,084	**3,108,867**
2025	252,215	251,209	251,307	249,021	256,651	272,305	291,507	294,412	282,446	260,996	254,530	258,675	**3,175,272**
2026	257,814	256,818	256,927	254,650	262,292	277,955	297,168	300,084	288,128	266,689	260,233	264,390	**3,243,150**

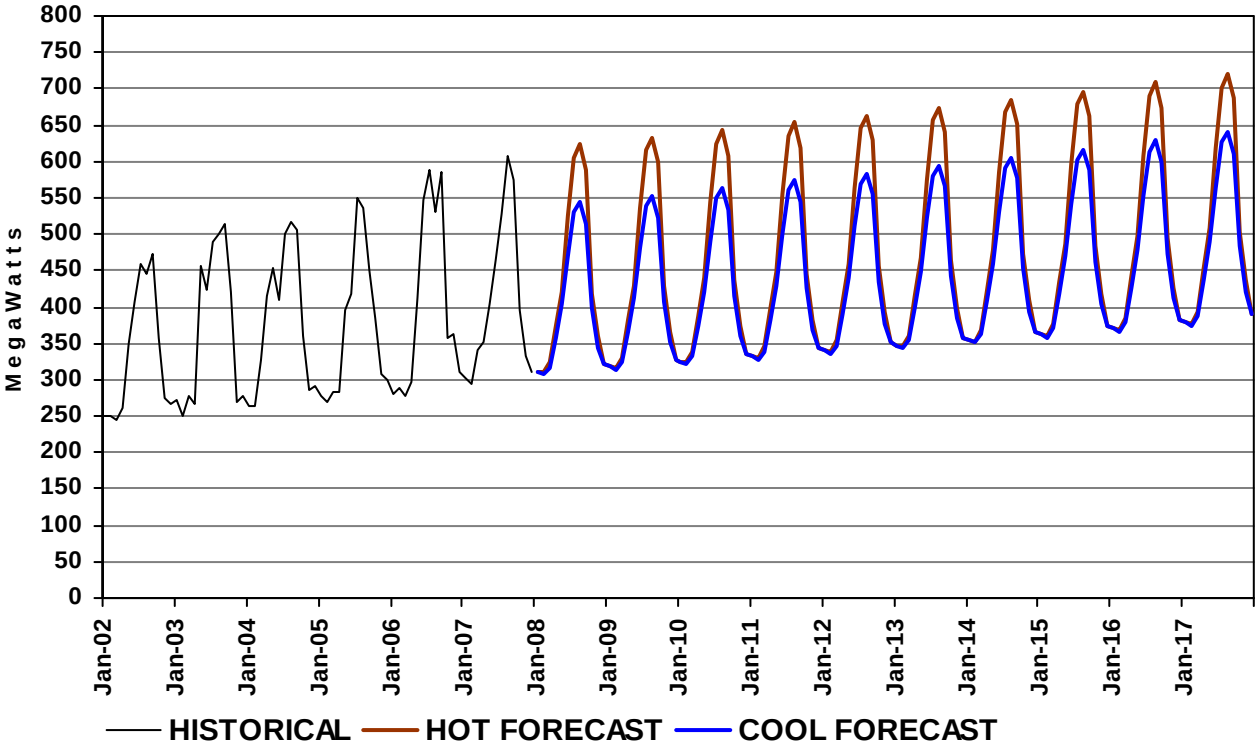
SCENARIO: MONTHLY PEAKS (MW) in Adverse Cool Weather

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	0.001791	0.001780	0.001840	0.002100	0.002271	0.002440	0.002500	0.002530	0.002530	0.002200	0.001976	0.001800
2008	311	307	317	357	403	471	530	**543**	513	398	345	321
2009	318	314	324	365	412	480	540	**553**	523	407	353	328
2010	325	321	332	373	421	490	550	**563**	533	416	360	336
2011	332	328	339	382	430	500	560	**574**	543	425	369	343
2012	340	335	347	391	440	510	570	**584**	554	434	377	351
2013	347	343	354	400	449	521	581	**595**	565	443	385	358
2014	355	351	362	409	459	531	592	**606**	576	453	394	366
2015	363	358	371	418	469	542	603	**617**	587	463	403	374
2016	371	366	379	427	479	553	614	**629**	598	473	412	383
2017	379	375	387	437	490	564	626	**641**	610	483	421	391
2018	387	383	396	447	501	576	638	**653**	622	494	431	400
2019	396	392	405	457	512	588	650	**665**	635	505	440	408
2020	405	400	414	468	523	600	662	**678**	647	516	450	417
2021	414	409	423	478	534	612	675	**691**	660	527	460	427
2022	423	418	433	489	546	625	688	**704**	673	538	471	436
2023	432	428	442	500	558	638	701	**717**	687	550	481	446
2024	442	437	452	511	570	651	715	**731**	701	562	492	456
2025	452	447	462	523	583	664	729	**745**	715	574	503	466
2026	462	457	473	535	596	678	743	**759**	729	587	514	476

System Energy Requirements



System Peak Demands



G. REGRESSION STATISTICS AND DATA SOURCES

REGRESSION STATISTICS

The following are the regressional statistics for historical energy sales in the Residential and Commercial rate classes.

RESIDENTIAL

Multiple R	0.9917
R Square	0.9834
Adj R Square	0.9680
Standard Error	7,884
Observations	72

	df	**SS**	**MS**	**F**
Regression	4	2.505E+11	6.262E+10	1,007
Residual	68	4.226E+9	62,157,014	
Total	72	2.547E+11		

	Coefficients	**Std Error**	**t Stat**	**P-value**
Population	0.759027	0.294638	2.57613	0.012167
CDD	91.9939	8.16665	11.2645	3.36E-17
HDD	36.0868	11.3473	3.18021	0.002217
Price	-1,353,977	642,387	-2.10772	0.038743

COMMERCIAL

Multiple R	0.9984
R Square	0.9968
Adj R Square	0.9823
Standard Error	6,023
Observations	72

	df	**SS**	**MS**	**F**
Regression	3	7.911E+11	2.637E+10	7,268
Residual	69	2.503E+9	36,282,195	
Total	72	7.936E+11		

	Coefficients	**Std Error**	**t Stat**	**P-value**
CDD	48.5936	6.20794	7.82765	4.13E-11
HDD	-19.5283	8.61698	-2.26626	0.026575
Employment	0.124789	0.002395	52.0962	3.9E-57

DATA SOURCES

The following data sources were used in this forecast model:

Customer Energy Sales:	RPU-Finance
Retail Electricity Prices:	RPU-Finance
City Population:	City Planning Dept.
Cooling/Heating Degree-Days:	Nat'l Weather Bureau (UCR Station)
County Employment—historical:	State Finance Dept.
County Employment—projections:	City Planning Dept / Webb & Assoc.
Historical Energy/Peak Loads:	RPU-Power Resources

Energy Efficiency in California's Public Power Sector

A Status Report

MARCH 2008

CALIFORNIA MUNICIPAL UTILITIES ASSOCIATION

NCPA
A PUBLIC AGENCY
NORTHERN CALIFORNIA POWER AGENCY

SCPPA

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Executive Summary

California Senate Bill 1037 (Kehoe), signed into law in September 2005, established several important policies regarding energy efficiency. Among the many provisions of the law is a statewide commitment to cost-effective and feasible energy efficiency, with the expectation that all utilities consider energy efficiency before investing in any other resources to meet growing demand.

This report, *Energy Efficiency in California's Public Power Sector: A 2008 Status Report* complies with Section 6 of the statute, requiring each publicly-owned utility (POU) to "report annually to its customers and to the State Energy Resources Conservation and Development Commission, its investment in energy efficiency and demand reduction programs." Thirty-nine POUs are submitting energy efficiency data in compliance with the provisions of the legislation.

The California Municipal Utilities Association (CMUA), in partnership with the Northern California Power Agency (NCPA) and the Southern California Public Power Authority (SCPPA), began a collaborative effort in October 2005 to develop an evaluation tool to measure energy efficiency program effectiveness and report program savings in a consistent and comprehensive manner. In December 2006, the first joint publicly owned utility report on energy efficiency was submitted to the California Energy Commission (CEC). This collaboration continues today, and this report takes into consideration several reporting modifications made in response to the enactment of California Assembly Bill 2021.

POUs continue their long-standing commitment to energy efficiency, an extension of fundamental principles dedicated to social and environmental responsibility, ensuring reliability, and keeping rates low for the communities that they serve. Even with this commitment, the cost for each utility to deliver energy savings can vary dramatically from year-to-year, depending on the customer base of the individual utility, the climate zone in which the utility resides, and the physical size of the service territory.

The principal findings and conclusions of this analysis are as follows:

- Public power energy efficiency programs provide more than three dollars of societal benefits for every dollar spent. Applying the Total Resource Cost (TRC) societal test, the weighted average cost effectiveness for all publicly owned energy efficiency programs in FY06/07 was 3.15. By comparison, programs authorized by the California Public Utilities Commission (CPUC) for the investor-owned utilities range between 1.6 and 2.8.

- During FY 06/07, POUs spent $63 million on energy efficiency programs, reducing peak demand by 57 megawatts and in excess of 254 million kilowatt-hours on an annual basis. POU energy efficiency expenditures for FY07/08 are expected to increase to $146 million during FY06/07, reducing demand by 118 megawatts during the summer peak and 541 million kilowatt-hours over the course of the year.

- For most of the 39 POUs, actual energy efficiency program savings in FY06/07 exceeded the savings estimated by the group of publicly-owned utilities in the 2006 report.

- Operational efficiency savings, considered "procurement" investments by the public power community, was reported by five POUs, providing 574 kilowatts of peak demand reduction and a savings of 5.2 million kilowatt-hours. Additional operational improvements by NCPA at its geothermal facilities at the Geysers and hydroelectric facilities provided some additional savings, but are not reflected in the totals.

- Lighting continues to dominate public power energy efficiency programs, accounting for approximately three-fifths of total energy savings achieved. However, POUs recognize that the growing saturation of the lighting market will require all utilities in the state to more aggressively deploy non-lighting efficiency programs going forward.

- Energy efficiency is a critical tool for POUs to reduce greenhouse gas emissions in California. FY06/07 programs within the public power community will reduce statewide greenhouse gas emissions by 1.5 million tons CO_2 equivalent over the lifetime of the installed measures. Current year programs are expected to save another 3.3 million tons.

I. Introduction

The California Municipal Utilities Association submits this second report providing an update on the status of publicly-owned utility energy efficiency programs. The report complies with Section 6 of Senate Bill 1037 (SB1037) and Section 3 of Assembly Bill 2021 (AB2021), which require each publicly-owned utility to:

> "Report annually to its customers and to the State Energy Resources Conservation and Development Commission, its investment in energy efficiency and demand reduction programs. A report shall contain a description of programs, expenditures, and expected and actual energy savings results."

Thirty-nine publicly-owned utilities (POUs) are submitting data in compliance with the provisions of the legislation.

The following report contains six sections beyond this introduction. Section II provides public power's roles and responsibilities and can be viewed as an expansion of Section III of the 2006 report. Section III provides an overview of the approaches being undertaken by public power to measure and verify energy efficiency savings. Section IV provides the results of the energy efficiency programs, with a range of discussion at some level of POU aggregation. Individual program data and summaries are contained in a comprehensive Appendix. Section V touches on the extent of demand reduction programs within the public power community. Section VI provides initial results and discussion on operational efficiency achievements by public power that contributes to the state's overall energy efficiency saving goals. The last section offers principal conclusions, but also offers some insights about the direction of future reports.

II. Public Power Energy Efficiency Reporting Roles and Responsibilities

Overview of Various Requirements Surrounding SB1037 and AB2021

Many of the basic provisions of SB1037 were retained by the adoption of AB2021 in 2006. One of the principal changes in the statute was the requirement that public power disclose the sources of funding for its investments in energy efficiency and demand reduction. Proponents of this provision stated their desire to encourage utilities to invest in energy efficiency as an alternative to generation investment. Recognizing the importance of the four elements of public benefits programs (energy efficiency, renewables, research and development, and low income assistance), the statute required that additional energy efficiency expenditures not come at the expense of low income or renewable programs.

Within the public power community, two important insights are important to share. First, POUs are not raiding the other three categories of their respective public benefits programs to expand energy efficiency programs. In fact, in many cases, expenditures in these other categories have

also increased, partially driven by the creation and expansion of solar programs in response to Senate Bill 1 directives (Statutes of 2006).

Second, the notion of deferring generation investment is different in the POU and investor-owned utility (IOU) business models. In the IOU model, deferring generation investment comes in the scale of megawatts. By comparison, most POUs update resource plans in terms of kilowatts. POU "procurement" efforts focus on generation, transmission, and distribution improvements. More detail on this concept will be described in Section IV of this report.

Energy Efficiency (EE) Reporting Tool

The Energy Efficiency (EE) Reporting Tool enables California's POUs to efficiently report the expenditures and energy savings related to their energy efficiency programs in a consistent manner that is comparable with the results reported by California's three IOUs. Because California's municipal utilities vary widely in terms of their size and the development of their EE programs, the EE Reporting Tool is designed to accommodate a range of experience and staffing levels.

The EE Reporting Tool is an Excel Spreadsheet developed by Energy and Environmental Economics (E3)[1] that contains a database of energy efficiency measures developed by KEMA, Incorporated (KEMA). Utilities select the measures that best represent the programs they have implemented and enter the relevant data. Relying on default values and assumptions contained in the EE Reporting Tool, utilities may enter as little as the number of units installed, the incentive provided to the customer and overhead costs to report meaningful results. Alternatively, utilities may modify or enter their own assumptions and create customized measures that better reflect their programs or service territory. The EE Reporting Tool then provides summary tables by program category that report the units installed, achieved savings, program costs, and cost effectiveness.

The 2006 report contained a detailed description of the reporting tools inputs and methodologies and will not be repeated here. However, in 2007, E3 updated the reporting tool to provide several enhancements and increase user-flexibility. For the wide range of utility specialists using the E3 model, several changes were made to the design and layout of the spreadsheet to improve the ease of use. For example, individual measures and overhead costs can now be assigned to specific programs, allowing utilities to report results by program as well as by measure category. A new field for upstream incentives was added for distributor or buy-down programs that do not pay incentives directly to end-use customers. E3 also added the ability to enter resource savings and avoided costs for natural gas and water use.

All of the above-mentioned work was done with the idea of updating the CEC reporting forms so that they match current report formats and categories. The following paragraphs provide further discussion on changes made to the EE Reporting Tool.

[1] E3 was the lead contractor in developing the "E3 Calculator" for reporting to the CPUC about PG&E, SCE, SoCalGas, and SDG&E energy efficiency programs.

Better Defining the Total Resource Cost (TRC) Test

The calculation of the TRC in the EE Reporting Tool was modified to be consistent with a CPUC ruling issued in September 2007 (Decision 07-09-043). In the decision, the CPUC modified how "free-rider" costs are accounted for in the TRC test. The net-to-gross ratio is used to account for free-riders that would have installed the energy efficiency measure even absent an incentive. A net-to-gross ratio of 0.80 implies that 20 percent of the participants are free-riders and that the energy savings from those customers should not be attributed to the utility program. Measure savings are reduced by the net-to-gross ratio when performing the standard costs tests. There was, however, disagreement regarding how the net-to-gross ratio should be applied to the cost side of the equation.

In general, the IOUs argued that all rebates and incentives paid by a utility should be treated as intra-regional transfers, which are excluded from the TRC test. Using this approach, incentives paid to free-riders are not included as a program cost.

The Utility Reform Network (TURN), the CPUC's Division of Ratepayer Advocates (DRA) and the Natural Resources Defense Council (NRDC) argued that incentive payments made to free-riders should be included as a cost of the efficiency program. These parties argued that incentives paid to free-riders are a cost borne by ratepayers that do not participate in the program.[2] The CPUC agreed with the latter position and incentives paid to free-riders are now included as a cost in the TRC.

Both incentive and direct install costs are treated the same in the model: they offset the measure installation cost. Incentives or direct install costs paid to free riders are included as a cost in the calculation of the TRC. In the numerical example that follows on Table 1, the report looks at the hypothetical savings surrounding a refrigerant recharge program. In this case, the calculated TRC using the current formula is somewhat lower than the TRC estimate using the previous formula.

[2] Including free-rider incentive costs is also consistent with the Standard Practice Manual interpretation that the TRC is the sum of the Participant Cost Test (PCT) and the Non-participant Cost Test or Ratepayer Impact Measure (RIM)

Table 1
Numerical Example Showing Difference in TRC Formulas
Refrigerant Recharge Program

Annual kWh savings	Measure Life	NTG Ratio	Measure Savings	Variable Overhead
200	8	0.80	$125	$15
Units Installed	**Measure Cost**	**Customer Incentive**	**Utility Direct Install Cost**	**Net Customer Cost**
10	$75		$65	$10

Previous TRC Formula		
Utility Cost	10 Units * ($65 + $15)	$800
Participant Cost	10 Units * ($75 - $65) *0.80	$80
Total Resource Cost		$880
Total Resource Benefit	10 Units * $125 * 0.80	$1,000
TRC Ratio	$1000/$880	1.14

Current TRC Formula		
Utility Cost	10 Units * ($65 + $15 +(1-0.80)*$65)	$930
Participant Cost	10 Units * ($75 - $65) *0.80	$80
Total Resource Cost		$1,010
Total Resource Benefit	10 Units * $125 * 0.80	$1,000
TRC Ratio	$1000/$1,010	0.99

Avoided Cost Module Enhancements

Three avoided cost elements were added to the EE Reporting Tool in 2007. In each case, the additional cost elements are based on the E3 Avoided Costs methodologies developed for the CPUC in its current energy efficiency proceeding. The methodology for each element is described in more detail in the E3 Avoided Cost Report, available on the E3 website.[3]

Transmission and Distribution Avoided Costs

The 2007 EE Reporting Tool was updated to include transmission and distribution (T&D) costs from the CPUC-approved avoided costs for each IOU. As part of the avoided cost methodology, T&D investment plans provided by each IOU were used to estimate marginal T&D costs by climate zone for each IOU. These T&D costs were then allocated to peak hours of the year using a time-dependent valuation methodology.

[3] "*Methodology and Forecast of Long Term Avoided Costs for The Evaluation of California Energy Efficiency Programs* ". Available at http://www.ethree.com/cpuc_avoidedcosts.html

The T&D avoided costs reflect the investment plans of the three California IOUs as opposed to the individual municipal utilities for which this report is produced. Though it would have been ideal to base T&D costs on the investment plans of each municipal utility, few of those utilities have readily available the data necessary to generate avoided T&D costs. Because the results reported for the municipal utilities are often compared to those of the IOUs, it was determined to be more appropriate to include estimated T&D costs than exclude them entirely.

Including T&D avoided costs increases the annual average avoided costs by about 10 percent over those used in 2006.[4] The largest increases occur during the Summer On-Peak time-of-use period and in the inland valley climate zones that have the hottest summer temperatures and highest growth rates.

Calculating Greenhouse Gas Reductions

Greenhouse Gas (GHG) emissions were incorporated into the EE Reporting Tool in 2007. CO_2 emissions rates were developed using the implied heat rate of the generation plant at the margin in any given hour. The hourly shape of electricity prices and monthly base load natural gas prices were used to calculate the implied heat rate marginal heat rate for each hour. The methodology employed by E3 produced an average emission rate of 1,060 pounds of CO_2 per megawatt-hour for PG&E and 1,100 pounds of CO_2 per megawatt-hour for SCE and SDG&E. Each IOU's time-of-use period definitions were used to calculate emission rates for each individual time-of-use period.[5]

The value for GHG emissions is based on several studies available at the time the E3 avoided costs were developed in 2004. The GHG value begins at $8.00 per ton in 2004 and escalates at 5 percent per year to $20.22 per ton in 2023. After 2023, the GHG value increases at a linear rate of $0.90 per ton per year.

It is important to note the significant relationship between the cost of carbon and the cost-effectiveness of energy efficiency programs. Increases in carbon costs have the direct impact of increasing the cost-effectiveness of energy efficiency programs. That said, assumptions regarding the appropriate carbon price can dramatically impact program effectiveness.

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4 CPUC-approved avoided costs have not been updated since 2005.

5 SMUD estimates the emissions avoided by energy efficiency measures to be based on a combination of a marginal generation source and a reduction in renewable energy required to meet its renewable portfolio standard (RPS). Its estimate of 810 pounds CO_2 per megawatt-hour applies 950 pounds CO_2 per megawatt-hour for SMUD's marginal generation sources and a 15 percent RPS associated with SMUD's current RPS levels.

Net-to-Gross Ratios

The current version of the EE Reporting tool provides additional flexibility for utilities to input net-to-gross ratios for determining net energy savings. Utilities may assign individual measures to a program name, and then override the default measure net-to-gross values by assigning a net-to-gross at the program level. In addition, reference tables and resource links were added to the tool which provides stipulated net-to-gross values for various program types. Net-to-gross sources include the CPUC Energy Efficiency Policy Manual, California Energy Efficiency website, investor owned utility work papers, California Measurement Advisory Council database, and the current CPUC proceeding on net-to-gross values.

Discount Rates

Each utility is able to input an applicable discount rate for its avoided cost calculations. E3 recommended a nominal discount rate of 4.5 percent, which is based on the value of 20-30 year AAA municipal bond yields. The range of discount rates actually input by utilities is 3-5 percent, with most utilities using a rate of 4.5 percent. Sensitivity analysis conducted on a random selection of utility reports suggests the variation in the TRC test for this range of discount rates is from 0.2-2.0 percent.

Natural Gas Prices

The ability to include natural gas and water savings along with electricity savings in performing the standard cost tests was added to the EE Reporting Tool in 2007. KEMA updated the resource savings for several measures to include natural gas. The natural gas avoided cost forecast for each IOU was also added to the Tool. Near-term natural gas prices are based on New York Mercantile Exchange (NYMEX) trading data for Henry Hub, and for the basis swaps between Henry Hub and the PG&E and Southern California Gas Company city gates. For years beyond the NYMEX trading data, the CEC forecast of natural gas prices for California was used.

III. Tracking and Verifying Energy Savings

This section provides an overview of the approaches that public power is undertaking to measure and verify energy efficiency program savings. The California statutes were amended by AB2021 to require all publicly-owned utilities to conduct independent evaluations of its energy efficiency programs:

> Section 9615(e)(3): "The results of an independent evaluation that measures and verifies the energy efficiency savings and reduction in energy demand achieved by its energy efficiency and demand reduction programs."

Following the establishment of energy efficiency targets per AB2021, publicly-owned utilities have proceeded with the task of developing an energy efficiency program evaluation framework

that meets legislative intent. Developing this framework will take time, but much progress is being made in this regard.

Although it may take years to establish what may be considered standard protocols for publicly-owned utilities, the process should deliver results in a relatively short period of time. As a point of reference, the current IOU evaluation efforts were initiated in 2002 are still evolving today. By contrast, the public power community has the benefits of utilizing and building upon this experience as well as learning from other evaluation practices that exist today, including past public power evaluation efforts. Individual and collaborative efforts have begun that will produce a comprehensive set of evaluation reports for the FY07/08 fiscal year (2008 program calendar year), with many of these findings being documented in the 2009 edition of this report.

Based on initial efforts, the majority of energy savings reported will be verified in evaluation efforts that fit traditional methodologies, such as those presented in the Model Energy Efficiency Program Impact Evaluation Guide, a product of the National Action Plan for Energy Efficiency Leadership Group.[6] However, standard methodologies and protocols do not appear to effectively scale down to cost-effectively address smaller utilities, which represent a small fraction of the total statewide energy savings. Ongoing efforts will continue to address how to structure evaluation efforts that provide reasonable assurance of the reported energy savings yet do not unduly burden small utility staff or program budgets. The public power community will continue to explore options for evaluating small energy efficiency programs and develop reasonable approaches that match the level of effort to the significance of the results, similar to the "verification-guided" approach being considered by the CPUC for smaller programs.

It should also be noted that implementing independent evaluation for publicly-owned utilities has been hampered by the large-scale evaluation activities currently being undertaken by the CPUC and the Department of General Services for the IOUs. The scale and activity of this tremendous evaluation effort has stressed the resources of the firms practicing evaluation in California. In many cases, POUs have had a difficult time gaining the attention of these firms, creating delays in the development of program evaluation plans. CMUA and its public power partners remain confident that the program evaluation industry will catch up with current work loads and eventually be able to provide adequate assistance and service to meet the needs of publicly-owned utilities.

A sample of the many ongoing measurement and verification activities being conducted by publicly-owned utilities follows directly below. Additional activities may be found in the individual utility program descriptions in Appendix A.

- Third party verification of all installations that exceed a certain level of incentive, (e.g. all incentives above $2,000).
- Utility staff pre- and post-installation inspections of all large commercial & industrial programs.
- Use of meters, instrumentation (data loggers) to establish baselines for energy use and subsequent verification of project energy savings.

[6] The National Action Plan for Energy Efficiency is sponsored by the U.S. Environmental Protection Agency and is endorsed by many public power organizations.

- Third party engineering estimates of energy savings using accepted industry standards and reviewed/approved by utility staff.
- Random sampling of small commercial/residential programs for verification of installations and energy savings (e.g., 10 percent of all program installations).
- Use of stipulated energy savings values for reporting standard energy efficiency measures per the E3 Reporting Tool and KEMA 2006 and 2008 reports, since the KEMA reports provide reliable, traceable, and well documented sources of energy savings values.
- Customer-provided measurement and evaluation plans, approved by utility staff, to quantify and verify project energy savings.

Program Evaluation Development Activities

An important first step for many utilities is the development of program evaluation plans, which provide a framework for focused evaluation efforts. With the adoption of AB2021, many of the smaller utilities are positioning themselves to develop a plan for the first time. For other utilities, the legislation provided a basis for revisiting existing plans and developing new ones that more aggressively promote cost-effective energy efficiency programs. The following list, while not all inclusive, highlights the efforts in recent months to develop such plans:

- LADWP issued a Request for Proposals in August 2007 for third party evaluation of its energy efficiency programs. They are currently in the process of obtaining board approval for a contract with the selected proposer, Expedient Energy LLC. Past evaluation activities include measurement and verification reports in 2003, 2004-05, and 2005-06, with findings largely supporting assumed program and energy savings estimated. Report comments included: under-estimating lighting system change outs and de-lamping at several projects (energy savings were accordingly adjusted to capture savings), and over-estimating some of the HVAC system energy savings (the energy savings estimating methodology for HVAC was accordingly adjusted).

- SMUD is currently planning measurement of verification activities for all of its major programs in fixed intervals (2-4 years apart), with the intention of evaluating all of its programs on a cyclical basis through 2017. The utility intends to follow guidelines developed by the CPUC, as described in the *California Evaluation Framework* (June 2004) and the *California Energy Efficiency Evaluation Protocols* (April 2006), to provide guidance on the methodological approaches needed to perform specific types of evaluations. This framework provides SMUD with the flexibility to use alternative evaluation approaches, especially when they can be shown to provide reliable results. Towards this end, SMUD is planning to allocate approximately 3 percent of its total energy efficiency budget towards impact-focused measurement and verification activities, conducted primarily through the use of third-party contractors with management and oversight by SMUD's Corporate Business Planning Department. For 2008, SMUD is in the process of awarding contracts for consultants to perform evaluations of programs in both the residential and commercial sectors. For the commercial sector, SMUD will be conducting impact evaluations of the Retrofit Energy Efficiency and HVAC and Motor Distributor programs. In the residential sector, impact

evaluations will include the Energy Advisory Services and Pool and Spa Efficiency programs, as well as the Solar Smart Home new construction program.

- The City of Palo Alto Utilities issued a Request for Proposals in February 2008 for a third-party evaluation of its energy efficiency programs. They are currently in the process of selecting a consultant to develop a measurement and verification plan for the current program year and to help the utility implement that plan in future program years.

- Silicon Valley Power will seek approval from the Santa Clara's City Council in March 2008 to place under contract Summit Blue Consulting to develop and implement a program evaluation plan.

- Roseville Electric is currently completing a demand side management (DSM) plan to assess current programs and include new innovative approaches, in order to reach the energy efficiency targets established in response to AB 2021. The new plan will also provide in-depth evaluation, measurement and verification plans on each program.

- The cities of Healdsburg, Lompoc, Biggs, Ukiah, Redding, Gridley, Lodi, Shasta Lake, and the Plumas Sierra Rural Electric Cooperative, Turlock Irrigation District and Lassen Municipal Utility District contracted with Summit Blue Consulting in late February to develop program evaluation plans for each utility. The plans are expected to be completed in April.

Collaborative Efforts

Much of this effort is supported collaboratively through the power of joint action. Joint collaboration and information sharing between utilities is facilitated in a number of ways, through POU regional and statewide committees. CMUA's Energy Services & Marketing Committee, NCPA's Public Benefits Committee, and SCPPA's Public Benefits Committee regularly meet to discuss best practices for program evaluation.

Since the 2006 report was released, several activities have been undertaken to assist many of the smaller utilities in establishing an approach for measuring and verifying program performance. In Northern California, NCPA's Public Benefits Committee issued a Request for Qualifications in late 2006 for program evaluation consultants. As a result of this effort, NCPA contracted with three evaluation consultants: Summit Blue Consulting, Robert Mowris & Associates, and RLW Analytics. The NCPA contracts serve as enabling agreements, which provide members access to professional evaluation services.

In January 2008, NCPA hosted a workshop on energy efficiency program evaluation, attended by representatives of NCPA and SCPPA member utility program administrative staff. The workshop was lead by a trio of experienced consultants (Summit Blue Consulting, Equipoise Consulting, and Market Development Group) who provided best practices, case studies, and offered cost effective solutions for program evaluation geared towards smaller utilities. As mentioned previously, 11 utilities have jointly contracted with Summit Blue Consulting to develop program evaluation plans for each utility.

IV. Program Results

This section is intended to provide an aggregated discussion about current and future energy efficiency programs and savings that apply to California's public power utilities. The discussion stops short in most cases of utility specifics, and defers a more detailed overview of specific utility program descriptions, expenditures, as well as expected and actual energy savings to Appendix A of this report.

Table 2 summarizes POU energy efficiency program savings and cost information for fiscal years 2007 (FY06/07) and 2008 (Forecast-FY07/08)[7]. During FY06/07, POUs spent approximately $63 million on energy efficiency programs, reducing peak demand more than 57 megawatts and in excess of 254 million kilowatt-hours on an annual basis. POU energy efficiency expenditures for FY07/08 are expected to more than double to over $146 million, resulting in 118 megawatts of savings during the summer peak and 541 million kilowatt-hours during the entire year.

Table 2
POU Program Information Summary

All POU Summary

Year	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle MWH savings	Total Utility Cost ($)
FY06/07	56,772	254,331,659	3,062,361	$63,151,647
FY07/08	117,856	541,087,556	6,515,981	$146,554,988

As expected, the vast majority of the program impacts reflect public power's two largest utilities: the Los Angeles Department of Water and Power (LADWP) and the Sacramento Municipal Utility District (SMUD). Approximately 63 percent of peak savings and 62 percent of annual savings can be attributed to these two utilities in the most recent year. With aggressive program enhancements expected at LADWP, the share of savings applicable to the two utilities is roughly three-fourths of the total for FY07/08.

While LADWP and SMUD account for a significant total of public power program savings, it does not discount the importance of energy efficiency programs being offered by the rest of the state's POUs. Table 3 attempts to highlight this, looking at public power's efficiency programs without LADWP and SMUD included in the total.

[7] Please note that Imperial Irrigation District, Merced Irrigation District, Modesto Irrigation District, Plumas-Sierra Rural Electric Cooperative, Sacramento Municipal Utility District, Turlock Irrigation District, and Truckee Donner Public Utility District all operate on a fiscal year that extends on a calendar year basis. As such, each utility's data for FY06/07 is actually calendar year 2007, and data for FY07/08 is actually for calendar year 2008. CMUA, NCPA, SCPPA, and Energy Commission staff recognize this data nuance.

Given the wide range of diversity surrounding each utility and program offerings, the reported results are impressive. During FY06/07, the remaining utilities spent over $28 million on energy efficiency programs, reducing load by 21 megawatts at the peak and over 96 million kilowatt-hours during the year. These same utilities are expected to increase program expenditures by over 43 percent to $42 million, resulting in 62 million kilowatt-hours in additional savings above and beyond the levels reached last year. These utilities are expected to reduce peak load by more than 38 megawatts.

Table 3
POU Program Information Summary
(Without LADWP and SMUD)

All POU Summary - Excluding LADWP & SMUD

Year	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle MWH savings	Total Utility Cost ($)
FY06/07	21,174	96,740,737	1,402,162	$28,663,125
FY07/08	38,942	158,999,419	2,220,918	$41,673,383

Looking at it yet another way, 14 utilities provide 96 percent of the net peak savings and net annual kilowatt-hour savings for the group as a whole. Table 4 provides the data for FY06/07 for the 14 utilities. Data for FY07/08 shows a similar influence, but is not repeated here.

Table 4
Utilities Most Heavily Influencing Energy Efficiency and Demand Savings
(Using FY06/07 Data)

Energy Savings Results - Top (14) Utilities

Utility	Net Peak KW Savings	Net Annual Kwh Savings
SMUD*	21,980	95,950,000
LADWP	13,618	61,640,922
Silicon Valley Power	791	10,889,227
Colton	1,838	10,246,503
TID*	1,887	9,206,284
Anaheim	3,083	8,723,577
Glendale	1,367	8,510,202
IID*	3,042	8,117,721
Riverside	1,358	5,843,476
Burbank	1,107	5,607,447
Modesto*	1,135	5,560,582
Palo Alto	1,086	4,710,731
Roseville	1,010	4,325,928
Pasadena	1,247	4,238,057

Tables 5 and 6 review the aggregated results by program sector. From the tables, it is clear that lighting and cooling programs account for the largest share of the savings. Also notable are the aggregated TRCs for public power, which equals 3.15 in FY06/07, suggesting that public power energy efficiency programs produce more than three dollars in societal benefits for every dollar spent. This trend is expected to carry forth into the current budget year, with the portfolio of programs expected to rise even higher than current values. Regarding specific program results, lighting continues to dominate public power energy efficiency programs, accounting for approximately three-fifths of total energy savings achieved. However, POUs recognize that the growing saturation of the lighting market will require all utilities in the state to more aggressively deploy non-lighting efficiency programs going forward.

Table 5
2006/2007 All POU Summary by Program Sector

All POU Summary		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	763	763	652,645	8,336,450	3,842	$ 414,905	$ 3,917	$ 79,062	$ 497,884
HVAC	Res Cooling	6,179	5,340	9,677,095	213,703,520	130,022	$ 3,959,509	$ 275,976	$ 2,440,356	$ 6,675,841
Appliances	Res Dishwashers	37	38	147,845	2,025,989	991	$ 162,969	$ 2,273	$ 35,815	$ 201,056
Consumer Electronics	Res Electronics	1	1	7,583	54,018	30	$ 4,001	$ 4,961	$ 2,768	$ 11,730
HVAC	Res Heating	147	16	988,265	21,762,090	9,815	$ 775,831		$ 154,855	$ 930,686
Lighting	Res Lighting	15,409	10,693	54,755,003	461,842,487	198,365	$ 3,120,298	$ 262,053	$ 3,606,267	$ 6,988,618
Pool Pump	Res Pool Pump	1,140	1,086	372,280	4,907,245	2,234	$ 117,677	$ 63	$ 243,771	$ 361,512
Refrigeration	Res Refrigeration	4,238	4,238	21,932,832	246,188,057	123,086	$ 3,152,404	$ 898,690	$ 3,546,143	$ 7,597,237
HVAC	Res Shell	2,217	2,217	3,267,116	45,309,045	24,805	$ 2,523,934	$ 217,142	$ 329,832	$ 3,070,908
Water Heating	Res Water Heating	47	47	532,280	6,276,063	2,866	$ 144,573	$ 22,069	$ 63,152	$ 229,795
Comprehensive	Res Comprehensive	1,634	1,634	2,341,411	45,159,139	18,356	$ 769,645	$ 15,837	$ 2,642,543	$ 3,428,025
Process	Non-Res Cooking	72	72	470,427	6,077,930	3,319	$ 44,028		$ 74,681	$ 118,710
HVAC	Non-Res Cooling	5,740	5,220	21,824,450	333,798,101	182,097	$ 5,070,196		$ 2,570,225	$ 7,640,421
HVAC	Non-Res Heating	4		9,693	290,784	162	$ 14,238		$ 1,800	$ 16,038
Lighting	Non-Res Lighting	22,039	19,336	100,572,023	1,160,718,388	606,619	$ 7,835,962	$ 891,667	$ 7,491,950	$ 16,219,579
Process	Non-Res Motors	1,664	1,626	10,014,934	148,702,322	78,443	$ 722,365		$ 816,173	$ 1,538,539
Process	Non-Res Pumps			320,686	4,624,560	2,519	$ 443,302		$ 46,217	$ 489,519
Refrigeration	Non-Res Refrigeration	252	243	2,071,706	20,711,771	10,680	$ 170,443		$ 318,121	$ 488,563
HVAC	Non-Res Shell	101	101	316,071	3,393,122	1,910	$ 91,763		$ 27,802	$ 119,565
Process	Non Res Process	934	892	6,228,709	78,760,400	37,240	$ 551,914		$ 850,375	$ 1,402,289
Comprehensive	Non Res Comprehensiv	2,649	2,649	10,806,229	186,981,370	83,861	$ 1,080,717	$ 468,805	$ 1,527,602	$ 3,077,124
Other	Other	582	559	7,022,376	62,738,045	33,828	$ 549,277	$ 427,854	$ 1,070,877	$ 2,048,007
SubTotal		65,850	56,772	254,331,659	3,062,360,896	1,555,090	$ 31,719,951	$ 3,491,307	$ 27,940,389	$ 63,151,647
T&D	T&D	574	574	5,212,304	189,575,200	106,390		$ 5,115,000	$ 66,788	$ 5,181,788
Total		66,424	57,346	259,543,963	3,251,936,096	1,661,480	$ 31,719,951	$ 8,606,307	$ 28,007,177	$ 68,333,435

EE Program Portfolio TRC Test	**3.15**

Excluding T&D

Table 6
2007/2008 All POU Summary by Program Sector

All POU Summary		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	764	764	595,059	7,120,588	3,387	$ 304,171	$ 4,185	$ 71,900	$ 380,256
HVAC	Res Cooling	9,302	8,356	14,458,367	296,377,744	180,451	$ 6,443,055	$ 358,865	$ 3,406,106	$ 10,208,027
Appliances	Res Dishwashers	38	38	140,596	1,897,738	963	$ 159,446	$ 3,305	$ 34,551	$ 197,302
Consumer Electronics	Res Electronics	1	1	7,308	51,542	28	$ 3,060	$ 4,961	$ 2,465	$ 10,486
HVAC	Res Heating	173	18	948,422	21,742,794	9,978	$ 870,751		$ 192,223	$ 1,062,974
Lighting	Res Lighting	165,246	30,218	157,562,396	1,378,373,466	663,966	$ 10,760,306	$ 1,525,373	$ 4,368,449	$ 16,654,128
Pool Pump	Res Pool Pump	1,691	1,429	682,322	6,943,216	4,020	$ 109,981	$ 26	$ 235,382	$ 345,389
Refrigeration	Res Refrigeration	10,420	10,420	58,865,953	897,503,170	470,603	$ 5,435,265	$ 26,322,472	$ 4,215,092	$ 35,972,829
HVAC	Res Shell	3,390	3,390	5,522,081	73,048,482	40,057	$ 3,853,981	$ 219,073	$ 305,835	$ 4,378,889
Water Heating	Res Water Heating	111	111	741,340	12,297,883	5,560	$ 319,006	$ 7,489	$ 83,329	$ 409,825
Comprehensive	Res Comprehensive	6,219	6,195	9,738,654	76,349,769	31,589	$ 4,925,732	$ 47,440	$ 4,941,655	$ 9,914,827
Process	Non-Res Cooking	70	70	451,875	5,862,632	2,066	$ 50,166		$ 88,231	$ 138,397
HVAC	Non-Res Cooling	10,390	9,965	29,784,643	497,828,458	274,687	$ 8,101,481	$ 500,000	$ 2,559,939	$ 11,161,420
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting	35,381	29,316	170,379,173	1,901,715,579	989,308	$ 24,268,436	$ 740,145	$ 7,107,824	$ 32,116,405
Process	Non-Res Motors	1,753	1,719	11,345,225	169,063,103	53,064	$ 1,206,825		$ 1,141,690	$ 2,348,515
Process	Non-Res Pumps			109,246	1,490,103	785	$ 260,152		$ 793	$ 260,945
Refrigeration	Non-Res Refrigeration	4,901	1,637	13,802,438	162,562,347	84,734	$ 1,363,935	$ 2,500	$ 478,569	$ 1,845,003
HVAC	Non-Res Shell	368	368	868,892	11,834,621	6,784	$ 282,649		$ 76,644	$ 359,293
Process	Non Res Process	632	612	10,082,590	140,929,720	70,375	$ 1,312,966		$ 925,157	$ 2,238,123
Comprehensive	Non Res Comprehensiv	5,870	5,826	24,108,174	456,713,440	214,260	$ 3,283,598	$ 400,000	$ 3,249,573	$ 6,933,171
Other	Other	23,908	7,402	30,892,804	396,274,442	219,171	$ 6,687,237	$ 428,962	$ 2,502,585	$ 9,618,784
SubTotal		280,628	117,856	541,087,557	6,515,980,837	3,325,838	$ 80,002,197	$ 30,564,798	$ 35,987,992	$ 146,554,988
T&D	T&D	290	290	1,032,000	24,860,000	14,158			$ 37,297	$ 37,297
Total		280,918	118,146	542,119,557	6,540,840,837	3,339,996	$ 80,002,197	$ 30,564,798	$ 36,025,289	$ 146,592,285

EE Program Portfolio TRC Test	**3.21**

Excluding T&D

Summary of Results by Public Power Utility

Tables 7 and 8 summarize the results of this analysis, shown by individual utility. The diversity of public power utilities is evidenced by the wide disparity of savings, largely a reflection of utility size. As an example, this analysis shows that many municipalities have realized or are planning to realize significant increases in savings in the next year. Two municipalities (LADWP and SMUD) had peak savings that exceeded five megawatts. Another 12 utilities (Anaheim, Burbank, Colton, Glendale, Imperial Irrigation District, Modesto Irrigation District, Palo Alto, Pasadena, Redding, Riverside, Roseville, and Turlock Irrigation District) have peak savings that fall between 1-5 megawatts, up from seven in the 2006.

Table 7
All POU Summary by Utility
FY06/07

All POU SUMMARY	Resource Savings Summary				Cost Summary			
	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Alameda	94	920,828	10,862,479	5,897	95,383	-	318,935	414,318
Anaheim	3,083	8,723,577	119,692,667	65,831	1,727,463	-	318,994	2,046,457
Azusa	186	1,040,546	10,721,489	6,149	289,670	-	123,790	413,460
Banning	114	253,033	3,659,048	2,127	53,455	-	-	53,455
Biggs	9	47,730	679,188	365	8,080	2,267	11,259	21,606
Burbank	1,107	5,607,447	76,495,416	41,776	843,314	707,258	172,793	1,723,365
Colton	1,838	10,246,503	158,273,947	87,705	840,941	-	8,000	848,941
Corona	31	98,029	947,238	525	28,921	-	8,000	36,921
Glendale	1,367	8,510,202	113,092,255	64,739	1,461,950	1,246,576	177,867	2,886,393
Gridley	42	650,773	9,180,530	4,930	51,047	-	37,172	88,219
Healdsburg	27	152,433	2,434,629	1,349	84,660	-	23,906	108,566
Hercules	-	46	464	-	150	-	-	150
IID*	3,042	8,117,721	122,146,723	70,791	1,922,493	277,870	1,048,282	3,248,645
Industry	-	-	-	-	-	-	-	-
LADWP	13,618	61,640,922	669,698,964	367,667	5,446,771	806,183	6,296,959	12,549,912
Lassen	53	90,218	1,094,486	587	65,787	-	115,500	181,287
Lodi	61	383,317	3,076,488	1,707	66,854	-	151,262	218,116
Lompoc	12	101,526	1,714,917	933	35,784	3,372	25,000	64,156
Merced*	32	3,773,195	54,977,226	29,452	352,369	-	192,116	544,484
Modesto*	1,135	5,560,582	74,322,297	41,019	537,244	213,300	1,403,371	2,153,916
Moreno Valley	16	44,000	792,000	450	11,000	-	3,810	14,810
Needles	1	1,091	14,176	9	792	-	1,808	2,600
Palo Alto	1,086	4,710,731	48,971,662	26,853	327,483	-	733,744	1,061,227
Pasadena	1,247	4,238,057	69,904,337	39,640	1,486,344	-	141,461	1,627,805
Pittsburgh Power/ Island Energy	-	-	-	-	-	-	-	-
Plumas Sierra*	36	487,454	11,526,994	5,870	553,116	-	113,300	666,416
Port of Oakland	9	53,117	849,872	471	1,925	-	78,000	79,925
Rancho Cucamonga	-	56,994	170,981	98	67,125	-	33,000	100,125
Redding	1,297	1,677,131	23,003,822	13,157	1,422,915	-	200,720	1,623,635
Riverside	1,358	5,843,476	124,214,956	76,477	945,125	-	1,000,000	1,945,125
Roseville	1,010	4,325,928	56,139,336	32,499	642,140	107,588	464,287	1,214,014
SMUD*	21,980	95,950,000	990,499,590	401,152	9,716,741	-	12,221,869	21,938,610
Shasta Lake	22	46,935	778,897	445	25,427	-	42,994	68,421
Silicon Valley Power	791	10,889,227	170,179,470	92,720	1,704,530	126,893	1,770,674	3,602,097
Trinity	-	18,850	245,050	149	37,976	-	-	37,976
Truckee Donner*	102	603,611	7,741,909	4,267	244,801	-	125,000	369,801
TID*	1,887	9,206,284	120,080,956	64,953	455,808	-	565,190	1,020,998
Ukiah	36	29,728	487,981	284	72,078	-	11,327	83,405
Vernon	42	230,417	3,688,455	2,050	92,289	-	-	92,289
Summary	56,772	254,331,659	3,062,360,896	1,555,090	$31,719,951	$3,491,307	$27,940,389	$63,151,647

Note: Utilities with an asterisk next to name have fiscal years that are on a calendar year basis.

In reviewing the tables, it is again important to recognize the wide range of accounting variations utilized by each utility, which results in some differences if one compares utility marketing, EM&V, and administrative costs. As mentioned earlier, with many utilities having individuals administering and delivering services across a variety of program areas, costs are accounted for in different ways. As a result, certain conclusions about the level of administrative costs in relation to total program energy efficiency expenditures may be somewhat misleading.

Table 8
All POU Summary by Utility
Forecast FY07/08

All POU SUMMARY	Resource Savings Summary				Cost Summary			
	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Alameda	257	2,431,346	33,316,688	18,262	123,500	-	459,950	583,450
Anaheim	7,105	15,231,234	174,103,168	94,179	2,236,170	-	376,443	2,612,613
Azusa	242	1,352,670	13,531,351	7,572	307,855	-	123,790	431,645
Banning	116	258,035	5,135,817	3,049	87,080	-	-	87,080
Biggs	12	56,588	648,908	362	17,354	-	-	17,354
Burbank	1,645	8,004,572	94,418,833	50,611	1,484,718	1,290,970	185,560	2,961,248
Colton	1,838	10,246,503	158,273,947	87,705	840,941	-	8,000	848,941
Corona	31	82,840	814,200	460	25,421	-	8,000	33,421
Glendale	2,077	12,324,423	152,126,231	85,480	1,409,293	1,551,976	250,000	3,211,269
Gridley	11	85,877	1,181,426	641	13,808	-	37,172	50,980
Healdsburg	36	186,606	2,966,516	1,644	103,206	-	23,906	127,112
Hercules	-	150	2,234	-	225	-	-	225
IID*	10,224	30,080,337	439,989,877	252,210	5,228,289	677,870	1,177,432	7,083,591
Industry	-	-	-	-	-	-	-	-
LADWP	50,914	275,088,138	3,164,500,206	1,696,894	37,364,964	26,145,538	6,934,500	70,445,002
Lassen	343	592,754	7,439,619	3,991	456,485	-	115,500	571,985
Lodi	61	2,899,577	30,051,740	16,658	153,544	-	151,262	304,806
Lompoc	18	151,284	2,302,598	1,252	52,609	6,545	25,000	84,154
Merced*	62	1,858,795	28,828,026	16,239	191,036	-	192,116	383,152
Modesto*	1,300	6,556,441	84,125,291	46,492	625,552	234,091	1,801,913	2,661,555
Moreno Valley	16	44,000	792,000	450	11,000	-	3,810	14,810
Needles	9	14,596	180,845	110	10,290	-	6,000	16,290
Palo Alto	930	2,694,116	28,805,510	15,632	327,483	-	733,744	1,061,227
Pasadena	1,857	5,894,957	98,129,692	53,573	1,476,155	-	127,296	1,603,450
Pittsburgh Power/ Island Energy	-	-	-	-	-	-	-	-
Plumas Sierra*	41	532,118	12,962,784	6,572	618,062	-	110,498	728,560
Port of Oakland	33	193,079	2,391,710	1,325	35,333	-	100,000	135,333
Rancho Cucamonga	408	401,620	3,793,320	2,186	139,583	-	33,000	172,583
Redding	1,408	2,814,999	35,468,245	19,966	1,411,558	-	225,000	1,636,558
Riverside	2,302	11,020,232	170,204,093	99,566	1,046,000	444,792	1,000,000	2,490,792
Roseville	2,769	7,751,205	106,576,054	61,149	2,038,152	67,862	674,473	2,780,487
SMUD*	28,000	107,000,000	1,130,563,035	457,878	16,529,880	-	17,906,723	34,436,603
Shasta Lake	90	146,819	2,337,276	1,350	101,788	-	42,994	144,782
Silicon Valley Power	1,101	23,176,028	380,568,304	207,490	3,819,454	145,155	1,770,270	5,734,878
Trinity	-	22,850	297,050	180	45,000	-	-	45,000
Truckee Donner*	420	2,131,656	20,645,848	11,156	168,056	-	125,000	293,056
TID*	1,921	9,371,000	122,229,408	-	1,005,921	-	1,247,315	2,253,236
Ukiah	220	180,839	2,961,358	1,724	437,127	-	11,327	448,454
Vernon	38	209,271	3,317,627	1,830	59,306	-	-	59,306
Summary	117,856	541,087,556	6,515,980,837	3,325,838	$80,002,197	$30,564,798	$35,987,992	$146,554,988

Note: Utilities with an asterisk next to name have fiscal years that are on a calendar year basis.

Table 9 compares actual savings realized in FY06/07 with the savings projected for that same time period in the 2006 report. With the exception of LADWP, public power savings in megawatt hours was approximately 12 percent above the level projected last year. LADWP's

results were lower than expected due to significant program staffing shortages[8] which caused the delayed launch of several high energy savings impact programs, program ramp-up delays, and energy efficiency projects submitted for programmatic support not completed by the end of fiscal year (energy savings carried over to FY 07/08 as a result).

Table 9
Comparison of Actual Savings with Savings Projected in the 2006 Report

All POU Summary	2007 Projected Savings MWH	2007 Actual Savings MWH	2008 Forecast Savings MWH
Alameda	611	921	2,431
Anaheim	13,849	8,724	15,231
Azusa	1,897	1,041	1,353
Banning	253	253	258
Biggs	131	48	57
Burbank	5,778	5,607	8,005
Colton	3,715	10,247	10,247
Corona	37	98	83
Glendale	8,463	8,510	12,324
Gridley	80	651	86
Healdsburg	113	152	187
Hercules	0	0	0
IID*	2,065	8,118	30,080
Industry		-	-
LADWP	153,074	61,641	275,088
Lassen	307	90	593
Lodi	307	383	2,900
Lompoc	163	102	151
Merced*	282	3,773	1,859
Modesto*	3,457	5,561	6,556
Moreno Valley	44	44	44
Needles	44	1	15
Palo Alto	2,129	4,711	2,694
Pasadena	5,244	4,238	5,895
Pittsburgh Power/ Island Energy	-	-	-
Plumas Sierra*	171	487	532
Port of Oakland	10	53	193
Rancho Cucamonga	101	57	402
Redding	7,208	1,677	2,815
Riverside	3,059	5,843	11,020
Roseville	6,523	4,326	7,751
SMUD*	87,096	95,950	107,000
Shasta Lake	63	47	147
Silicon Valley Power	12,242	10,889	23,176
Trinity	13	19	23
Truckee Donner*	46	604	2,132
TID*	6,121	9,206	9,371
Ukiah	122	30	181
Vernon	232	230	209
Summary	325,050	254,332	541,088
Summary (Excluding LADWP)	171,976	192,691	265,999

[8] LADWP has recently increased its energy efficiency staffing level by 27 percent, filling long existing vacancies. This is the first significant hiring LADWP has undertaken since early 2001. The new staff is currently in training and is expected to be fully productive by the start of FY08/09.

Earlier in this report, we noted that public power programs produce more than three dollars of societal benefit for every one dollar spent on energy efficiency programs, using the TRC test. Table 10 looks at this result on a utility-specific basis. When reviewing the results, any TRC above 1.0 suggests that a utility portfolio of programs can be considered cost-effective. In this situation, 26 utilities have TRCs exceeding this threshold. Fifteen of these utilities have TRCs exceeding 2.0.

Table 10
Cost Effectiveness Comparison by Utility
TRC Test

Utility	TRC
Alameda	1.66
Anaheim	5.01
Azusa	1.74
Banning	1.25
Biggs	1.46
Burbank	1.80
Colton	12.47
Corona	1.55
Glendale	1.57
Gridley	5.30
Healdsburg	1.46
Hercules	-
IID*	3.60
Industry	-
LADWP	3.72
Lassen	0.47
Lodi	0.95
Lompoc	0.98
Merced*	3.54
Modesto*	1.91
Moreno Valley	4.44
Needles	0.81
Palo Alto	2.83
Pasadena	2.66
Pittsburgh Power/ Island Energy	-
Plumas Sierra*	1.44
Port of Oakland	0.93
Rancho Cucamonga	0.38
Redding	1.30
Riverside	5.24
Roseville	2.38
SMUD*	1.33
Shasta Lake	0.77
Silicon Valley Power	2.07
Trinity	0.03
Truckee Donner*	2.37
TID*	4.30
Ukiah	0.45
Vernon	4.29
Weighted Average:	3.15

V. Demand Reduction Programs and Results

California policymakers consider demand response to be an important piece of the energy puzzle. Yet, according to the CEC's Integrated Energy Policy Report (IEPR), the state struggles with finding ways to encourage California utilities to develop demand response programs.[9]

Much of the attention toward demand reduction programs has focused on California's IOUs. Demand response programs are expected to play some role in the soon-to-be-implemented California Independent System Operator market redesign. The Federal Energy Regulatory Commission is now considering use of demand response programs, as it seeks to improve the effectiveness of regional transmission organizations. As described in the 2006 report, the use of demand response programs is generally tied to the size of the utility. In general, large utilities have such programs while smaller utilities do not. At present, 13 POUs have either some form of demand response program or are about to implement new programs.

Table 11
POUs with Demand Reduction Programs

Anaheim Public Utilities
Azusa Light & Water
Gridley Municipal Utility
Los Angeles Department of Water & Power
City of Lompoc
Modesto Irrigation District
City of Palo Alto Utilities
City of Pasadena
Roseville Electric
Redding Electric Utility
Riverside Public Utilities
Sacramento Municipal Utility District
Silicon Valley Power

The general findings provided in the 2006 report are still relevant here. With system reliability not a significant issue for most POUs, it should not be surprising that many of the traditional demand reduction programs are not being utilized within the various service territories. That being said, POU programs primarily target large commercial and industrial users who can either reduce a significant portion of their loads or serve the loads from another source such as a backup generator during critical peak demand periods. The programs take into account the weather sensitivity of peak loads, load shedding strategies, and economic incentives to shed load or shift the serving of it to another source during peak periods.

[9] The CEC notes that "despite its many advantages, price-responsive demand response is expected to reduce peak demand by only 2.2 percent in the summer of 2007, which is less than half the goal of 5 percent" included in the state's Energy Action Plan.

The following represents a snapshot of some of the load shedding programs being offered by the POUs, both large and small. Note that this information is not intended to be an exhaustive list of programs available. A complete set of demand reduction program information is included in the collective set of utility descriptions provided in Appendix A.

Anaheim

Load reduction programs continue to be in place and effectively protected Anaheim residents and businesses from the effects of statewide power events. All of Anaheim's six load reduction programs can provide up to 30 megawatts of curtailable load, if needed. The following is a summary of these programs:

- Voluntary Load Reduction Program - where businesses are notified and given time to prepare their loads for curtailment. The customers then properly shut down processes and cycle equipment off. Customers are notified via pager, phone or e-mail to facility or operations managers.

- Load Curtailment Exemption Program - offered to customers who can curtail load by 15 percent either at a single location or by aggregating their total electrical load (minimum 1 megawatt). Customers are required to comply with load reduction within 10 minutes of notification. Participating customers are exempt from rotating outages in exchange for a 15 percent load curtailment for the entire duration of every Stage 3 rotating outage event.

- Fuel Cost Reimbursement Program - applies to customers with large backup generators. Participating customers transfer their facility loads from utility to generator power for up to four-hour blocks during a Stage 3 emergency. The generators comply with the limits set by the South Coast Air Quality Management District, which allows backup generators to run during Stage 2 and 3 emergencies.

- "10 in Time" Program - encourages commercial customers to voluntarily reduce energy usage by at least 10 percent, when contacted via an e-mail during an ISO Stage 3 emergency. Participating customers receive a one-time credit of $25 for every 100 kilowatt-hours of demand reduction contributed during a Stage 3 event from June 1 through September 30.

- City Load Reduction Program - involves City facilities that have installed or modified emergency back-up generation systems. These loads are called upon as the City's first line of defense during a Stage 3 alert to reduce load.

- Thermal Energy Storage Incentive Program - provides incentives and special time-of-use electric rates for customers who shift their air conditioning loads to non peak periods of the day through the installation and operation of a thermal energy storage system. To date, 13 systems have been installed.

Burbank Water & Power

In 2008, Burbank will be installing 20 Ice Bear systems on HVAC units located at its City facilities. During night-time hours, energy is used to freeze water in the Ice Bear units. During daytime peak hours, the compressor of the HVAC unit is turned off and a low energy-using fan blows refrigerant over the ice, providing cooling to the building. Each Ice Bear unit shifts about seven kilowatts of electrical usage from on-peak times to off-peak hours. In total, this Burbank demonstration project will shift 140 kilowatts of on-peak energy to off-peak times.

An added advantage beyond simply peak shifting is that this project will swap the baseload generation of coal and natural gas to predominantly off-peak wind production. In this way, Burbank will effectively be using renewable energy to provide on-peak space cooling in several City facilities.

Gridley Municipal Utility

Gridley Municipal Utility, one of the state's smallest POUs, realizes demand reduction with the help of its water and sewer utilities. If needed, these utilities can activate backup generators at wells and sewer lift stations throughout Gridley, resulting in up to a 15 percent reduction of overall demand. Gridley also has a specific arrangement with a local hospital to utilize its backup generator for additional demand reduction capacity. In extreme circumstances, the utility can call upon its single largest customer to shut down load, which at approximately 750 kilowatts, equals up to 15 percent of the average city load.

LADWP

LADWP is in the process of restructuring its electric rates to enhance energy efficiency achievements in all customer sectors. The restructured electric rates will be implemented in July 2008.

During periods of high electrical demand, LADWP proactively contacts its largest commercial and industrial customers, accounting for approximately one-third of energy consumed in Los Angeles, and requests voluntary load reductions. Experience with recent heat storms has shown this to be an effective, albeit temporary, demand reduction activity.

Modesto Irrigation District

MID has operated demand reduction programs for more than two decades. MID's two programs made more than 40 megawatts of load reduction available during calendar year 2007:

- Shave the Energy Peak Program: The program allows MID operators to reduce electricity demand by cycling over 14,000 air conditioners in its service territory, making 13 megawatts

of available peak load reduction. Bill discounts of over $350,000 were provided to the group of residential and commercial customers participating in program during 2007.

- Interruptible Rate Program: This program allows MID operators, upon customer notification, to reduce electricity demand by requiring cessation of the curtailable portion of customer load. The available peak load reduction was 22 megawatts. Bill discounts of over $390,000 were given to commercial and industrial customer participants during 2007.

Palo Alto

Palo Alto uses the Advanced Metering Program, where the utility provides participating electric customers with 15-minute interval data in either a real-time format or on a day-plus-one load profiling format. This demonstration program provides customers with the necessary technical information to manage the overall consumption of electricity for their facility, as well as stage their actions to respond to utility requests for load curtailment.[10]

In addition, Palo Alto put out a Request for Proposals in February 2008 to look for potential Demand Reduction program contractors. With its relatively mild Bay Area climate and flat load, many traditional load control programs are not cost effective in Palo Alto. However, the utility is hopeful that some contractors will have programs to cost-effectively incent customers to reduce their peak load energy usage.

Roseville Electric

Roseville Electric offers two demand response programs. The residential program, Power Partners, is a dispatchable direct load control (DLC) program. By 2009, the new DLC program will provide five megawatts of dispatchable load obtained from residential air conditioning systems.

Large business customers with peak demand of greater than 250 kilowatts have access to their 15-minute interval load via the Roseville Electric web site and the Energy Profiler Online (EPO) program. EPO provides the customer with information sufficient to voluntarily curtail peak load consumption when alerted by the EPO communications system. Roseville Electric assists these customers in identifying curtailable load.

SMUD

SMUD offers three primary programs for load management and demand response. The largest is its residential Air-Conditioner Load Management (ACLM) or Peak Corps program. This is a voluntary program where residential customers allow SMUD to install cycling devices on their air conditioners. During electrical system emergencies, SMUD can send a radio signal to switch-

[10] Lodi, Silicon Valley Power, and Redding all have similar metering technologies available for customers to manage their overall consumption.

off (or cycle) the central air conditioners of program participants. Cycling can occur periodically between June 1 and September 30. SMUD currently has over 100,000 participants on this program that can contribute nearly 100 megawatts of load reduction under normal cycling conditions.

The Demand Bid Program pays participants to reduce at least 75 kilowatts of non-critical load for blocks of at least two hours from 2-6 pm on weekdays between June and September. Customers receive a bill credit for load reductions below a calculated baseline, based on hourly average loads for the previous 10 business days. Customers are compensated for curtailment performance meeting their load reduction bids. For performance less than their bids, the credits are reduced. Customers have access to a web-based management system provided by the utility for daily monitoring on non-curtailment days, and near real-time monitoring on curtailment days. SMUD currently has a total of five megawatts enrolled in this program.

The Voluntary Emergency Curtailment Program calls on approximately 125 commercial and industrial customers to reduce their electrical use during system emergencies. There is no obligation and no penalty if a business is unable to respond to SMUD's request to reduce usage. This program has the potential of curtailing 45 megawatts of load.

SMUD also has agreements in place with its two largest industrial customers to curtail usage on an on-call basis. These agreements represent a total of 14 megawatts of load reduction.

SMUD is also currently reevaluating its load management and demand response programs and examining the feasibility of integrating load management and demand response with supply-side resource planning. Options evaluated and analyzed include offering customers both incentive-based and price-based demand response programs. SMUD is also considering including the integration of demand response programs with new tariffs that encourage customers to shift usage away from peak hours.

Silicon Valley Power

SVP offers one program. With a high load factor, SVP offers a voluntary load shedding program called the "Power Reduction Pool." Using a voluntary arrangement, customers participating in the program reduce their load by at least 200 kilowatts during system emergencies.[11]

Riverside Public Utilities

RPU has a voluntary load curtailment program that calls on approximately 200 large commercial and industrial customers to reduce their electrical use during system emergencies. This program has the potential of curtailing approximately 30 megawatts of load. There is no obligation and no penalty if a business is unable to respond to RPU's request to reduce usage, however the program has been successful with load curtailed historically averaging 20 megawatts.

[11] The communication network in the Power Reduction Pool program is tested at least once per year.

In 2007, RPU implemented an 'e-blast' program where customers receive information via e-mail or wireless device of any power emergencies or energy conservation requests. RPU is currently investigating other demand response programs to be employed at a future date.

VI. Operational Efficiency

Efficiency gains related to generation and transmission services serve an important role in reducing the cost of electricity to consumers, ensuring reliable operation of the statewide grid, and helping to significantly reduce the use of fossil fuels for power generation. In the context of the AB2021 debate, these gains have another useful purpose for measuring energy efficiency program success from a public power perspective.

The statute calls for utilities to distinguish between "procurement" investment for energy efficiency programs and investments from traditional public benefits programs. Additionally, the statute makes it clear that additional energy efficiency program expenditures should not come at the expense of other programs. For purposes of this report, all procurement dollars are considered a component of operational improvements, as it relates to generation, transmission, and distribution upgrades. In no case are energy efficiency program expenditures increasing at the expense of other public benefits programs.

In this report, five utilities have reported operational savings, as well as NCPA in connection with the facilities it operates on behalf of its 17 members. As requested by CEC Chairman Pfannenstiel in an April 2007 energy efficiency workshop, operational savings are not included in the calculation of utility TRCs.

Burbank Water and Power

During FY06/07, Burbank significantly increased the amount of primary conductors installed on several heavily-loaded circuits. The increased efficiency resulted in 1,189 megawatt-hours of annual energy savings and a demand reduction of 390 kilowatts. During the current fiscal year, the utility's re-conductoring efforts continue with additional circuits with expected annual savings of 500 megawatt-hours and nearly 200 kilowatts of demand reduction.

In other operational improvement efforts, Burbank upgraded about 400 services last year. The increased efficiency of a larger wire size saves an estimated 13 megawatt-hours annually with a peak demand reduction of seven kilowatts. This work is ongoing and will likely produce similar savings over the next few years.

Burbank also retires about 200 old transformers annually, replacing them with new, efficient models. This activity saves about 214 megawatt-hours annually, representing a demand reduction of 40 kilowatts.

In total, Burbank experienced operational loss reductions of about 400 kilowatts and 1,400 megawatt-hours during FY06/07. Projected savings for the current fiscal year is 200 kilowatts and 800 megawatt-hours.

Glendale Water and Power

Glendale has begun a citywide power system upgrade project. Under the project, all electrical system facilities will be converted to handle 12,000 volts rather than 4,000 volts. It is anticipated that the entire power system will be upgraded by 2016. In addition to improving electric service and system reliability, this project will save energy by reducing line losses. To date, Glendale estimates annual energy savings at 863,000 kilowatt-hours.

LADWP

LADWP has guidelines, polices, and practices that always value and assess distribution system losses with a goal of assuring that system efficiency is economically optimized including: evaluation of losses as part of the total ownership cost when purchasing transformers, practicing economic conductor sizing, installing and maintaining the optimum level of reactive sources including both distribution line and station capacitor banks, configuration changes, and load balancing to optimize circuit performance. The following are just a few examples of how LADWP is working to reduce the level of line losses on its system.

- Half of LADWP's new load is served directly from the 34.5 kilovolt system. Doing so reduces system losses substantially, compared to putting the load on the 4.8 kilovolt system. It also eliminates the need to add distribution station capacity (more losses) and reduce the number of system expansions.

- LADWP now orders lower temperature rise distribution transformers, which provides additional overload capability as well as longer life and fewer line losses. The utility also has strict requirements related to acceptable losses for transformers.

- Utility distribution standards are changing overhead construction standards to provide greater use of larger 3/0 ASCR conductors (compared to #6, #2 or 1/0). This is being done by the utility not only for greater circuit tie capabilities but also to provide more robust construction, and provide additional resistance to wind-related outages. This also has the added benefit of lower system losses.

- A comprehensive reactive power study is underway to provide improved system VAR support. This will reduce system losses.

Plumas Sierra Rural Electric Cooperative

Due to the remote nature of its system and the substantial distribution system necessary to reach rural customers, Plumas-Sierra is subject to significant system operational losses (approximately 17,520 megawatt hours per year). Plumas-Sierra has begun reconstruction projects to upgrade lines that are responsible for the bulk of those losses. The Clio Overhead Rebuild Project is two-thirds completed and should reduce system peak losses by 90 kilowatts. The Wingfield Road Rebuild Project has already been completed and is expected to reduce system peak losses by one kilowatt.

City of Palo Alto Utilities

Palo Alto has two operational efficiency projects: Shasta turbine upgrade, and the East Meadow Substation conversion from 4 kilovolts to 12 kilovolts. The Shasta turbine upgrade increased generation output by one percent and has an expected life of 50 years. Palo Alto was the major project funder (35 percent), and will receive 11.6 percent of the increased generation. The East Meadow Substation was upgraded from 4 kilovolts to the primary distribution voltage of 12 kilovolts, and the savings are expected to last 50 years.

NCPA Operational Improvements

In addition to the programs of individual utilities, the value of joint action can actually create savings among groups of public power utilities. NCPA has long been committed to improving the performance and stopping the decline in generating capacity of the two renewable geothermal generating plants it operates in the Geysers, located in Sonoma and Lake County, which currently provide up to 120 megawatts of peak power.

In FY06/07, NCPA implemented several improvements that improve generating efficiency.

- Steam Injection Well J-5 was cleaned in October 2006 to increase steam production. The increase provides 6,000 megawatt hours of additional generating capacity annually.
- Horizontal Injection Well Q-10 was deepened in November 2006. The additional water capacity results in 77,000 megawatt hours of increased generation annually.
- Steam Turbine Unit 1 was overhauled in April 2007, resulting in increased efficiency of 1-2 percent. For the same quantity of steam, the unit produces 3,000-6,000 megawatt hours of energy on an annual basis.

Future improvements include the addition of an injection well turbine, a new booster pump station, addition of a vacuum pump on the gas removal system, and the addition of two megawatts of solar arrays to power booster pumps.

NCPA has made numerous efficiency improvements at its hydroelectric facilities at the Collierville Powerhouse, located in Calaveras County. In FY06/07, NCPA installed a turbine runner on Unit 1, increased operational efficiency by 0.38-0.47 percent. This action adds to savings associated with a November 2006 control system modification which increased the

operating efficiency of the facility by 10 percent during non-peak periods. NCPA will continue its commitment to energy efficiency and will pursue addition efficiency improvements in the future.

VII. Conclusions and Lessons Learned

CMUA appreciates the opportunity to provide to the CEC this second assessment of public power energy efficiency programs in California. Consistent with the stated intent and mandates of SB1037 and AB2021, our analysis concludes that public power energy efficiency programs are producing significant energy savings for the state in the most cost-effective manner. The following bullets provide the key findings of this analysis:

- Public power energy efficiency programs provide more than three dollars of societal benefits for every dollar spent.

- During FY 06/07, POUs spent $63 million on energy efficiency programs, reducing peak demand by 57 megawatts and in excess of 254 million kilowatt-hours on an annual basis. For most of the 39 POUs, actual energy efficiency program savings in FY06/07 exceeded the savings estimated by the group of publicly-owned utilities in the 2006 report.

- POU energy efficiency expenditures for FY07/08 are expected to increase to $146 million during FY06/07, reducing demand by 118 megawatts during the summer peak and 541 million kilowatt-hours over the course of the year.

- Operational efficiency savings, considered "procurement" investments by the public power community, was reported by five POUs, providing 574 kilowatts of peak demand reduction and a savings of 5.2 million kilowatt-hours. Additional operational improvements by NCPA at its geothermal facilities at the Geysers and hydroelectric facilities provided some additional savings, but are not reflected in the totals.

- Lighting continues to dominate public power energy efficiency programs, accounting for approximately three-fifths of total energy savings achieved. However, POUs recognize that the growing saturation of the lighting market will require all utilities in the state to more aggressively deploy non-lighting efficiency programs going forward.

- Energy efficiency is a critical tool for POUs to reduce greenhouse gas emissions in California. FY06/07 programs within the public power community will reduce statewide greenhouse gas emissions by 1.5 million tons CO_2 equivalent over the lifetime of the installed measures. Current year programs are expected to save another 3.3 million tons.

Next Steps

CMUA expects this report to be incorporated into the CEC's 2009 IEPR process, much in the same way the last report served as an input to the 2007 IEPR. Within the context of that process, much progress has been made in terms of collecting a comprehensive set of energy efficiency data from stakeholders. This information is critical to the state's implementation of AB32, and key to the California Air Resources Board (CARB) determining the components of the

regulatory and market-based toolbox that CARB will consider will comprise the state's greenhouse gas reduction program.

Along those lines, it is important to remember that, while energy efficiency is a vitally important tool to reach the goals of AB32, it is not the only answer to the greenhouse gas reduction challenge. Coordinated energy policy must recognize the value of energy efficiency, renewable resources, and other mechanisms in total while providing local utilities with the flexibility to optimize their own solutions which best contribute to the state's objectives.

CMUA, NCPA, and SCPPA look forward to a continued dialogue on energy efficiency issues, and our desire to balance statewide energy policy direction with the needs and diverse interests of local communities. The next edition of this report will be submitted on March 15, 2009.

Appendix A: Description of Utility Programs

ALAMEDA POWER & TELECOM (ALAMEDA P&T)

- Established in 1887, the oldest municipal electric utility in the west
- 33,000 customers, 85 percent are residential
- Peak demand: 68 megawatts, occurs in the early evening in the winter
- Alameda P&T load does not have large demand spikes like most of California
- There is no residential air-conditioning
- Annual energy use is 390 gigawatt-hours
- 120 employees

Alameda P&T Energy Efficiency Program Highlights

From FY98/99 to FY06/07, the total required public benefits expenditures were $10,409,536 and the actual expenditures were $16,130,202. Alameda P&T's high investments in renewable energy resources have resulted in expenditures of $5,720,666 in excess of the public benefits requirements.

Since 1991, Alameda P&T has spent almost $2 million in energy efficiency rebates, resulting in more than a 10 percent peak demand reduction and a 5 percent energy reduction. The savings are based upon the "Measure Quantification Methodology: Statewide Savings and Cost 2006" and engineering estimates. All measures have been field-verified.

Public Facilities

Energy efficient lighting retrofits have been completed for all City facilities; and all traffic lights have been retrofitted with LEDs. The energy cost savings since the lighting retrofits started in 1993 is almost $1 million.

City Schools

Alameda P&T rebates of $126,000 helped support the retrofit of the 18 public schools with energy efficient lighting and heating/cooling equipment. The resulting energy cost savings is more than $3 million since the 1994 retrofit. In FY07/08, Alameda P&T will be providing building facilities training focused on energy efficiency for the school district maintenance staff.

Energy Efficiency Goal

As required by AB2021, Alameda P&T has developed an estimate of all potentially achievable cost effective energy efficiency savings and established an annual target for energy savings over 10 years. To achieve this goal, Alameda P&T is updating the energy

efficiency rebate levels and developing new programs. An interdepartmental Energy Efficiency Implementation Team is responsible for developing and evaluating the new programs. The Team is also responsible for the development and implementation of a new marketing plan for all of the energy efficiency programs. Additionally, staff plan to complete an energy efficiency evaluation of Alameda P&T's electric distribution system.

Alameda P&T Investment in Renewables

Alameda P&T will be continuing efforts to make its power supplies more efficient. When the available steam and water in the NCPA geothermal reservoir was declining in the early 1990s, measures were implemented to increase the efficiency and output of the geothermal resources including:

- Treated wastewater from surrounding areas was piped into the geothermal area extending the life and increasing the output from this renewable resource.
- The steam turbines were re-bladed to accommodate lower pressure steam
- The new near-horizontal injection well resulted in an increase of the steam and the capacity for injected water.
- Installed a 3-megawatt turbine in the injection well for additional output.
- Alameda P&T signed long-term contracts for wind and landfill gas generating projects

Proposed Alameda P&T Renewable Investment Program: **(for 2007-08)**

- Continue the NCPA geothermal effluent pipeline project and expand the near-horizontal injection well project, for a total cost of close to $1 million
- Continue to evaluate landfill gas projects and other renewable power supplies close to Alameda

ALAMEDA POWER & TELECOM SUMMARY DATA

Time Period for Reporting Data: Fiscal Year ending 6/30/2007

Alameda		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers									
HVAC	Res Cooling									
Appliances	Res Dishwashers									
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting	48	6	34,553	310,975	166	$ 2,482		$ 8,683	$ 11,165
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration	2	2	12,760	229,680	125	$ 14,080		$ 6,872	$ 20,952
HVAC	Res Shell									
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling	78	36	201,090	3,016,350	1,610	$ 44,227		$ 86,071	$ 130,297
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting	82	42	494,419	4,908,171	2,720	$ 20,548		$ 149,261	$ 169,809
Process	Non-Res Motors	15	8	154,274	2,314,104	1,231	$ 10,606		$ 65,522	$ 76,128
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration			2,400	19,200	10	$ 300		$ 538	$ 838
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other			21,333	63,998	35	$ 3,140		$ 1,989	$ 5,128
SubTotal		227	94	920,828	10,862,479	5,897	$ 95,383		$ 318,935	$ 414,318
T&D	T&D									
Total		227	94	920,828	10,862,479	5,897	$ 95,383		$ 318,935	$ 414,318

EE Program Portfolio TRC Test	**1.66**

Excluding T&D

Time Period for Forecast Data: Fiscal Year ending 6/30/2008

Alameda		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers									
HVAC	Res Cooling									
Appliances	Res Dishwashers									
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting	66	9	50,064	450,576	241	$ 4,050		$ 5,715	$ 9,764
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration	34	34	217,715	3,918,874	2,126	$ 38,280		$ 53,959	$ 92,239
HVAC	Res Shell									
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling	4	5	642,193	9,632,898	5,243	$ 10,431		$ 131,469	$ 141,900
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting	305	165	1,207,486	14,892,580	8,232	$ 57,177		$ 207,665	$ 264,841
Process	Non-Res Motors									
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehensive	Non Res Comprehensive	88	44	290,008	4,350,120	2,381	$ 10,048		$ 60,091	$ 70,139
Other	Other			23,880	71,640	40	$ 3,515		$ 1,052	$ 4,566
SubTotal		497	257	2,431,346	33,316,688	18,262	$ 123,500		$ 459,950	$ 583,450
T&D	T&D									
Total		497	257	2,431,346	33,316,688	18,262	$ 123,500		$ 459,950	$ 583,450

EE Program Portfolio TRC Test	**2.46**

Excluding T&D

ANAHEIM PUBLIC UTILITIES

ANAHEIM PUBLIC UTILITIES
www.anaheim.net

- Established in 1894, the only municipal electric utility in Orange County
- 109,746 meters, 85 percent residential, 14 percent commercial and 1 percent miscellaneous
- Peak demand: 534 megawatts, occurs in the early afternoon in the summer
- Average annual energy use is 3,284 gigawatt-hours
- 330 employees

Anaheim Energy Efficiency Program Highlights

Overview of Public Benefit Programs
From January 1998 through June 2007, public benefits expenditures totaled $59,301,386. Anaheim Public Utilities' expenditures have been 59 percent for Energy Efficiency, 18 percent for RD&D, 16 percent for renewable energy resources and 7 percent income qualified. Participation by income qualified customers is higher since all the residential energy efficiency programs are offered to all customers. Low income customers participate but are not tracked.

Conservation of electricity and water is part of the utility's daily routine. In the long-term, conservation of energy and water helps Anaheim Public Utilities defer the future purchase of more costly resources. In the short-term, conservation is vital in helping maintain stable rates. Anaheim offers approximately 45 value packed Advantage Services to help customers reduce electric and water use and save money.

Current Commercial Customer Programs
[Total annual program cost: $1,422,438. Resulting in: 1,309 kilowatt demand reduction, 6,453,056 kilowatt-hour reduction]

- **Comprehensive Energy Audits -** Customized on-site audits and recommendations designed to improve energy operating efficiency and help customers reduce costs.
- **Water Use Surveys -** Expert analysis of a facility's water use, specific water saving recommendations, and an explanation how incentives may help fund improvements.
- **Dusk to Dawn Lighting -** Free outdoor energy efficient lights with photocells help improve security, save energy, and help hold down costs.
- **Industrial Process Improvement Incentives –** Commercial and industrial water users adopting water-saving processes are eligible for financial assistance.
- **Economic Development/Business Retention Rate -** Provides qualifying businesses with rate discounts with an efficiency measures installation component.

- **Customized Energy Incentives -** Customized financial incentives for installation of high-efficiency air conditioning, motors, and other production related equipment.
- **Heat Pump Incentives -** Encourage installation of high-efficiency heat pumps.
- **Commercial Solar Energy Incentive –** Encourages customers to install solar electric systems at their business facilities.
- **Exit Sign Program -** Financial incentives for up to 50 percent of the cost to retrofit incandescent bulbs or fluorescent lamps in exit signs with more efficient exit sign lighting technology..
- **Lighting Incentives –** Provides incentives to improve energy efficiency for a variety of lighting applications**.**
- **Small Business Energy Management Assistance -** Provides customers of less than 100 kilowatt demand with energy use evaluations, retrofit funding, and installation assistance; focusing on lighting upgrades, programmable thermostats, air conditioning, and refrigeration tune-ups.
- **New Construction -** Design assistance and incentives for new construction and facility expansions that install energy-efficient equipment that exceed Title 24.
- **Commercial Water Equipment Rebates -**Businesses and companies are eligible for rebates by installing or retrofitting with qualifying water-saving devices.

Current Residential Customer Programs

[Total annual Program Costs $2,167,499**.** Resulting in: 1,774 kilowatt demand reduction; 2,728,868 kilowatt-hour reduction]

- **Home Utility Check-Up -** A customized in-home survey of water and energy use and existing appliances; or an option to go to www.anaheim.net and click on Public Utilities to complete a detailed survey online. Either way, customers receive money saving advice, installation of up to five CFLs, water saving aerators and showerheads, and learn about incentives designed to help them be more water and energy efficient.
- **Dusk to Dawn Lighting -** Free outdoor energy efficient lights that automatically turn on at dusk and off at dawn to help improve security and use less electricity.
- **Home Investment Package (HIP)** – Whole house diagnosis program using Home Performance with Energy Star model to evaluate and improve energy efficiency, safety, comfort, durability and resale value of existing single family homes. Program mandates BPI-certified contractors to diagnose home, present results and perform home improvements.
- **Air Duct Efficiency -** Incentives for customers who repair or replace their air duct systems to meet tight duct standards.
- **Home Incentives -** Rebates for purchase and installation of high efficiency ENERGY STAR® rated appliances and high efficiency conservation measures.
- **Solar Energy Buydown -** Funding helps residents lower the cost of harnessing the power of the sun to generate electricity and reduce household electric bills.
- **TreePower -** Provides complimentary shade trees and incentives for residential customers. Shade trees, when properly placed, can help reduce air conditioning costs.
- **Rehabilitation Loan and Energy Efficiency Grants –** Income-qualified loans to residential customers for rehabilitation of existing single-family homes. Grants are offered in addition to installing energy efficiency measures.

- **Weatherization** - Provides weatherization measures, ensures combustion appliance safety and installs Energy Star appliances for income-qualified residential homeowners and tenants.
- **Neighborhood Comprehensive Revitalization** – Provides comprehensive revitalization and retrofits to existing income-qualified neighborhood developments. Funding is provided to install high efficiency conservation measures and Energy Star appliances.
- **Lighten-Up CFL Fundraiser** - Provides free CFLs to students to sell as a fund raising activity to attend outdoor environmental camp (or other specified extracurricular activity). Schools pay $1 for each bulb sold which is applied to the Sun Power for Schools Program.
- **Permit Fee Waiver** – Waives the required permit fees for residential customers who install high efficiency measures and Energy Star appliances qualified for the Home Incentives Program.
- **Toilet Rebate Programs -** Rebates for ultra-low-flush and high efficiency toilets.
- **Income-Qualified Senior or Disabled Energy Credit -** Provides a 10 percent reduction on the electric portion of bills to seniors or long-term disabled customers at or below 80 percent of the Orange County median income.

Public Facilities
Energy efficient lighting retrofits have been completed for most City facilities; and all traffic sign lights have been retrofitted with LEDs.

City Schools
Anaheim Public Utilities rebates of $330,125 helped support the retrofit of the 18 public schools with energy efficient lighting and heating/cooling equipment.

Time Period for Reporting Data
Fiscal Year ending 6/30/2007

Proposed Energy Efficiency Programs and Services (2007-08)
- Introduce Energy Efficiency Permit Fee Waiver Program, offering waiver of permit fees for the installation of energy efficient equipment
- Maintain existing programs at current levels
- Evaluate the appropriateness of any new energy efficiency technologies
- Ensure that energy efficiency is part of integrated resource planning by determining and implementing the most cost-effective, reliable, and feasible energy efficiency measures
- Measure and evaluate the impact of energy efficiency programs

Low Income
- Maintain existing programs at current levels
- Ensure that all qualified customers are enrolled in the low-income program
- Conduct an evaluation of the low-income programs

Load Reduction Programs
Load Reduction Programs continue to be in place and effectively protected Anaheim residents and businesses from the effects of state-wide power events. Fortunately, during summer 2007, no Transmission Emergencies or energy shortages occurred. The utility's Load Reduction Programs, however, were ready and available. Load Curtailment Agreements with three customers, originally in place until year-end 2006 were extended to 2008. Additional load became available from City facilities and the addition of new participants. All Load Reduction Programs combined can provide up to 30 MW of curtailable load.

Investment in Renewables

- **Green Power for the Grid and Sun Power for Schools Programs** - These two programs offer all Anaheim businesses and residents a way to help bring electricity generated by quiet, clean, renewable energy resources - such as solar, wind, geothermal, biomass, and small hydro - to the community. A small financial commitment, which appears as a line item on customer utility bills, provides customers the opportunity to direct funding into one or both of these green resource programs. The program had 293 signups during FY06/07, accounting for $8646.88 in collections that has gone towards offsetting the cost of green power and assisting schools that install solar energy systems.

Proposed Renewable Investment Program
Anaheim continues to evaluate landfill gas projects and other renewable power supplies to add to its resource mix. Anaheim's goal is to achieve purchases of renewable energy resources of 10 percent by 2010 and 20 percent by 2015.

ANAHEIM PUBLIC UTILITIES

ANAHEIM PUBLIC UTILITIES
www.anaheim.net

Time Period for Reporting Data: Fiscal Year ending 6/30/2007

Anaheim		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers									
HVAC	Res Cooling	317	317	172,009	2,580,134	1,564	$ 174,549		$ 9,678	$ 184,227
Appliances	Res Dishwashers									
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting	292	292	852,392	5,966,744	3,022	$ 150,195		$ 25,898	$ 176,092
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration	1,043	1,043	632,068	9,481,024	5,043	$ 262,654		$ 110,757	$ 373,411
HVAC	Res Shell	11	11	25,175	377,625	240	$ 89,708		$ 86	$ 89,794
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling	241	241	823,511	12,352,670	6,996	$ 531,493		$ 37,478	$ 568,971
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting	557	557	2,531,406	37,971,092	21,102	$ 138,419		$ 33,593	$ 172,012
Process	Non-Res Motors	509	509	2,773,653	41,604,799	21,909	$ 181,583		$ 57,658	$ 239,241
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other	112	112	913,363	9,358,581	5,954	$ 198,863		$ 43,845	$ 242,709
SubTotal		3,083	3,083	8,723,577	119,692,667	65,831	$ 1,727,463		$ 318,994	$ 2,046,457
T&D	T&D									
Total		3,083	3,083	8,723,577	119,692,667	65,831	$ 1,727,463		$ 318,994	$ 2,046,457

EE Program Portfolio TRC Test	5.01

Excluding T&D

Time Period for Forecast Data: Fiscal Year ending 6/30/2008

Anaheim		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers									
HVAC	Res Cooling	363	363	197,331	2,959,972	1,794	$ 199,840		$ 9,782	$ 209,622
Appliances	Res Dishwashers									
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting	3,894	3,894	6,176,150	43,233,052	21,894	$ 423,613		$ 52,086	$ 475,699
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration	1,199	1,199	726,878	10,903,177	5,799	$ 302,052		$ 126,673	$ 428,725
HVAC	Res Shell	13	13	28,951	434,269	276	$ 103,164		$ 56	$ 103,220
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling	277	277	947,038	14,205,570	8,046	$ 611,217		$ 42,049	$ 653,266
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting	641	641	2,911,117	43,666,755	24,268	$ 159,182		$ 35,560	$ 194,742
Process	Non-Res Motors	586	586	3,189,701	47,845,519	25,196	$ 208,820		$ 63,340	$ 272,160
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other	131	131	1,054,066	10,854,854	6,906	$ 228,283		$ 46,896	$ 275,179
SubTotal		7,105	7,105	15,231,234	174,103,168	94,179	$ 2,236,170		$ 376,443	$ 2,612,613
T&D	T&D									
Total		7,105	7,105	15,231,234	174,103,168	94,179	$ 2,236,170		$ 376,443	$ 2,612,613

EE Program Portfolio TRC Test	5.70

Excluding T&D

AZUSA LIGHT & WATER

- Established in 1898, Azusa Light & Water is one of the oldest municipal utilities in Southern California and the West.
- The utility serves approximately 15,500 retail customers, of which 69 percent of the sales are for the commercial and industrial consumers that account for only 12 percent of the customer base.
- Peak demand of approximately 60 megawatts usually occurs in the early evening during the late summer.
- Azusa Light & Water does not self-generate, and purchases 80 percent of the total 267,304 megawatt-hours through long-term contracts.
- Unaudited sales revenues are $34,382,000, with unaudited operating costs of $32,631,000.
- Electric system includes 2 substations, 20 circuits and about 100 miles of electric lines.

Azusa Light & Water Energy Efficiency Program Highlights

Since inception, Azusa Light & Water has expended over $4,250,000 toward providing energy conservation information to the Azusa community and rewarding businesses and residents for upgrading inefficient energy consuming equipment with more energy efficient equipment. These efforts have resulted in an annual peak demand reduction of approximately 1 percent. Savings are based upon engineering estimates and measurements that have been field verified.

Current Commercial and Industrial Customer Programs: (Annual program cost: $290,000; resulting in approximately 300 kilowatts of demand reduction and 15,400,000 kilowatt-hours of net lifecycle savings):

- Business Partnership Program: Retrofit existing buildings and factories with high efficiency lighting, air conditioning and process equipment.
- Free Energy Audits: Provide suggestions on the most energy efficient equipment and more cost effective methods of operations.
- New Business Retrofit Program: Encourage the use of the most energy efficient equipment in the design and construction of new buildings and factories.

Current Residential Customer Programs: (Annual program cost: $75,000; resulting in approximately 50 kilowatts of demand reduction and 3,072,000 kilowatt-hours of net-lifecycle savings).

- EnergyStar® Refrigerator Program: Rebates are offered for the purchase of an EnergyStar® rated refrigerator.
- EnergyStar® Air Conditioner Program: Rebates are offered for the purchase of an Energy Star® rated room or central air conditioning unit.
- Home Weatherization Rebate Program: Rebates are offered for a variety of home weatherization measures.
- Free Home-in-Home Energy Audits: Provide recommendations for the effective use of energy within the residence.
- Free On-Line Home Energy Audit Program: Customers can enter various parameters that match their home and lifestyle, and receive an immediate list of conservation recommendations and measures along with an estimate of what each appliance within the home is using in the way of energy.

Public Facilities
Program guidelines are essentially the same as the current commercial and industrial programs; therefore they are included in that category for funding and savings.

City Schools
(Annual program cost: $68,000; resulting in approximately 75 kilowatts of demand reduction and 4,950,000 kilowatt-hours of net lifecycle savings).

- LivingWise: Provide an interactive conservation education program to all 6th grade classes within the City of Azusa, both private and public.

Proposed Azusa Energy Efficiency Programs and Services (2007-08)

- Maintain existing programs at current levels
- Ensure that all new electric loads are efficient
- Evaluate the appropriateness of any new energy technologies
- Ensure that energy efficiency is part of integrated resource planning by determining and implementing the most cost-effective, reliable, and feasible energy efficiency measures
- Measure and evaluate the impact of energy efficiency programs

Low Income Programs

- Maintain existing programs at current levels
- Ensure that all qualified customers are enrolled in the low-income program
- Conduct an evaluation of the low-income programs

Azusa Investment in Renewable Energy
Azusa Light & Water will continue to explore addition supplies of renewable energy to meet its 2010 requirement of 20 percent renewable energy in the power portfolio.

Azusa Demand Reduction Programs

- Maintain existing summer load reduction program driven by reliability considerations. Current program entails calling large customers to conserve during Stage 2 episodes.
- Measure and evaluate additional price-driven demand response programs.

AZUSA LIGHT & WATER

Time Period for Reporting Data: Fiscal Year ending 6/30/2007

Azusa		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers									
HVAC	Res Cooling	24	20	71,098	2,069,500	1,319	$ 38,582		$ 35,941	$ 74,523
Appliances	Res Dishwashers									
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting									
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration	6	6	36,634	659,405	351	$ 10,600		$ 6,378	$ 16,978
HVAC	Res Shell	9	9	12,021	240,416	138	$ 10,023		$ 2,652	$ 12,675
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking	2	2	7,765	116,475	61	$ 5,803		$ 1,061	$ 6,865
HVAC	Non-Res Cooling	6	6	17,513	315,234	182	$ 24,930		$ 3,702	$ 28,632
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting	95	95	226,683	2,497,798	1,387	$ 81,068		$ 25,289	$ 106,357
Process	Non-Res Motors									
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration	7	7	50,493	908,874	479	$ 18,914		$ 8,510	$ 27,425
HVAC	Non-Res Shell	4	4	20,585	385,235	222	$ 53,772		$ 4,573	$ 58,345
Process	Non Res Process	11	11	24,404	439,272	231	$ 2,290		$ 4,113	$ 6,403
Comprehensive	Non Res Comprehensive									
Other	Other	26	26	573,350	3,089,280	1,778	$ 43,687		$ 31,571	$ 75,258
SubTotal		190	186	1,040,546	10,721,489	6,149	$ 289,670		$ 123,790	$ 413,460
T&D	T&D									
Total		190	186	1,040,546	10,721,489	6,149	$ 289,670		$ 123,790	$ 413,460

EE Program Portfolio TRC Test	**1.74**

Excluding T&D

Time Period for Forecast Data: Fiscal Year ending 6/30/2008

Azusa		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers									
HVAC	Res Cooling	24	20	71,222	2,071,363	1,321	$ 38,767		$ 30,134	$ 68,902
Appliances	Res Dishwashers									
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting	440	56	312,000	2,808,000	1,422	$ 18,000		$ 20,056	$ 38,056
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration	6	6	36,634	659,405	351	$ 10,600		$ 5,343	$ 15,943
HVAC	Res Shell	9	9	12,021	240,416	138	$ 10,023		$ 2,222	$ 12,245
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking	2	2	7,765	116,475	61	$ 5,803		$ 889	$ 6,693
HVAC	Non-Res Cooling	6	6	17,513	315,234	182	$ 24,930		$ 3,101	$ 28,031
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting	95	95	226,683	2,497,798	1,387	$ 81,068		$ 21,187	$ 102,255
Process	Non-Res Motors									
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration	7	7	50,493	908,874	479	$ 18,914		$ 7,130	$ 26,044
HVAC	Non-Res Shell	4	4	20,585	385,235	222	$ 53,772		$ 3,831	$ 57,603
Process	Non Res Process	11	11	24,404	439,272	231	$ 2,290		$ 3,446	$ 5,736
Comprehensive	Non Res Comprehensive									
Other	Other	26	26	573,350	3,089,280	1,778	$ 43,687		$ 26,450	$ 70,137
SubTotal		630	242	1,352,670	13,531,351	7,572	$ 307,855		$ 123,790	$ 431,645
T&D	T&D									
Total		630	242	1,352,670	13,531,351	7,572	$ 307,855		$ 123,790	$ 431,645

EE Program Portfolio TRC Test	**1.90**

Excluding T&D

CITY OF BANNING ELECTRIC UTILITY

- Established in 1922
- 12,200 customers, 90 percent are residential
- Peak demand: 48 megawatts, primarily driven by summer air conditioning load
- The Utility's annual energy use is 163,644 megawatt-hours, which is broken down into 47 percent residential and 53 percent commercial/industrial
- 33 employees

Overview of Banning Energy Efficiency Program Highlights

During FY 06/07, Banning spent $41,301 in energy efficiency rebates, which provided 22 kilowatt demand and 95,699 kilowatt-hours energy savings.

Current Customer Programs:

- Air Conditioner: Monetary incentives to replace an existing central air conditioning unit with a new high-efficiency unit.
- EnergyStar® Appliances: Monetary incentives for purchasing products that meet the Energy Star®" criteria.
- EnergyStar® Refrigerator: A monetary incentive for replacing an old inefficient refrigerator with a new energy efficient unit.
- Recycle: Rebates offered to remove and recycle operating old and inefficient refrigerators and freezers.
- Energy Weatherization: Monetary incentives to replace inefficient materials with products that will improve the energy efficiency of their facility and reduce energy use.
- Shade Tree: Rebates offered to plant shade trees around homes to help reduce the amount of energy used for air conditioning.
- Photovoltaic: Monetary incentives for the purchase and installation of photovoltaic (PV) or solar powered systems.
- New Construction: Monetary incentives for new construction projects that exceed the energy efficiency above California's Title 24 standards.
- Energy Audits: Provides customers with a variety of recommendations for reducing energy consumption.
- Low Income Assistance: An electric utility account credit for qualified customers.

Proposed Banning Energy Efficiency Programs and Services: (2007-08)

- Increase overall participation in existing programs by at least 10 percent
- Ensure that all new electric load is efficient
- Evaluate and implement new energy efficiency technologies as applicable
- Ensure that Banning's Renewable Portfolio Standard (RPS) is maintained
- Measure and evaluate the impact of energy efficiency programs

Low-Income Customer Programs:

- Ensure that all qualified customers are provided information for the low-income programs
- Conduct an evaluation of the low-income programs

Banning Investment in Renewables:

The City of Banning's RPS has committed the Utility to reach 33 percent renewables by 2020.

- The City has contracted for geothermal energy, which when fully operational will provide over 10 percent renewable energy.
- The Utility is currently evaluating several renewable projects to meet the RPS goals.

Banning Demand Reduction Programs:

The City of Banning does not currently have any demand reduction programs in place.

CITY OF BANNING ELECTRIC UTILITY

Time Period for Reporting Data: Fiscal Year ending 6/30/2007

Banning		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers			614	6,144	4	$ 3,216			$ 3,216
HVAC	Res Cooling	113	82	103,042	1,781,824	1,134	$ 22,823			$ 22,823
Appliances	Res Dishwashers			1,148	14,924	8	$ 2,450			$ 2,450
Consumer Electronics	Res Electronics			378	3,406	2	$ 1,001			$ 1,001
HVAC	Res Heating									
Lighting	Res Lighting	132	17	93,600	842,400	427				
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration	6	6	37,329	671,918	357	$ 20,765			$ 20,765
HVAC	Res Shell	8	8	16,922	338,432	195	$ 3,200			$ 3,200
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling									
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting									
Process	Non-Res Motors									
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other									
SubTotal		260	114	253,033	3,659,048	2,127	$ 53,455			$ 53,455
T&D	T&D									
Total		260	114	253,033	3,659,048	2,127	$ 53,455			$ 53,455

EE Program Portfolio TRC Test	**1.25**

Excluding T&D

Time Period for Forecast Data: Fiscal Year ending 6/30/2008

Banning		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	1	1	1,280	12,800	7	$ 3,750			$ 3,750
HVAC	Res Cooling	107	65	113,726	2,411,962	1,536	$ 49,750			$ 49,750
Appliances	Res Dishwashers	1	1	1,640	21,320	11	$ 3,750			$ 3,750
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting									
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration	11	11	69,021	1,242,374	661	$ 29,620			$ 29,620
HVAC	Res Shell	39	39	72,368	1,447,360	833	$ 210			$ 210
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling									
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting									
Process	Non-Res Motors									
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other									
SubTotal		159	116	258,035	5,135,817	3,049	$ 87,080			$ 87,080
T&D	T&D									
Total		159	116	258,035	5,135,817	3,049	$ 87,080			$ 87,080

EE Program Portfolio TRC Test	**1.37**

Excluding T&D

CITY OF BIGGS

- Biggs has 611 residential, 55 commercial and 3 industrial customers.
- The City of Biggs projects a growth rate of 5 percent over the next 3 years.
- Peak demand – in July 2007 was 4 megawatts
- Annual energy use: 16.2 gigawatt-hours
- Power content: Geothermal 13 percent, small hydro 1 percent, large hydro 76 percent, and nonrenewable 10 percent.

Overview of Biggs Energy Efficiency Program Highlights

The City of Biggs implemented residential energy efficiency programs in 1997 but completely remodeled our programs in mid 2005. The program for FY06/07 expanded to include commercial audits and educational programs.

Current Energy Efficiency Programs and Services

- Residential Energy Audits - free, customized home energy audits, including blower door tests, weatherization evaluations, and a review of energy usage. Specific recommendations to improve energy efficiency and reduce energy use are provided.
- Commercial Energy Audits - free, customized commercial energy audits, including lighting assessment, HVAC assessment, equipment assessment and a review of energy usage. Specific recommendations to improve energy efficiency and reduce energy use are provided.
- Fluorescent Light Program - a CFL Give-away Program to encourage customers to replace incandescent bulbs with CFLs.
- Residential Energy Rebate Program - The City of Biggs manages a comprehensive residential energy efficiency incentive program, focusing on peak load reduction and energy savings. Generous rebates and comprehensive technical support are available to residential customers to promote the installation of attic/roof insulation, dual pane windows, shade screens, higher-efficiency water heaters, higher efficiency pool pumps and the purchase of energy efficient clothes washers and refrigerators.
- Commercial Energy Rebate Program - The City of Biggs offers customized energy efficiency incentive programs to commercial customers, focusing on peak load reduction and energy savings. Generous rebates and comprehensive technical support are available

to commercial customers to promote the installation of energy efficient lighting, HVAC, equipment and controls.

- Investment Grade Audit Program - The City of Biggs offers, free of charge, investment-grade audits for all school district buildings as a way to support the district in acquiring grant funding for energy efficiency retrofits.
- Education Services - The City of Biggs supports its Solar Schoolhouse Program by funding teacher participation in the "Summer Institute for Educators" and by supplying Solar Schoolhouse Educational Tools for classroom use.

CITY OF BIGGS

Time Period for Reporting Data: Fiscal Year ending 6/30/2007

Biggs		Resource Savings Summary						Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers										
HVAC	Res Cooling	5	1	6,735	121,253	5	78	$ 1,900		$ 2,987	$ 4,887
Appliances	Res Dishwashers			74	967		1	$ 75		$ 16	$ 91
Consumer Electronics	Res Electronics										
HVAC	Res Heating										
Lighting	Res Lighting	28	4	19,500	175,500	28	94	$ 1,344		$ 2,543	$ 3,887
Pool Pump	Res Pool Pump										
Refrigeration	Res Refrigeration	2	2	11,978	215,611	2	117	$ 1,200		$ 3,475	$ 4,675
HVAC	Res Shell	3	3	3,693	73,856	3	42	$ 3,561		$ 1,332	$ 4,892
Water Heating	Res Water Heating										
Comprehensive	Res Comprehensive										
Process	Non-Res Cooking										
HVAC	Non-Res Cooling										
HVAC	Non-Res Heating										
Lighting	Non-Res Lighting			5,750	92,000		34		$ 2,267	$ 907	$ 3,174
Process	Non-Res Motors										
Process	Non-Res Pumps										
Refrigeration	Non-Res Refrigeration										
HVAC	Non-Res Shell										
Process	Non Res Process										
Comprehensive	Non Res Comprehensive										
Other	Other										
SubTotal		38	9	47,730	679,188	38	365	$ 8,080	$ 2,267	$ 11,259	$ 21,606
T&D	T&D										
Total		38	9	47,730	679,188	38	365	$ 8,080	$ 2,267	$ 11,259	$ 21,606

EE Program Portfolio TRC Test	**1.46**

Excluding T&D

Time Period for Forecast Data: Fiscal Year ending 6/30/2008

Biggs		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers									
HVAC	Res Cooling	2	1	1,376	24,774	16	$ 1,359			$ 1,359
Appliances	Res Dishwashers									
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting									
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration			296	5,328	3	$ 600			$ 600
HVAC	Res Shell	1	1	1,638	32,752	18	$ 2,076			$ 2,076
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling									
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting	11	9	53,278	586,054	325	$ 13,319			$ 13,319
Process	Non-Res Motors									
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other									
SubTotal		14	12	56,588	648,908	362	$ 17,354			$ 17,354
T&D	T&D									
Total		14	12	56,588	648,908	362	$ 17,354			$ 17,354

EE Program Portfolio TRC Test	**3.08**

Excluding T&D

BURBANK WATER & POWER (BWP)

- Established in 1913
- Serving the 100,000 residents of and 6,000 businesses located in the City of Burbank with water and electricity
- Burbank's peak electrical demand hit a system high of 308 megawatts in August 2007
- Annual energy use is approximately 1,200 gigawatt-hours
- Burbank Water and Power employs approximately 300 employees

BWP's Energy Efficiency Program Highlights

During FY06/07, BWP spent a total of $1,788,632 for energy efficiency programs. These programs resulted in net peak demand savings of 1,107 kilowatts, net annual energy savings of over 5.6 million kilowatt-hours, and an estimated net lifetime energy savings of over 76 million kilowatt-hours.

Our projections for FY07/08 show spending on energy-efficiency initiatives of $2,997,253. These programs are projected to result in net peak demand savings of 1,645 kilowatts, net annual energy savings of eight million kilowatt-hours, and an estimated net lifetime energy savings of over 94 million kilowatt-hours.

Current Customer Programs:
BWP offers an array of both commercial and residential programs.

Here is a brief description of Burbank's commercial programs:

- Energy Solutions Business Rebate Program: Rebates offered for early replacement efficiency retrofit projects such as lighting and HVAC.
- Business Bucks: Targeted to smaller and mid-sized businesses, this program provides free surveys of commercial facilities by a certified energy manager. A report listing recommended energy efficient retrofits is provided from which businesses can select. In 2007, BWP increased the incentives of this program such customers can receive up to $2,000 in cost-effective energy-efficiency retrofits paid for by BWP.
- Made in the Shade Program: Up to 20 free shade trees are provided to interested Burbank businesses. Shade trees are 'nature's air conditioners'; mature trees properly sited can significantly reduce air conditioning use.

- Wet Cleaning Incentive Program: Provide education on the advantages of professional wet cleaning to all Burbank dry cleaners, as well as additional financial incentives to cleaners making the switch to wet cleaning.
- Leadership in Energy and Environmental Design (LEED) Certification Incentive Program: Incentive program to encourage the construction of environmentally preferred buildings in Burbank.
- Business Energy Education Program: Provides free educational workshops on energy efficiency topics to Burbank businesses.

Here is a brief description of Burbank's residential programs:

- Home Rewards Residential Rebate Program: Cash rebates offered to Burbank residents purchasing Energy Star® appliances and taking energy-efficiency actions, such as installing attic or wall insulation in their homes.
- Home Energy Analyzer: This free on-line service allows residents to input their household characteristics and energy use to discover ways to save energy.
- Made in the Shade: Up to three free shade trees are provided to interested Burbank homeowners to reduce air conditioning use.
- Refrigerator Exchange Program: Burbank's low-income Lifeline Rate customers can receive a new Energy Star™ refrigerator in exchange for their existing unit.
- Refrigerator Round-Up Program: Any Burbank resident with a second operable refrigerator can turn that appliance in to BWP for environmental recycling and receive a $100 billing credit.

Additionally, BWP offers ad hoc energy-saving opportunities throughout the year, including providing free compact fluorescent lights at community events and "LivingWise" kits to 6th grade students. These kits contain both energy and water saving devices for the household.

New Programs

During FY07-08, BWP staff will be rolling out at least three new initiatives. As always, BWP staff will continue to explore other cost-effective efficiency opportunities.

- CFL Mail Out Program: Every Burbank address, residential and business alike, will receive a package containing two compact fluorescent lights (CFLs)
- Check-Me Program: Single-Family, Multi-Family, and Commercial customers will be able to participate in this program, ensuring that their HVAC systems operate at the highest efficiency rated.
- Ice Bear Program: BWP plans to install 20 peak load reducing Ice Bear units during the year.

BURBANK WATER & POWER (BWP)

Time Period for Reporting Data: Fiscal Year ending 6/30/2007

Burbank		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	7	7	16,082	160,816	93	$ 106,361		$ 316	$ 106,677
HVAC	Res Cooling	215	167	447,883	11,616,761	7,387	$ 142,244	$ 74,509	$ 38,017	$ 254,769
Appliances	Res Dishwashers	5	5	15,502	201,527	106	$ 28,493		$ 362	$ 28,855
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting	157	21	115,592	1,040,328	527	$ 10,506		$ 1,705	$ 12,211
Pool Pump	Res Pool Pump	9	4	13,633	136,325	80	$ 703		$ 284	$ 987
Refrigeration	Res Refrigeration	136	136	1,022,208	18,399,737	9,786	$ 124,460	$ 131,576	$ 34,212	$ 290,247
HVAC	Res Shell	38	38	50,025	1,000,502	576	$ 94,773		$ 2,122	$ 96,894
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive			110,481	552,404	280		$ 15,837	$ 909	$ 16,746
Process	Non-Res Cooking									
HVAC	Non-Res Cooling									
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting									
Process	Non-Res Motors									
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehensive	Non Res Comprehensive	729	729	3,531,982	41,496,430	21,852	$ 335,775	$ 468,805	$ 71,152	$ 875,732
Other	Other			284,061	1,890,586	1,088		$ 16,532	$ 23,715	$ 40,247
SubTotal		1,297	1,107	5,607,447	76,495,416	41,776	$ 843,314	$ 707,258	$ 172,793	$ 1,723,365
T&D	T&D	437	437	1,416,000	28,320,000	16,318			$ 65,267	$ 65,267
Total		1,734	1,544	7,023,447	104,815,416	58,094	$ 843,314	$ 707,258	$ 238,060	$ 1,788,632

EE Program Portfolio TRC Test	**1.80**

Excluding T&D

Time Period for Forecast Data: Fiscal Year ending 6/30/2008

Burbank		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers									
HVAC	Res Cooling	211	211	467,132	11,277,950	7,175		$ 225,840	$ 34,814	$ 260,654
Appliances	Res Dishwashers									
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting	3,647	492	2,691,720	24,225,480	12,268	$ 299,718		$ 37,260	$ 336,978
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration	150	150	1,055,200	18,993,600	10,102	$ 50,000	$ 100,050	$ 33,545	$ 183,595
HVAC	Res Shell									
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive	98	74	700,120	5,103,603	2,666	$ 400,000	$ 47,440	$ 8,277	$ 455,717
Process	Non-Res Cooking									
HVAC	Non-Res Cooling	140	140					$ 500,000		$ 500,000
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting									
Process	Non-Res Motors									
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehensive	Non Res Comprehensive	578	578	2,875,000	33,500,000	17,641	$ 735,000	$ 400,000	$ 54,220	$ 1,189,220
Other	Other			215,400	1,318,200	759		$ 17,640	$ 17,444	$ 35,084
SubTotal		4,824	1,645	8,004,572	94,418,833	50,611	$ 1,484,718	$ 1,290,970	$ 185,560	$ 2,961,248
T&D	T&D	242	242	821,000	16,420,000	9,461			$ 36,005	$ 36,005
Total		5,066	1,887	8,825,572	110,838,833	60,073	$ 1,484,718	$ 1,290,970	$ 221,565	$ 2,997,253

EE Program Portfolio TRC Test	**2.42**

Excluding T&D

COLTON ELECTRIC UTILITY (CEU)

- Established in 1895 by the City of Colton
- CEU has three substations and owns a 43 megawatt gas combustion turbine generator
- CEU has 18,126 electric meters, with residential comprising 28 percent of total sales, commercial 27 percent, industrial 42 percent and 3 percent municipal
- Peak demand for 2006 was 86 megawatts on August 22 at 4:00 p.m.
- In FY05/06, CEU sold 342,569,090 kilowatt-hours
- CEU has 40 employees

CEU Energy Efficiency Program Highlights

From FY98/99 through FY05/06, Colton spent $3,771,892 on Public Benefits Programs. Spending for the major efficiency programs was $1,063,871, and reduced peak demand by 1,082 kilowatts, overall demand by 1,530 kilowatts, annual energy use by 3,248,993 kilowatt-hours and lifecycle energy use by 28,262,818 kilowatt-hours. The budget for FY 06/07 is $848,941.

Overview of Current Energy Efficiency Programs:
The objectives of the program are to implement energy efficiency programs for all customers by evaluating energy use of customers and start with low and no cost measures, then do the most cost effective reliable measures beginning with lighting upgrades for all customers.

Current Commercial Customer Programs:

- The major commercial program has been lighting rebates that paid $200 per kilowatt reduced. From 1997 to 2005, this program cost $87,730, reducing demand by 428 kilowatts and saving approximately 1,250,000 kilowatt-hours per year.
- In 2004, CEU had a consultant perform audits for 868 businesses to identify needs and opportunities for improving energy efficiency. The audits found that lighting upgrades at these customers had a potential for reducing demand by 2,026 kilowatts and saving 7,145,213 kilowatt-hours annually.
- In 2005, a free direct install lighting program was implemented to facilitate lighting upgrades. This program replaced inefficient lighting with up to date systems at 250 businesses and reduced demand 158 kilowatts saving 742,093 kilowatt-hours annually. The program cost $185,212.
- In FY06/07, CEU's free direct install lighting program expanded to serve 552 customers and reduced peak demand by 310 kilowatts saving customers 1,459,390 kilowatts. The program's cost was $366,496 and saved customers an average of $450 annually.

Current Residential Customer Programs:

- All 16,000 residential customers have been provided with 2 free CFLs. Each lamp uses 15 watts to provide the light of a 60 watt incandescent lamp. This $111,680 program reduced peak demand by 154 kilowatts and overall demand by 1,440 kilowatts saving 818,000 kilowatt-hours per year. The total lifecycle saving is calculated to be 7,372,800 kilowatt-hours.
- Home energy audits are available to customers with high energy bills.
- Online energy audits and information is available through Apogee Interactive.

Low Income Customer Programs:

- 433 low income customers participated in CEU's once-a-year one month 100 percent credit on electric charges. This allowed customers who received high bills especially during summer months to not be burdened with the difficulty of paying a bill. $72,300 was spent an average benefit of $147 per customer.
- 145 low income customers were assisted by a refrigerator replacement program that provided a new energy saving refrigerator and recycled the old refrigerator. $79,146 was spent and 17.7 kilowatts and 108,750 kilowatt-hours will be saved by the program.
- Portable evaporative coolers were given to 50 customers to provide comfort and reduce air conditioning costs. The cooler program cost $12,500 and saved reduced demand by 75 kilowatts, saved 47,450 kilowatt-hours per year, and has a projected lifecycle savings of 237,250 kilowatt-hours.

City Facilities to date:

- All traffic signals were retrofitted with LED energy saving lights. The $245,000 project reduced demand by 62 kilowatts and saved 550,000 kilowatt-hours a year, saving $85,000 a year in energy costs.
- All city facilities had high efficiency lighting installed and City Hall had extremely old air conditioners replaced with high efficiency units.

Measurement and Verification Activities:

- Currently and in the future E3 will be used to verify savings and benefits. Alternative calculations may also be used for some measures.

Proposed CEU Energy Efficiency Programs: for 2007-2008

Residential:

- The CFL mailing program will provide all residential customers a package with two CFL lamps and energy saving information. The program is expected to cost $320,000 and save 153 peak kilowatts, 1,050 overall kilowatts, 819,200 kilowatt-hours per year, and 7,372,000 life cycle kilowatt-hours.
- A catalog of energy saving products will be sent to all customers and be available online. It will have energy saving information and products such as CFLs, lamps, coolers, meters, thermometers and thermostats. The utility will provide buy down funds to reduce costs. Costs and savings will be evaluated after the program has operated.
- Continue in-home and online energy audits.

- Select incentives for effective cooling products.
- The low-income residential refrigerator replacement program will spend $320 per customer. The expected $32,000 annual cost will reduce peak demand by 24 kilowatts, save 155,680 kilowatt-hours annually, and 2,802,240 kilowatt-hours over the life of the refrigerators.
- Low-income customers with high air conditioning costs are provided evaporative coolers. The $30,000 program should reduce peak demand by 120 kilowatts, save 142,000 kilowatt-hours per year, and 713,200 kilowatt-hours over the life of the coolers.

Commercial:

- Direct install lighting for 400 customers is expected to cost $300,000 and will reduce peak demand from 100 to 300 kilowatts, saving almost 900,000 kilowatt-hours per year and have lifecycle savings of more than 8,000,000 kilowatt-hours.
- Air conditioning tune-ups will be done on a pilot basis and be evaluated on the actual cost and savings.

Renewable Energy Development Plans:

- The Photovoltaic Rebate Program, which began in 2005, offers $4.00 per watt with a cap of $20,000 for residential and $50,000 for commercial.
- The one project completed was a 100 kilowatt commercial system that received $50,000 from CEU.
- During FY07/08, several solar systems are in the planning process with $200,000 budgeted for residential and commercial customers.
- Other renewable energy expenditures in FY07/08 are an expected $185,000 for landfill gas electric and wind energy. CEU is investigating investment and purchases from geothermal, concentrating solar, low head hydroelectric, additional wind, and bio-fuel generation from wood-waste and sludge.

CEU Demand Reduction Programs:

CEU currently does not have any demand reduction programs in place. Demand reducing time-of-use rates are available for customers with demand greater than 200 kilowatts. Other demand reduction technologies are being investigated such as wireless internet controlled thermostats and energy storage systems.

COLTON ELECTRIC UTILITY (CEU)

Time Period for Reporting Data: Fiscal Year ending 6/30/2007

COLTON ELECTRIC UTILTIY		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers									
HVAC	Res Cooling	157	106	104,835	1,755,392	1,117	$ 31,966		$ 873	$ 32,840
Appliances	Res Dishwashers									
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting	729	107	568,889	5,120,000	2,593	$ 77,556		$ 608	$ 78,164
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration	35	35	321,088	5,779,584	3,074	$ 79,145		$ 1,262	$ 80,408
HVAC	Res Shell									
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling									
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting	2,042	1,591	9,251,691	145,618,971	80,921	$ 652,274		$ 5,256	$ 657,530
Process	Non-Res Motors									
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other									
SubTotal		2,963	1,838	10,246,503	158,273,947	87,705	$ 840,941		$ 8,000	$ 848,941
T&D	T&D									
Total		2,963	1,838	10,246,503	158,273,947	87,705	$ 840,941		$ 8,000	$ 848,941

EE Program Portfolio TRC Test	**12.47**

Excluding T&D

Time Period for Forecast Data: Fiscal Year ending 6/30/2008

COLTON ELECTRIC UTILTIY		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers									
HVAC	Res Cooling	157	106	104,835	1,755,392	1,117	$ 31,966		$ 873	$ 32,840
Appliances	Res Dishwashers									
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting	729	107	568,889	5,120,000	2,593	$ 77,556		$ 608	$ 78,164
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration	35	35	321,088	5,779,584	3,074	$ 79,145		$ 1,262	$ 80,408
HVAC	Res Shell									
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling									
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting	2,042	1,591	9,251,691	145,618,971	80,921	$ 652,274		$ 5,256	$ 657,530
Process	Non-Res Motors									
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other									
SubTotal		2,963	1,838	10,246,503	158,273,947	87,705	$ 840,941		$ 8,000	$ 848,941
T&D	T&D									
Total		2,963	1,838	10,246,503	158,273,947	87,705	$ 840,941		$ 8,000	$ 848,941

EE Program Portfolio TRC Test	**12.47**

Excluding T&D

CORONA DEPARTMENT OF WATER AND POWER (CDWP)

- Electric utility established in 2001
- Approximately 99 percent of the electric consumption originates with either municipal or private (commercial and industrial) customers.
- Annual Maximum Load Demand: about 28 megawatts.
- Total served load (about 12 megawatts of UDC Bundled Load subsumed within Corona's service territory & about 16 megawatts of Direct Access Load). Note: In prior years, CDWP also served the Los Angeles Unified School District.
- Annual energy use: 180 gigawatt-hours
- CDWP's self-defined mission is to "protect public health"

CDWP Energy Efficiency Program Highlights

In FY06/07, CDWP spent more than $30,000 in rebate incentives to increase energy efficiency for the community. The High Efficiency Washer Rebate program reduced load by 7,194 kilowatt-hours per year through the use of Energy Star® appliances. CDWP budgeted $33,000 in rebate incentives for FY07/08.

Current Commercial Customer Programs:

- Energy Efficiency Technical Support Effort: CDWP offers technical support to facilitate installation and operation of air conditioning and lighting controls for commercial customers.

Current Residential Customer Programs:

- Residential High Efficiency Washer Rebate Program: Rebates are provided to customers who purchase and install Energy Star® clothes washing machines.
- Energy Efficiency Tune-Ups – Distribution of Compact Fluorescent Light Bulbs
- Torchiere Lamp Replacement: CDWP offers replacement lamps to residential customers for their high usage, hazardous torchieres lamps.

Current Education Programs:

- Energy Usage and Demand Analysis Effort: Analyze commercial customer energy usage and demand in order to facilitate customer efficiency measures and demand-side management.

Proposed Corona Energy Efficiency Projects and Services: (2007-08)

- At a minimum, the City of Corona plans to maintain existing efforts and programs at current levels with continued funding.

- The City of Corona implemented a Solar Rebate Program that was effective January 1, 2008. The program offers a rebate of $2.80 per watt of customer-installed solar power. The budgeted amount for FY 07/08 is $212,000 – allocating 25% to residential customers and 75% to commercial customers. The maximum residential rebate amount is $8,400 (3 kW) and $70,000 (25 kW) for commercial customers.
- City of Corona's energy efficiency programs are currently under development and improvement efforts are underway to augment and elaborate upon existing and new efforts and programs, which are expected to continue for the foreseeable future.

CDWP Demand Reduction Programs:
The City of Corona does not currently have a rate-based demand reduction program in place. However, CDWP operates multiple municipal facilities that can be interrupted for several hours per day, when needed.

CORONA DEPARTMENT OF WATER AND POWER (CDWP)

corona
Department
of Water
and Power

Time Period for Reporting Data: Fiscal Year ending 6/30/2007

Corona		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	27	27	64,979	649,792	374	$ 24,221		$ 5,799	$ 30,020
HVAC	Res Cooling									
Appliances	Res Dishwashers									
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting	17	4	33,050	297,446	151	$ 4,700		$ 2,201	$ 6,901
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration									
HVAC	Res Shell									
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling									
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting									
Process	Non-Res Motors									
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other									
SubTotal		44	31	98,029	947,238	525	$ 28,921		$ 8,000	$ 36,921
T&D	T&D									
Total		44	31	98,029	947,238	525	$ 28,921		$ 8,000	$ 36,921

EE Program Portfolio TRC Test	1.55

Excluding T&D

Time Period for Forecast Data: Fiscal Year ending 6/30/2008

Corona		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	29	29	68,640	686,400	395	$ 24,221		$ 6,930	$ 31,151
HVAC	Res Cooling									
Appliances	Res Dishwashers									
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting	19	3	14,200	127,800	65	$ 1,200		$ 1,070	$ 2,270
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration									
HVAC	Res Shell									
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling									
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting									
Process	Non-Res Motors									
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other									
SubTotal		48	31	82,840	814,200	460	$ 25,421		$ 8,000	$ 33,421
T&D	T&D									
Total		48	31	82,840	814,200	460	$ 25,421		$ 8,000	$ 33,421

EE Program Portfolio TRC Test	1.46

Excluding T&D

GLENDALE WATER AND POWER (GWP)

GWP manages a service territory with 83,000 customer meters and an all-time peak load of 336 megawatts in July 2006. GWP owns 249 megawatts of on-site, natural gas and landfill gas fired generation. GWP also has a 40 megawatt share of the Magnolia Power Plant, a 20 megawatt share of Hoover Dam generation, 39 megawatts of the Intermountain Power Project, 10 megawatts of the Palo Verde Nuclear Generating Station, 20 megawatts of San Juan Unit 3, and approximately 80 megawatts of other power through Power Purchase Agreements. Approximately 16 percent of GWP retail sales come from renewable resources, including wind, geothermal, local landfill, and hydroelectric. Our goal is 20-23 percent renewable resources by 2017. GWP partially owns or has long-term contracts on various transmission lines in the LADWP transmission grid, and has made significant investments in energy efficiency through its public benefit programs.

GWP Energy Efficiency Program Highlights

AWARDS

- Won a CMUA award for most innovative and comprehensive usage of PBC funds in the small municipal utility category for the Business Energy Solutions program.

TOTAL DSM INVESTMENTS

- $2,552,716 invested in FY 2006-2007
- Over $22.5 million invested since January 2000

TOTAL DEMAND AND ENERGY SAVINGS – FY06/07

- Incremental demand reductions of 2,386 kilowatts
- Incremental coincident peak demand reductions of 1,367 kilowatts
- Incremental energy savings of 8,510 megawatt-hours
- Incremental energy savings as a percent of GWP annual load of 0.74 percent
- Estimated cumulative demand reductions since January 2000 - 14,500 kilowatts
- Estimated cumulative energy savings since January 2000 - over 56,700 megawatt-hours

SUMMARY OF ACTIVE DSM PROGRAMS – FY06/07

Low-Income Customer DSM Programs

- Cool Care - provides long-term electric bill discounts for low-income customers encouraging the replacement and recycling of old, energy inefficient refrigerators. Program replaced and recycled 2,518 refrigerators with new ENERGY STAR models since July 2003. Cumulative annual demand and energy savings for replacements to date are estimated at 148 kilowatts and 1,742 megawatt-hours.

- Smart Home Peak Hogs – GWP's CMUA award-winning program that reduces peak demand while providing bill relief for primarily low-income customers by encouraging the replacement of energy inefficient HVAC units in apartments. Since July 2003, this program has replaced 1,579 tons of energy inefficient Peak Hogs in Glendale apartments. Cumulative annual demand and energy savings for these replacements are estimated at 695 kilowatts and 670 megawatt-hours.

General Residential DSM Programs

- Smart Home Refrigerator Recycling - targets secondary refrigerators for early retirement by offering free CFLs and a one time discount off the electric bill. The retired refrigerators are recycled in an environmentally sensitive manner. In the first year of the program, 46 refrigerators were recycled and 276 energy efficient light bulbs were distributed at a cost of $4,554. Cumulative annual demand and energy savings for this program are 29 kilowatts and 100 megawatt-hours.
- Smart Home Energy and Water Saving Surveys - reduces customer energy consumption through comprehensive in-home energy and water saving surveys, education, and direct measures installations. Installed energy saving measures include compact fluorescent lights, hot water heater wraps, and blower door test. Since July 2001, this program has provided over 7,743 audits and energy education sessions, installed over 20,707 CFLs, 3,015 water heater blankets, and conducted 3,093 blower door tests. These installations are producing estimated cumulative annual demand and energy savings of 1,846 kilowatts and 5,776 megawatt-hours.
- Smart Home Energy and Water Savings Rebates - provides rebates to promote the early retirement of approved energy and water saving appliances and devices. Over 23,592 rebates have been processed since July 2001. This program is producing estimated cumulative demand and energy savings of 2,976 kilowatts and 5,493 megawatt-hours.
- Smart Home AC Tune-Ups and Duct Sealing Services - provided by Proctor Engineering, helps residential customers save energy by ensuring that their air conditioning and duct systems are functioning at their optimal level. Over 6,974 tons of HVAC have been tuned since February 2000. These services are producing estimated cumulative annual demand and energy savings of 877 kilowatts and 995 megawatt-hours.
- Livingwise® - provides funding to support participation in the LivingWise energy and water conservation program at Glendale public and private schools. LivingWise provides 10 hours of intensive energy education as well as installation of energy saving devices including compact florescent light bulbs. Over 8,625 students have participated in this program since July 2001. Cumulative annual demand and energy savings reaching 492 kilowatts and 2,796 megawatt-hours a year.
- Tree Power - provides up to three free trees and arborist services to ensure that the trees are planted correctly. When properly sited and cared for, a healthy, mature shade tree helps provide shade that cools the home and helps reduce air conditioning use. This program has planted 1,269 trees since July 2004. These trees are expected to produce cumulative annual demand and energy savings of 160 kilowatts and 445 megawatt-hours.

Small Business DSM Programs

- Small Business Peak Hogs - modeled after GWP's CMUA award-winning residential program. It reduces peak demand and customer energy consumption, and provides bill

relief for small business customers by providing incentives for small businesses and small business landlords to replace old, inefficient HVAC units. Cumulative annual demand and energy savings from the installed measures to date are 81 kilowatts and 135 megawatt-hours.

- Smart Business Energy Saving Upgrades – a CMUA award winning program that provides small business customers with comprehensive no-cost energy surveys, customized written reports, energy education, directly installs as much as $1,250 worth of cost-effective energy conservation measures. This program has conducted 2,267 energy audits and retrofits since July 2001. Cumulative annual demand and energy savings from the installed measures to date are 934 kilowatts and 4,222 megawatt-hours.
- Smart Business AC Tune-Ups and Duct Sealing Services - provided by Proctor Engineering, this program helps small business customers save energy by ensuring that their air conditioning and duct systems are functioning at their optimal level. Almost 6,005 tons of HVAC have been tuned since February 2000. These tune-ups are producing estimated cumulative annual demand and energy savings of 3,624 kilowatts and 4,815 megawatt-hours.

Large Business DSM Programs

- Business Energy Solutions (BES) - provides incentives to complete pre-approved energy audits and retrofit projects. Incentives are limited to the lessor of 25 percent total project costs for retrofit projects, 100 percent of the above Title 24 remodeling and/or new construction investments, or $0.06 per kilowatt-hour saved over the lift of the installed measures. Audit incentives are limited to 10 cents per square foot. This program has supported 138 retrofit projects since January 1999 that are producing cumulative demand and energy savings of 3,169 kilowatts and 20,742 megawatt-hours.

TIME PERIOD FOR PROGRAM PERFORMANCE DATA

- Fiscal Year Ending June 30, 2007

PROPOSED DSM PROGRAMS FOR FY 2007-2008

- Energy Savings equal to 1.0 percent of retail sales
- Expenditures at or above 2.85 percent of retail revenues
- Maximize energy efficiency program results through continued use of the E3/Kema evaluation model

SUPPLY SIDE RENEWABLE ENERGY DEVELOPMENT PLANS FOR FY 2006-2007

- Enter into a new long term contract for 20 megawatts of wind generated electricity from Oregon and begin receiving the energy under the contract in FY08/09.
- Review and evaluate proposals received by SCPPA for renewable energy to obtain an additional 30 megawatts of renewable generation
- Participate in studies for the development of the Green Path North transmission line to provide a route to receive geothermal power

GLENDALE WATER AND POWER (GWP)

Time Period for Reporting Data: Fiscal Year ending 6/30/2007

Glendale		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	20	20	47,602	476,016	274	$ 17,958		$ 662	$ 18,620
HVAC	Res Cooling	591	182	720,395	15,781,771	10,067	$ 270,846	$ 56,291	$ 35,028	$ 362,165
Appliances	Res Dishwashers	7	5	21,033	273,426	148	$ 29,588		$ 358	$ 29,946
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting	516	66	366,007	3,294,065	1,668		$ 70,737	$ 3,813	$ 74,550
Pool Pump	Res Pool Pump	30	7	43,550	435,500	256	$ 9,651		$ 640	$ 10,291
Refrigeration	Res Refrigeration	121	121	942,164	16,958,952	9,020	$ 427,699		$ 22,271	$ 449,970
HVAC	Res Shell	245	245	312,325	5,799,891	3,339	$ 161,954	$ 41,055	$ 8,638	$ 211,647
Water Heating	Res Water Heating	9	9	33,744	506,160	291		$ 6,611	$ 723	$ 7,334
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling	375	345	2,430,837	44,457,495	25,617	$ 506,343		$ 71,165	$ 577,508
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting	405	300	2,030,782	19,888,154	11,053	$ 27,651	$ 736,317	$ 27,355	$ 791,323
Process	Non-Res Motors									
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell	67	67	76,505	765,050	440	$ 10,261		$ 1,063	$ 11,325
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other			1,485,258	4,455,774	2,565		$ 335,565	$ 6,151	$ 341,716
SubTotal		2,386	1,367	8,510,202	113,092,255	64,739	$ 1,461,950	$ 1,246,576	$ 177,867	$ 2,886,393
T&D	T&D			863,000	17,260,000	9,945		$ 0		
Total		2,386	1,367	9,373,202	130,352,255	74,685	$ 1,461,950	$ 1,246,576	$ 177,867	$ 2,886,393

EE Program Portfolio TRC Test	1.57

Excluding T&D

Time Period for Forecast Data: Fiscal Year ending 6/30/2008

Glendale		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	20	20	47,602	476,016	274	$ 17,958		$ 726	$ 18,684
HVAC	Res Cooling	591	182	720,395	15,781,771	10,067	$ 270,846	$ 56,291	$ 38,426	$ 365,563
Appliances	Res Dishwashers	7	5	21,033	273,426	148	$ 29,588		$ 392	$ 29,980
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting	4,040	514	2,864,815	25,783,337	13,057		$ 376,137	$ 32,741	$ 408,878
Pool Pump	Res Pool Pump	30	7	43,550	435,500	256	$ 9,651		$ 702	$ 10,353
Refrigeration	Res Refrigeration	160	160	942,164	16,958,952	9,020	$ 427,699		$ 24,431	$ 452,130
HVAC	Res Shell	245	245	312,325	5,799,891	3,339	$ 161,954	$ 41,055	$ 9,476	$ 212,485
Water Heating	Res Water Heating	9	9	33,744	506,160	291		$ 6,611	$ 793	$ 7,404
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling	501	442	2,940,692	52,141,062	30,044	$ 426,035		$ 91,012	$ 517,047
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting	530	425	2,836,340	28,749,292	15,977	$ 55,301	$ 736,317	$ 43,387	$ 835,005
Process	Non-Res Motors									
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell	67	67	76,505	765,050	440	$ 10,261		$ 1,166	$ 11,428
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other			1,485,258	4,455,774	2,565		$ 335,565	$ 6,748	$ 342,313
SubTotal		6,200	2,077	12,324,423	152,126,231	85,480	$ 1,409,293	$ 1,551,976	$ 250,000	$ 3,211,269
T&D	T&D									
Total		6,200	2,077	12,324,423	152,126,231	85,480	$ 1,409,293	$ 1,551,976	$ 250,000	$ 3,211,269

EE Program Portfolio TRC Test	2.20

Excluding T&D

GRIDLEY MUNICIPAL UTILITY (GMU)

- Established in 1910
- 2,650 customers, 83 percent are residential
- The City of Gridley projects a growth rate of 5 percent for the next 5-10 years
- Peak demand – 10.6 megawatts; usually annual peaks are in July or August (10.6 megawatts reached on July 25, 2006)
- Annual energy use: 35 gigawatt-hours

GMU Energy Efficiency Program Highlights

In response to the passage of AB 1890, GMU initiated a variety of new energy efficiency programs in 2000. Having a high percentage of residential customers, the program offerings have been tailored to residential customers and have included a refrigerator buy-back program, a compact florescent light giveaway, a residential weatherization program, and an appliance rebate program. Recent program revisions have deleted some programs and added others.

Current Commercial Customers Programs:

- Energy Audits: On-site energy audits by GMU energy specialists are available to commercial customers. Energy efficiency measures are recommended based on each audit and the GMU personnel follow up with additional visits to answer questions and make additional recommendations.
- Custom Energy Efficiency Incentive Program: GMU financial incentives for commercial customers are based on individual audits and audit recommendations and are tailored to the individual customer needs based on the audit and the potential energy savings.
- Lighting retrofit: A commercial lighting retrofit program is offered to businesses in Gridley. There is a prevalence of T-12 lighting throughout the City and most high bay lighting uses high intensity discharge fixtures instead of more efficient florescent fixtures.

Current Residential Customer Programs:

- Energy Efficiency Hotline: A toll free line with GMU personnel is available for our customers to answer questions and provide information on energy efficiency related matters.
- Energy Audits: On-site energy audits by GMU energy specialists are available to residential customers. Energy efficiency measures are recommended based on each audit

and the GMU personnel follow up with additional visits to answer questions and make additional recommendations.

- Appliance Rebates: GMU provides rebates for the purchase of EnergyStar® appliances
- Residential Heat Pump and Efficient Air Conditioning Rebates: GMU offers rebates for residential and small business customers who install high performance heat pumps or air-conditioners that exceed current requirement.
- Residential Lighting and Ceiling Fan Rebates: GMU offers rebates to homeowners who install CFLs and/or ceiling fans to replace more expensive cooling options (AC).
- Weatherization Incentives: GMU provides financial incentives for homeowners who invest in weatherization measures.
- Rate and Energy Assistance Programs**:** GMU offers rate assistance for both customers with a medical necessity and low-income senior citizens.

Community Programs:

- Municipal Facilities: The City initiated a complete replacement of refrigerators at city facilities at the same time that it offered a residential refrigerator "buy-back" program. The refrigerators replaced older inefficient units at local districts as well. Estimated reductions of 5 kilowatts and 20 megawatt-hours annually were realized.
- Solar Aerator Installation: The City installed Solar Bee© aerators at its sewer plant and has reduced both peak demand and overall usage. Demand was reduced by an estimated 31 kilowatts and usage was reduced by about 117 megawatt-hours per year.
- Photovoltaic Demonstration Projects*:* GMU has initiated 2 PV demonstration project (2-3 kilowatts each) to be sited in Gridley. These PV projects will be evaluated for their feasibility; be used to demonstrate to the community how PV projects work; and be used to familiarize staff, crew and key decision makers with PV technology. In conjunction with these projects, GMU is developing a program that meets the guidelines of the recently enacted SB 1 legislation.

Education Program:

- Energy Curriculum: GMU provides 5th grade teachers with an energy/water efficiency curriculum for use in their classrooms.

Proposed GMU Energy Efficiency Programs and Services: **(2007-08)**

- Maintain existing programs at current levels
- Ensure that all new electric load is efficient
- Evaluate the appropriateness of any new energy efficiency technologies
- Ensure that energy efficiency is part of integrated resource planning by determining and implementing the most cost-effective, reliable, and feasible energy efficiency measures
- Measure and evaluate the impact of energy efficiency programs

GMU Demand Reduction Programs:

The City of Gridley's water and sewer utilities can activate backup generators at wells and sewer lift stations throughout the City resulting in up to a 15 percent reduction of overall demand. In addition, the City has called upon the local hospital to utilize their backup generator for additional demand reduction capacity. Finally, in extreme circumstances, the City has called

upon its single largest customer to shut down. Their load of approximately 750 kilowatts can be as much as 15 percent of average city loads.

In addition, the energy efficiency programs being managed by GMU include consideration and evaluation of their impact on demand reduction.

GRIDLEY MUNICIPAL UTILITY (GMU)

Time Period for Reporting Data: Fiscal Year ending 6/30/2007

Gridley		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers			485	4,848	3	$ 150		$ 157	$ 307
HVAC	Res Cooling	4	2	1,972	35,502	23	$ 1,896		$ 1,708	$ 3,604
Appliances	Res Dishwashers									
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting									
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration			1,347	24,250	13	$ 675		$ 769	$ 1,444
HVAC	Res Shell	1	1	956	19,122	11	$ 3,424		$ 677	$ 4,100
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling			1,917	34,505	19	$ 457		$ 1,166	$ 1,622
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting	8	6	31,200	343,200	190	$ 6,170		$ 11,301	$ 17,471
Process	Non-Res Motors	1	1	48,000	720,000	383	$ 1,036		$ 21,395	$ 22,431
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other									
SubTotal		15	11	85,877	1,181,426	641	$ 13,808		$ 37,172	$ 50,980
T&D	T&D									
Total		15	11	85,877	1,181,426	641	$ 13,808		$ 37,172	$ 50,980

EE Program Portfolio TRC Test	1.51

Time Period for Forecast Data: Fiscal Year ending 6/30/2008

Gridley		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers			485	4,848	3	$ 150		$ 157	$ 307
HVAC	Res Cooling	4	2	1,972	35,502	23	$ 1,896		$ 1,708	$ 3,604
Appliances	Res Dishwashers									
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting									
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration			1,347	24,250	13	$ 675		$ 769	$ 1,444
HVAC	Res Shell	1	1	956	19,122	11	$ 3,424		$ 677	$ 4,100
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling			1,917	34,505	19	$ 457		$ 1,166	$ 1,622
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting	8	6	31,200	343,200	190	$ 6,170		$ 11,301	$ 17,471
Process	Non-Res Motors	1	1	48,000	720,000	383	$ 1,036		$ 21,395	$ 22,431
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other									
SubTotal		15	11	85,877	1,181,426	641	$ 13,808		$ 37,172	$ 50,980
T&D	T&D									
Total		15	11	85,877	1,181,426	641	$ 13,808		$ 37,172	$ 50,980

EE Program Portfolio TRC Test	1.51

Excluding T&D

CITY OF HEALDSBURG

- 5,461 customers, 4,400 are residential
- The City of Healdsburg projects a growth rate of 1.5 percent over the next 3 years
- Peak demand – 21.2 megawatts; *(July 2006)*
- Annual energy use: 71,351 megawatt-hours
- Power content: Geothermal 50 percent, small hydro 1 percent, large hydro 29 percent, other renewable 1 percent, and nonrenewable 19 percent

City of Healdsburg Energy Efficiency Program Highlights

The City of Healdsburg started implementing efficiency programs in 1997. In 2007, Healdsburg underwent an extensive redesign/upgrade of their energy efficiency and renewable energy (PV) programs. As a result, Healdsburg now manages a comprehensive energy efficiency incentive program for residential & commercial customers focusing on peak load reduction and energy conservation.

For residential customers, generous rebates are offered for the installation of various energy efficiency weatherization measures including, but not limited to, awnings, shade screens, compact fluorescent lamps, insulation, and double paned windows, as well as the purchase of higher-efficiency HVAC systems, electric clothes washers & dryers, refrigerators, freezers, dishwashers, and ceiling fans. For commercial customers, rebates are available for upgraded lighting, HVAC equipment and, in cases where an analysis is performed, rebates can be offered for additional equipment that reduces energy use and/or demand.

Programs offered in the past that will continue forward include the following:

- **"**Time-of-Use Rates" Program: The City of Healdsburg has implemented a "time-use-rate" program for both residential and commercial customers, enabling them to reduce energy costs through the time management of their energy usage.
- Residential "Energy Efficiency Outreach: The City of Healdsburg has implemented an energy outreach program for its Hispanic residential customers, offering comprehensive energy efficiency information to improve energy efficiency and reduce energy use.

Healdsburg Energy Efficiency Programs and Services: (2007-08)

- Upgrades of existing programs with increased budget levels.
- Ensure that all new electric loads are efficient.
- Evaluate the appropriateness of any new energy technologies.

- Ensure that energy efficiency is part of integrated resource planning by determining and implementing the most cost-effective, reliable, and feasible energy efficiency measures.
- Measure and evaluate the impact of energy efficiency programs.

Healdsburg Demand Reduction Programs:
The City of Healdsburg has implemented a comprehensive energy efficiency program for both City facilities and the Healdsburg Hospital focusing on peak load reduction, resulting in substantial energy savings. In addition, new programs currently being implemented include consideration and evaluation of their impact on demand reduction.

CITY OF HEALDSBURG

Time Period for Reporting Data: Fiscal year ending 6/30/2007

Healdsburg		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers			714	7,136	4	$ 300		$ 68	$ 368
HVAC	Res Cooling									
Appliances	Res Dishwashers									
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting	1		445	4,003	2	$ 41		$ 34	$ 75
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration			2,880	51,840	28	$ 1,350		$ 481	$ 1,831
HVAC	Res Shell	2	2	1,572	22,492	13	$ 866		$ 227	$ 1,093
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling									
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting	33	25	146,822	2,349,158	1,302	$ 82,103		$ 23,096	$ 105,199
Process	Non-Res Motors									
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other									
SubTotal		36	27	152,433	2,434,629	1,349	$ 84,660		$ 23,906	$ 108,566
T&D	T&D									
Total		36	27	152,433	2,434,629	1,349	$ 84,660		$ 23,906	$ 108,566

EE Program Portfolio TRC Test	**1.46**

Excluding T&D

Time Period for Forecast Data: Fiscal Year ending 6/30/2008

Healdsburg		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	1	1	1,939	19,392	11	$ 800		$ 151	$ 951
HVAC	Res Cooling									
Appliances	Res Dishwashers									
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting	1		890	8,006	4	$ 83		$ 56	$ 138
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration	1	1	3,520	63,360	34	$ 1,650		$ 483	$ 2,133
HVAC	Res Shell	5	5	4,070	56,768	32	$ 2,150		$ 470	$ 2,620
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling									
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting	40	30	176,187	2,818,990	1,562	$ 98,524		$ 22,747	$ 121,271
Process	Non-Res Motors									
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other									
SubTotal		47	36	186,606	2,966,516	1,644	$ 103,206		$ 23,906	$ 127,112
T&D	T&D									
Total		47	36	186,606	2,966,516	1,644	$ 103,206		$ 23,906	$ 127,112

EE Program Portfolio TRC Test	**1.47**

Excluding T&D

CITY OF HERCULES MUNICIPAL UTILITY (HMU)

The Hercules Municipal Utility ("HMU") was created in 2002 to provide safe, reliable and cost-effective electric service to retail consumers in Hercules that are located in and around new development areas. Once grown out, the HMU will provide its customers with exceptional value and will provide the City and its residents with the financial benefits of a healthy and ongoing enterprise operation.

- 700 residential and 88 commercial customers, approximately 82 percent commercial energy use and 18 percent residential
- Customers are served through approximately 18 miles of 12 kilovolts underground facilities with a peak demand of 3 megawatts
- HMU's purchased power is 100 percent Green Energy backed through RECs from small hydro renewable resources

HMU Energy Efficiency Program Highlights

Current Commercial Customer Programs:

- Commercial Rate Structure: HMU has in place a summer/winter rate structure with higher rates in the summer for commercial customers. The largest customers have a time-of-use rate structure. All of the rate structures encourage conservation.
- Energy Efficiency Rebates: HMU commercial customers have historically not expressed interest in energy efficiency rebates. Most customers own/use facilities which have been constructed within the last 3 years. Accordingly, no programs are in place.
- Solar PV: The HMU offers financial incentives for the use of solar PV units.

Current Residential Customer Programs:

- Energy Audits/Education: On request, HMU will perform energy audits for customers. Energy savings tips posted on the HMU website.
- Solar PV: The HMU offers financial incentives for the use of solar PV units.
- Energy Efficiency Rebates: HMU encourages residential energy efficiency by offering incentives for the purchase and installation of high performance windows, increased Insulation, sunscreens and Energy Star® refrigerators, clothes washers and dishwashers.
- Residential Rate Structure: HMU has in place a five-tier residential rate structure with each tier becoming increasingly more expensive. The largest customers have a time-of-

use rate structure. HMU's other commercial customer has a summer/winter rate structure with higher rates in the summer. All of the rate structures encourage conservation.

Proposed Energy Efficiency Projects and Services: (2007-08)
The existing programs will be maintained at the current level. HMU has been authorized to develop a lighting efficiency program and the program is under development. Most HMU customers are in facilities built within the last three years. Energy efficiency rebate programs are primarily customer-driven. Should customers express interest in a new program, HMU would determine appropriate rebate amounts and implement new programs.

HMU Demand Reduction Programs:
With HMU location in the East Bay, many homes do not have air conditioning units. System load is almost constant year-round except under the rarest conditions. Subsequently, demand response programs are neither existing nor planned.

CITY OF HERCULES MUNICIPAL UTILITY (HMU)

Time Period for Reporting Data: Fiscal Year ending 6/30/2007

Hercules		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers			46	464		$ 150			$ 150
HVAC	Res Cooling									
Appliances	Res Dishwashers									
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting									
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration									
HVAC	Res Shell									
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling									
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting									
Process	Non-Res Motors									
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other									
SubTotal				46	464		$ 150			$ 150
T&D	T&D									
Total				46	464		$ 150			$ 150

EE Program Portfolio TRC Test	-

Excluding T&D

Time Period for Forecast Data: Fiscal Year ending 6/30/2008

Hercules		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers			23	232		$ 75			$ 75
HVAC	Res Cooling									
Appliances	Res Dishwashers			58	749		$ 50			$ 50
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting									
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration			70	1,253		$ 100			$ 100
HVAC	Res Shell									
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling									
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting									
Process	Non-Res Motors									
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other									
SubTotal				150	2,234		$ 225			$ 225
T&D	T&D									
Total				150	2,234		$ 225			$ 225

EE Program Portfolio TRC Test	-

Excluding T&D

CITY OF INDUSTRY

- Established in 2001
- Most of the City of Industry is served by SCE. The City serves one industrial park with 30 customers and was looking to start serving a power pumping facility beginning in 2007.
- Load Demand: 5 megawatts at the industrial park Expected to increase 2-10 megawatts once the power pumping facility is served.

CITY OF INDUSTRY ENERGY EFFICIENCY PROGRAM HIGHLIGHTS

Current Commercial Customer Programs:

- Utility does not have specific energy efficiency programs since it is only serving a limited area of the city, targeting new construction only. The City does not intend to serve existing buildings.

City of Industry Demand Reduction Programs:

The City of Industry does not currently have any demand reduction programs in place.

ISLAND ENERGY

- Doing Business as Island Energy, the Pittsburg Power Company owns, operates and manages the electrical and gas system facilities located at Mare Island in the City of Vallejo, California.
- Island Energy supplies all retail electric and gas services to agricultural, residential, commercial and industrial customers within its service area.
- Island Energy serves 185 commercial and 258 residential customers with 446 electric and 327 gas meters.
- Customers on Mare Island are served through a looped 12-kilovolt underground facilities with a peak demand of 4.5 megawatts.
- Commercial and industrial electrical loads consist of approximately 90 percent of the total electrical load and approximately 70 percent of the gas load.
- Hydropower accounts for more than 50 percent of Island Energy's retail electric sales.
- Island Energy's Public Benefits Program funds energy efficiency and conversation programs, as well as its Solar Incentive Program.

Island Energy Efficiency Program Highlights

Current Commercial Customer Programs:

- Distribution System Upgrade: Island Energy is working with developers on Mare Island to upgrade its substation and backbone distribution system to improve system efficiency, and to accommodate future developments. Island Energy plans to invest several million dollars on the main station overhaul and system upgrade in the next 2-3 years, subject to the progress of development on the island.
- Energy Efficient Lighting Program: Island Energy has worked closely with the City of Vallejo to promote the installation of energy efficient lighting on the island. The plan has been realized in all new residential projects. The effort of placing efficient lighting in the industrial areas and in street lights will depend on the progress of new development of those areas.
- Consumption Monitoring Program: Island Energy has closely monitored commercial energy consumptions in an attempt to develop a better understanding of customer consumption patterns, which will be used for energy conservation programs and energy advisory services.

Current Residential Customer Programs:

- Energy Education Program: Island Energy provides numerous sources of energy efficiency information to educate its customers on energy saving tips, sources of energy and new technologies on renewable energies.

- Energy Efficient House Program: Island Energy encourages all developers on the island to use energy-efficient building practices and technologies.
- Residential Tier Rate Structure: Island Energy adopted a tiered-rate structure for residential customers to encourage energy conservation.
- Consumption Monitoring Program: Island Energy closely monitors residential consumption patterns and is developing a good understanding of residential energy demands. Island Energy will continuously monitor residential consumptions to keep track on energy conservation due to the implementation of tier rates.
- Residential Retail Lighting: Island Energy provided 100 sets of energy saving kits, including CFLs and window strips to its customers. The total investment is about $1,500.

Proposed Energy Efficiency Programs and Services: (2007-08)

- **Energy Advisory Services**: Provide free on-site energy analysis and assessment of energy usage pattern, advisory services on how to conserve energy and save money in the form of survey, websites, paper audits and telephone assistance.
- **Appliance Efficiency Program**: Promote purchase of energy efficient household appliances and provide rebates and coupons on Energy Star products and other energy efficient appliances.
- **Residential Retail Lighting** Continue to promote high efficiency CFL fixtures and bulbs to residential customers. Education, promotion and financial incentives work together to increase the utilization of CFLs.
- **Solar Domestic Appliance**: Offer rebates for new domestic solar appliance installations and inspection incentives for residential customers.
- **Customer-Directed Program:** Provide funding to allow commercial and industrial electric customers to plan and develop their own energy efficiency programs in any of the public interest categories.

Island Energy Demand Reduction Programs:

Island Energy does not have any demand reduction programs. As load grows and matures, the utility anticipates evaluating such programs. The databases described above will be used to forecast load as well as explore energy management programs.

IMPERIAL IRRIGATION DISTRICT (IID)

- Established in 1936
- IID serves 140,780 customers
- Peak demand: 993 megawatts, July 21, 2006
- Annual energy sales are 3,418 gigawatt-hours in 2007

IID's Energy Efficiency Program Highlights

Total program expenditures of $3,071,784 in calendar year 2007 will result in savings of more than 8,117,695 kilowatt-hours annually. These investments in efficiency will also reduce peak purchases by 3,042 kilowatts.

IID's Energy Efficiency Program Objectives:

- Provide a positive impact on utility cost by stabilizing energy consumption and reducing purchases of expensive peak power.
- Insure the program portfolio is cost-effective, thereby relieving some of the upward pressure on rates.
- Assist customers by providing an opportunity to take charge of their energy utilization and by doing so, reduce their electricity cost.
- Provide customers the opportunity to improve the environment by conserving energy and/or acquiring renewable energy.
- Provide income qualified residential customers with rate assistance and positively impact their families by providing energy efficiency measures that reduce their dependency on subsidies.
- Provide all customers with the opportunity to participate in renewable energy (specifically photovoltaic) generation by providing attractive, cost-effective options.
- Increase the awareness of energy efficiency and utilization through effective promotion of programs and energy issues, and provide a forum for customer adoption of energy effective habits through energy education.

Current Commercial Customer Programs:

- IID's Energy Conservation Services: No cost energy audits, educational workshops, and a number of other services including rebate program administration.
- Commercial AC Maintenance Program: Proctor Engineering Group is administering the Check Me! Commercial Program for IID. Participating HVAC contractors utilize Check

Me HVAC system analysis software to deliver comprehensive HVAC maintenance and optimum operational efficiency to commercial customer's equipment.

- Energy Star® Appliance Rebate Program: Rebates offered to commercial customers that purchase Energy Star® labeled appliances including refrigerators, room air conditioners, lighting products, home/office electronics, and ceiling fans.
- Commercial Demand-Side Management Program: Offers energy analysis of large customer facilities to identify cost-effective measures which reduce peak load and energy use. This program includes incentives for lighting retrofits, high efficiency HVAC, chillers, motors, VFDs, air compressors, ice storage, and controls.
- Pump Check: In 2007, IID Energy expanded its Ag program to include pump testing and repair. The target markets for this program are irrigation pumping, golf courses, and municipal systems. The program has already tested 60 pumps that are in various stages of repair.
- Government Energy Manager (GEM): Late in 2007, IID launched its GEM program. This program provides municipal governments an energy manager from IID's staff. This energy manager reports to the city manager and augments the city's staff with an energy professional. The energy manager coordinates energy matters for the city, identifies energy efficiency opportunities, facilitates project implementation, and insures new construction occurring within the city addresses energy efficiency. Thus far, one city has taken advantage of this opportunity and three others are in process.

Current Residential Customer Programs:

- IID's Inspector Energy: IID introduced Inspector Energy in 2007. Inspector Energy provides no cost audits of residential homes and provides homeowners with incentive proposals and information concerning IID programs. In addition, Inspector Energy provides educational workshops and a number of other services including rebate program administration.
- Refrigerator Recycling Program: Financial incentives offered to customers that surrender their old operational refrigerator for recycling.
- Energy Star® Appliance Rebate Program: Rebates offered to residential customers that purchase Energy Star® labeled appliances such as refrigerators, room air conditioners, and home/office electronics.
- California Green Builder: IID has partnered with the Building Industry Association to deliver the California Green Builder (CGB) through out IID's service territory. CGB provides incentives to builders to provide environmentally friendly construction. IID provides builder incentives for exceeding Title 24 by more than 15%, coordination municipal entities through the GEM program, and promotional assistance for builders. To date, one builder has signed on to the program and five governmental entities have passed resolutions supporting CGB. This initiative has been hampered by the turn down in the building industry but has established momentum for 2008 and beyond.
- Residential HVAC Maintenance Program: Participating HVAC contractors utilize "Check Me" HVAC system analysis software to deliver comprehensive HVAC maintenance and optimum operational efficiency, air flow and refrigerant charge, to residential customer's equipment.

- Residential HVAC Duct Testing and Sealing: Participating HVAC contractors utilize "Check Me" HVAC system analysis software to deliver comprehensive duct testing and sealing services.
- Residential High Efficient HVAC Rebate Programs: Rebates are offered to customers installing energy efficient air conditioners and heat pumps. Program is being promoted in conjunction with Energy Star®, and is available for residential customers, replacement and new construction.
- Residential Low-Interest HVAC Financing Program: Offers customers the option of applying for a rebate or financing, at reduced interest rates, of qualifying HVAC equipment.
- Emergency Energy Assistance Program: Qualified low-income customers can receive financial assistance to avoid disconnection of their electric service due to non-payment.
- Residential Energy Assistance Program (REAP): Qualified low-income residents receive a 30 percent discount on their electric rate.
- Low-Income Weatherization Program: Qualifying low-income customers receive weatherization services to help minimize the effects of weather on household energy consumption. The Energy Star® refrigerator exchange is included in weatherization services offered to qualifying residents.

Photovoltaic Program

- Photovoltaic Rebate Program: IID offers rebates to residential and commercial customers that install qualifying photovoltaic generation systems. IN 2007, IID provided incentives for 22 PV systems that installed 177.5 KW. IID incentives totaled $497,663.69 in 2007.
- Not-for-Profit Pilot Program: In 2007, IID announced a pilot program that increased PV incentives for Not-for-Profit entities to $4.80 per watt with a limited program budget. Six entities have been awarded incentives totaling $561,000 for 132 KW of installed capacity. These projects are in various stages of completion.

Schools/Education Program:

- Livingwise Resource Action Plan: The National Energy Foundation's Livingwise Resource Action Plan (RAP) is being delivered to sixth grade students in IID service area. The RAP includes a teacher workbook and individual Resource Action Kits for students. The kits contain; low-flow showerhead, kitchen faucet aerator, 20 watts CFL, nightlight, AC dirty filter alarm, water temperature check card, toilet leak detector tablets, and LivingWise CDROM.
- Solar Schoolhouse: IID Energy contracts with the Rahus Institute to promote renewable resource curriculum in secondary school science departments, provide PV Contractor best practices workshops, and material support to schools.

IMPERIAL IRRIGATION DISTRICT (IID)

Time Period for Reporting Data: Calendar Year ending 12/31/2006

Imperial ID		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	5	5	12,355	123,552	71	$ 4,050		$ 678	$ 4,728
HVAC	Res Cooling	439	481	2,049,625	45,278,855	28,805	$ 375,651		$ 414,862	$ 790,513
Appliances	Res Dishwashers	1	1	2,477	32,198	19	$ 2,150		$ 178	$ 2,328
Consumer Electronics	Res Electronics			2,993	26,935	16	$ 5,220		$ 148	$ 5,368
HVAC	Res Heating									
Lighting	Res Lighting	4	1	2,870	25,834	13	$ 460		$ 117	$ 577
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration	14	14	245,488	4,418,784	2,350	$ 2,030	$ 137,824	$ 143,632	$ 283,486
HVAC	Res Shell	561	561	1,293,890	14,199,031	8,197	$ 828,335	$ 232,750	$ 105,092	$ 1,166,177
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling	1,805	1,806	1,923,315	21,978,491	12,514	$ 146,540		$ 193,233	$ 339,773
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting	435	383	2,036,647	12,624,776	7,016	$ 193,585		$ 54,321	$ 247,906
Process	Non-Res Motors									
Process	Non-Res Pumps	32	32	362,040	3,620,400	1,907	$ 21,300		$ 13,796	$ 35,096
Refrigeration	Non-Res Refrigeration	157	157	398,593	5,971,092	3,439	$ 40,099		$ 29,635	$ 69,734
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other									
SubTotal		3,455	3,442	8,330,293	108,299,948	64,346	$1,619,420	$ 370,574	$ 955,691	$ 2,945,685
T&D	T&D									
Total		3,455	3,442	8,330,293	108,299,948	64,346	$1,619,420	$ 370,574	$ 955,691	$ 2,945,685

EE Program Portfolio TRC Test	**4.01**

Excluding T&D

Time Period for Reporting Data: Calendar Year ending 12/31/2007

Imperial ID		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers									
HVAC	Res Cooling	553	470	1,721,666	30,766,735	19,573	$ 488,611		$ 315,218	$ 803,829
Appliances	Res Dishwashers									
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting									
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration	136	136	1,031,082	18,559,469	9,871	$ 13,584	$ 128,136	$ 296,548	$ 438,268
HVAC	Res Shell	599	599	1,487,844	16,231,008	9,355	$ 986,556	$ 149,734	$ 123,477	$ 1,259,767
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling	1,306	1,250	1,451,718	17,203,741	10,108	$ 224,480		$ 193,197	$ 417,677
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting	176	175	1,221,456	17,963,664	9,935	$ 99,495		$ 52,888	$ 152,383
Process	Non-Res Motors									
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehensive	Non Res Comprehensive	270	270	672,556	13,451,120	7,751	$ 67,255		$ 46,451	$ 113,706
Other	Other	142	142	531,399	7,970,985	4,198	$ 42,512		$ 20,503	$ 63,015
SubTotal		3,182	3,042	8,117,721	122,146,723	70,791	$ 1,922,493	$ 277,870	$ 1,048,282	$ 3,248,645
T&D	T&D									
Total		3,182	3,042	8,117,721	122,146,723	70,791	$ 1,922,493	$ 277,870	$ 1,048,282	$ 3,248,645

EE Program Portfolio TRC Test	**3.60**

Excluding T&D

IMPERIAL IRRIGATION DISTRICT (IID)

Time Period for Forecast Data: Calendar Year ending 12/31/2008

Imperial ID		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers									
HVAC	Res Cooling	1,431	1,217	4,456,213	79,616,509	50,650	$ 1,201,950		$ 288,340	$ 1,490,290
Appliances	Res Dishwashers									
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting	8,800	1,120	6,240,000	56,160,000	28,441		$ 400,000	$ 107,434	$ 507,434
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration	136	136	1,031,082	18,559,469	9,871	$ 13,584	$ 128,136	$ 233,167	$ 374,887
HVAC	Res Shell	1,556	1,556	3,416,113	38,104,551	21,947	$ 2,148,700	$ 149,734	$ 106,302	$ 2,404,736
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling	3,197	2,985	4,549,769	59,133,349	34,108	$ 884,005		$ 304,451	$ 1,188,456
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting	509	507	3,661,600	53,904,800	29,686	$ 307,500		$ 34,793	$ 342,293
Process	Non-Res Motors									
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehensive	Non Res Comprehensive	2,704	2,704	6,725,560	134,511,200	77,507	$ 672,550		$ 102,945	$ 775,495
Other	Other									
SubTotal		18,333	10,224	30,080,337	439,989,877	252,210	$ 5,228,289	$ 677,870	$ 1,177,432	$ 7,083,591
T&D	T&D									
Total		18,333	10,224	30,080,337	439,989,877	252,210	$ 5,228,289	$ 677,870	$ 1,177,432	$ 7,083,591

EE Program Portfolio TRC Test	**4.69**

Excluding T&D

LASSEN MUNICIPAL UTILITY DISTRICT (LMUD)

- Lassen Municipal Utility District was established in 1988
- 12,000 customers, 50 percent of energy sales are residential, with the remaining 50 percent primarily commercial with a few agricultural and industrial customers.
- The median residential income in Lassen is at or below the poverty level.
- Lassen load demand: there is little or no difference recorded between winter and summer.
- Annual energy use: 143 gigawatt-hours
- Annual power content – 3 percent geothermal, 21 percent hydro, <1 percent biomass/waste, <1 percent wind, 76 percent nonrenewable
- LMUD's mission is to provide reliable, quality power to our community at the best possible price. LMUD works closely with all of the other local agencies to promote planned economic growth in our service area.

LMUD Energy Efficiency Program Highlights

Current Residential Customer Programs:

- Residential Rebate Program": This program has been greatly expanded during FY06/07 and FY07/08. The program began by offering rebates to residential customer who purchased and installed EnergyStar appliances and energy efficient Marathon electric water heaters. While these two aspects of the program still exist – the program now includes the following rebate programs.

    - SmartBuilt Homes – rebates are provided to contractors or home owners who build energy efficient homes. Homes must exceed current Title 24 standards by at least 10 percent.
    - SmartBuilt Retro – rebates are provided to customers who install energy efficient measures to existing homes. Rebates are available for upgraded insulation, low-e windows, duct sealing and lighting.
    - Heat Pump Program – rebates are offered to customers who purchase and install energy efficient heat pump systems. Rebates vary in amount depending on the HSFP and SEER rating of the system.
    - Energy Efficiency Kits – LMUD distributed over 700 "Energy Efficiency Kits" to customers in FY06/07 and FY07/08. The kits contain energy

conservation educational materials, two compact fluorescent lamps, a low-flow shower head, an outlet sealing kit and a refrigerator and hot water thermometer.

Current Commercial Customer Programs:

- Custom Energy Projects: LMUD offers customized rebate programs to larger customers who have special projects that do not fit into existing rebate categories. For example, Diamond Mountain Casino, LMUD's third largest customer, is in the process of building a 60-unit motel. LMUD representatives have met with the key people involved in this expansion to discuss energy saving measures and the rebates that would apply.
- SmartLight Program: SmartLight provides incentives to commercial and industrial customers who replace existing lighting with energy saving measures, such as switching from T-12 to T-8 fixtures.
- Commercial Energy Audits: LMUD provides energy audits to our commercial and industrial customers. Audits are aimed at reducing total energy consumption. Recommendations are provided to customers as well as correlating rebate information.
- "Community Projects" Program: Local non-profit entities submit projects based on the four guidelines of AB 1890. Qualifying projects are eligible for financial incentives equal to 50 percent of the project expenses (with a limit of $25,000).
- Consumer Education: LMUD strives to reach each of our customers to educate them and help them reduce their energy consumption. The LMUD web site and "*Ruralite*" magazine offer current energy conservation tips and advice on how to implement energy conservation measures. Through the website and the *Ruralite* magazine, customers are encouraged to call our efficiency experts for help to determine their energy usage and identify appropriate conservation measures.

LMUD Demand Reduction Programs:

LMUD does not currently have any demand reduction programs in place.

LASSEN MUNICIPAL UTILITY DISTRICT (LMUD)

Time Period for Reporting Data: Fiscal Year ending 6/30/2007

Lassen		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	5	5	11,379	113,792	63	$ 1,645		$ 12,990	$ 14,635
HVAC	Res Cooling			342	7,833	5	$ 6,600		$ 1,402	$ 8,002
Appliances	Res Dishwashers	1	1	2,508	32,604	18	$ 1,330		$ 3,743	$ 5,073
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting	57	8	41,805	376,243	201	$ 3,047		$ 38,085	$ 41,132
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration	2	2	11,154	200,779	109	$ 3,450		$ 22,514	$ 25,964
HVAC	Res Shell									
Water Heating	Res Water Heating	4	4	17,100	256,500	137	$ 7,250		$ 26,768	$ 34,018
Comprehensive	Res Comprehensive	34	34	5,930	106,735	54	$ 42,465		$ 9,997	$ 52,462
Process	Non-Res Cooking									
HVAC	Non-Res Cooling									
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting									
Process	Non-Res Motors									
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other									
SubTotal		102	53	90,218	1,094,486	587	$ 65,787		$ 115,500	$ 181,287
T&D	T&D									
Total		102	53	90,218	1,094,486	587	$ 65,787		$ 115,500	$ 181,287

EE Program Portfolio TRC Test	0.47

Excluding T&D

Time Period for Forecast Data: Fiscal Year ending 6/30/2008

Lassen		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	29	29	68,275	682,752	377	$ 9,870		$ 11,402	$ 21,272
HVAC	Res Cooling	1	1	3,011	70,998	45	$ 63,600		$ 1,870	$ 65,470
Appliances	Res Dishwashers	5	4	16,368	212,784	118	$ 8,680		$ 3,574	$ 12,254
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting	339	46	250,829	2,257,459	1,205	$ 18,282		$ 33,429	$ 51,711
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration	16	16	95,322	1,715,789	931	$ 28,100		$ 28,146	$ 56,246
HVAC	Res Shell									
Water Heating	Res Water Heating	27	27	120,416	1,806,240	966	$ 52,000		$ 27,575	$ 79,575
Comprehensive	Res Comprehensive	221	221	38,533	693,598	349	$ 275,952		$ 9,504	$ 285,456
Process	Non-Res Cooking									
HVAC	Non-Res Cooling									
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting									
Process	Non-Res Motors									
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other									
SubTotal		638	343	592,754	7,439,619	3,991	$ 456,485		$ 115,500	$ 571,985
T&D	T&D									
Total		638	343	592,754	7,439,619	3,991	$ 456,485		$ 115,500	$ 571,985

EE Program Portfolio TRC Test	0.78

Excluding T&D

LODI ELECTRIC UTILITY (LEU)

- Established in 1910
- 28,500 customers (23,500 residential; 5,000 commercial/industrial)
- Peak demand: 138 megawatts; occurs in: summer daytime
- Annual Energy Use: 458,740,745 kilowatt hours (FY 06/07)

LEU Energy Efficiency Program Highlights

Since 1998, LEU has spent more than $6.5 million on demand-side management rebates and programs designed to increase energy efficiency for the community, resulting in a 14 percent peak demand reduction and a 10 percent energy reduction.

Current Commercial/Industrial Customer Programs:

- Lodi Commercial (G-1 & G-2) Rebate Program – provides rebates for small and medium-sized commercial customers who install designated energy efficiency measures, such as: attic insulation, window tinting/shade screens, programmable thermostats, ceiling fans, appliances, high efficiency lighting retrofits, and maintenance of refrigeration/HVAC equipment.
- Lodi Commercial/Industrial (G-3 to I-1) Rebate Program - provides rebates of up to $12,500 to large commercial and industrial customers; the rebate is for pumps/motors, process equipment improvements, building envelope improvements, HVAC/chiller replacements, and high efficiency lighting retrofits.

Current Residential Customer Programs:

- Lodi Appliance Rebate Program - provides rebates to all customers who purchase an EnergyStar ® refrigerator, dishwasher and or front-loading clothes washer.
- Lodi Energy Efficient Home Improvement Rebate Program - provides rebates to customers for installing attic/wall insulation, attic fans, whole house fans, shade screens/window tinting, radiant barriers, as well as for repairing/replacing HVAC duct systems, and for installing high efficiency (14+ SEER) air conditioning units.
- HVAC System Performance Test - provides a rebate for customers who utilize a select list of HVAC contractors capable of performing a high-end duct system performance test (the test measures air flow, air return and system balance).

Current Commercial and Residential Programs:

- Lodi Energy Audit Program - LEU offers on-line and on-site residential energy audits as well as on-site small commercial customer energy audits.

Current School (In-Classroom) Programs:

- Lodi LivingWise Program - provides energy efficiency "kits" and manuals to 425 6th grade students in Lodi schools; the program is designed to teach the students the basics of energy and water conservation.
- Lodi Solar Schoolhouse Program - provides teacher mini-grants and teacher training regarding solar/renewable energy resources; also via this program, we sponsor the annual Lodi Solar Olympics (the event, held each May, features solar-powered model race cars, fountains, ovens, and model homes built by area students).

Current Low-Income Residential Programs:

- Lodi C.A.R.E. Package Program - provides grants to very low-income customers in need of assistance paying their electric utility account; the program coordination/customer screening is performed by the Lodi Salvation Army. In order to secure a grant payment, customers must consent to in an in-home energy audit.

Measurement Methodology:
Lodi utilizes KEMA's 'Measure Quantification Methodology' report for various residential and small commercial rebate programs. For large commercial and industrial customer rebates/programs, the customer is required to provide to the utility an engineered energy analysis/audit detailing their projected savings.

Proposed LEU Energy Efficiency Programs and Services: (2007-08)
Maintain existing programs, while possibly expending additional Public Benefit Program funds on demand-side management rebates/incentives.

LEU Demand Reduction Programs:
LEU does not currently have any demand reduction programs in place.

LODI ELECTRIC UTILITY (LEU)

Time Period for Reporting Data: Fiscal Year ending 6/30/2007

Lodi		Resource Savings Summary					Cost Summary		
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	1	1	2,935	29,352	16	$ 9,225		$ 1,410	$ 10,635
HVAC	Res Cooling	6	2	7,817	82,197	47	$ 3,169		$ 4,191	$ 7,360
Appliances	Res Dishwashers	2	2	5,787	75,234	42	$ 3,975		$ 3,632	$ 7,607
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting	43	6	33,843	304,589	163	$ 2,314		$ 12,971	$ 15,284
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration	2	2	10,531	189,562	103	$ 4,850		$ 8,914	$ 13,764
HVAC	Res Shell	15	15	13,234	225,987	128	$ 13,100		$ 11,741	$ 24,841
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling									
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting	11	10	54,808	602,888	334	$ 21,491		$ 29,358	$ 50,849
Process	Non-Res Motors	3	3	32,947	658,944	367	$ 6,178		$ 33,585	$ 39,762
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration	28	19	173,769	714,346	402	$ 1,557		$ 36,048	$ 37,605
HVAC	Non-Res Shell	1	1	7,208	72,080	40	$ 996		$ 3,458	$ 4,455
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other			40,437	121,310	67			$ 5,954	$ 5,954
SubTotal		112	61	383,317	3,076,488	1,707	$ 66,854		$ 151,262	$ 218,116
T&D	T&D									
Total		112	61	383,317	3,076,488	1,707	$ 66,854		$ 151,262	$ 218,116

EE Program Portfolio TRC Test	0.95

Excluding T&D

Time Period for Forecast Data: Fiscal Year ending 6/30/2008

Lodi		Resource Savings Summary					Cost Summary		
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	1	1	2,065	20,648	11	$ 6,675		$ 102	$ 6,777
HVAC	Res Cooling	8	4	8,628	94,714	55	$ 5,016		$ 520	$ 5,536
Appliances	Res Dishwashers	1	2	4,597	59,758	33	$ 3,575		$ 298	$ 3,873
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting	43	6	33,843	304,589	163	$ 2,314		$ 1,340	$ 3,654
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration	1	1	5,599	100,786	55	$ 3,700		$ 490	$ 4,190
HVAC	Res Shell	17	17	14,412	247,654	140	$ 19,400		$ 1,329	$ 20,729
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling									
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting	11	10	2,588,185	28,275,031	15,670	$ 110,561		$ 142,261	$ 252,823
Process	Non-Res Motors									
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration	27	19	171,360	685,440	387	$ 1,307		$ 3,595	$ 4,902
HVAC	Non-Res Shell	1	1	7,208	72,080	40	$ 996		$ 357	$ 1,354
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other			63,680	191,040	106			$ 969	$ 969
SubTotal		111	61	2,899,577	30,051,740	16,658	$ 153,544		$ 151,262	$ 304,806
T&D	T&D									
Total		111	61	2,899,577	30,051,740	16,658	$ 153,544		$ 151,262	$ 304,806

EE Program Portfolio TRC Test	10.32

Excluding T&D

LOS ANGELES DEPT OF WATER & POWER (LADWP)

- Established in 1902 to deliver water to the City of Los Angeles. Electric distribution began in 1916.
- Serves 3.9 million people via 1.4 million electric and 680,000 water connections. Nearly 70 percent of electricity usage can be attributed to commercial/industrial sectors with over 30% by residential customers.
- A peak demand of 6,165 megawatts was registered in the summer of 2006.
- Annual energy use is 22.8 million megawatt-hours.
- 8,375 employees.
- The largest municipal utility in the nation.

LADWP Energy Efficiency Program Highlights

- From FY00/01 to FY06/07, LADWP expenditures for its Energy Efficiency Programs totaled $104.8 million.
- These programs achieved peak demand reduction of 189.8 megawatts during this period and 419.9 gigawatt-hours of energy savings.
- The average cost of these savings is $0.02 per kilowatt hour.
- The savings are based on engineering estimates and the DEER database. Savings have been adjusted annually since FY03/04 based on measurement and verification performed by an independent third party.

Overview of LADWP Energy Efficiency Programs

Current Commercial Customer Programs: Total Non-Residential Program cost: $7.32 million resulting in 9.25 megawatts of peak demand reduction and 45.3 gigawatt hours of energy savings annually.

- Commercial Lighting Efficiency Offer: Provide rebates to retrofit existing buildings with high-efficiency lighting measures. Rebate levels and qualifying measures have been enhanced for FY07/08 to increase program participation.
- Chiller Efficiency Program: Provide rebates to retrofit existing buildings with high-efficiency water-cooled electric chillers. National Best Practices award winning program. Achieved 50 megawatts of peak reduction since 2001.

- Refrigeration Program: Provides incentives for energy efficient refrigeration measures.
- Custom Performance Incentives: Addresses cost-effective energy-saving opportunities not served by existing prescriptive offerings. Program includes equipment controls, CO sensors, high efficiency technologies, and other innovative strategies. LADWP engineers evaluate the merits and energy-saving benefits of each submitted measure and calculate savings-based financial incentives for participating customers.
- Small Business Direct Install: Pays 100 percent of the cost of a lighting retrofit, up to $1,200, for small business customers. Pilot program operates using contract services. Ensures that services are easily obtainable for hard-to-reach small business market.
- New Construction: Provides incentives and technical assistance for new construction and major remodel projects using two-tier system for standard new construction and higher incentives for projects receiving LEED certification.
- Financing Program: Provide low-interest loans for the installation of energy efficient equipment in existing buildings. Nearly $7.5 million loaned to retrofit City facilities with energy efficient systems since 2001.
- Energy Audits: Provide approximately 1,000 free on-site energy audits annually for existing non-residential buildings.
- Technical Assistance: Provide technical assistance and design review for retrofit projects in existing building and new construction projects.

Current Residential Customer Programs: Total Residential Program cost: $5.01 million resulting in 4.22 megawatts of peak demand reduction and 15 gigawatt-hours of energy savings annually.

- Consumer Rebate Program: Rebates for the purchase and installation of Energy Star appliances and other high-efficiency equipment, including refrigerators, air-conditioners, windows, etc. Refrigerator rebates were reintroduced to this program beginning 2006.
- Refrigerator Recycling: LADWP provides free pick-up and recycling of old, inefficient refrigerators, along with a free 6-pack of CFLs.
- Compact Fluorescent Lamp Distribution: Direct distribution of over 420,000 free CFLs to customers through events, community groups, and with other energy efficiency programs since 2003.
- Affordable Housing: Provide design review to verify installation of energy efficiency measures for approval of $1 million per year in Affordable Housing Trust Fund grants.
- Home Energy Saver Online Audit: Computerized energy audit analyzes energy use and makes recommendations for efficiency opportunities.
- Low-Income Refrigerator Exchange: Provides 50,000 new energy-efficient refrigerators to low-income customers in exchange for existing inefficient older models.

Proposed LADWP Energy Efficiency Programs and Services: (2007-08)

Commercial Customer Programs: Total Non-Residential Program cost: $21.62 million resulting in 19.49 megawatts of peak demand reduction and 113.9 gigawatt-hours of energy savings annually.

- Commercial Lighting Efficiency Offer: Provide rebates to retrofit existing buildings with high-efficiency lighting measures. Rebates levels and qualifying measures have been enhanced for FY07/08 to move toward maximum achievable program participation.

- Chiller Efficiency Program: Provide rebates to retrofit existing buildings with high-efficiency electric chillers. Qualifying types of chillers has been increased and new rebate levels are intended to pay the full incremental cost of a new high-efficiency unit.
- Refrigeration Program: Provides incentives for energy efficient refrigeration measures.
- Custom Performance Incentives: Addresses cost-effective energy-saving opportunities not served by existing prescriptive offerings. Program includes equipment controls, CO sensors, high efficiency technologies, and other innovative strategies. LADWP engineers evaluate the merits and energy-saving benefits of each submitted measure and calculate savings-based financial incentives for participating customers.
- Small Business Direct Install: Full program pays 100 percent of the cost of a lighting retrofit, up to $2,500, for small business customers. Program operates using SCPPA Direct Install Program contractors made available to LADWP through a participation agreement with SCPPA. Ensures that services are easily obtainable for hard-to-reach small business market.
- New Construction: Provides incentives and technical assistance for new construction and major remodel projects using two tier system for standard new construction and higher incentives for projects receiving LEED certification.
- Financing Program: Provide low-interest loans for the installation of energy efficient equipment in existing buildings and city facilities.
- Energy Audits: Provide free on-site energy audits for existing non-residential buildings.
- Technical Assistance: Provide technical assistance and design review for retrofit projects in existing building and new construction projects.

Residential Customer Programs: Total Residential Program cost: $41.2 million resulting in 24.18 megawatts of peak demand reduction and 134.4 gigawatt hours of energy savings annually.

- Consumer Rebate Program: Rebates for the purchase and installation of Energy Star appliances and other high-efficiency equipment, including refrigerators, air-conditioners, windows, etc.
- Point of Sale Consumer Rebate Program: Provides LADWP residential appliance rebates at the retailers' cash register to supplement the mail-in rebate offer. Register receipts and in-store displays would announce LADWP's rebate.
- Refrigerator Recycling: LADWP provides free pick-up and recycling of old, inefficient refrigerators, along with free CFLs and a new cash incentive of $35 for each recycled refrigerator.
- Low-Income Refrigerator Exchange: Provides new energy-efficient refrigerators to low-income customers in exchange for existing inefficient older models. Program offering up to 50,000 refrigerators to qualifying customers continues.
- Compact Fluorescent Lamp Distribution: Significantly expand distribution of free CFLs to 1 million residential customers through direct distribution to residences, events, community groups, and with other energy efficiency programs.
- CFL Manufacturers Buy-down: New program for 2007-08 to provide incentives to manufacturers intended to reduce the price of CFL to retail purchasers.
- Affordable Housing: Provide design review to verify installation of energy efficiency measures for approval of $1 million in Affordable Housing Trust Fund grants.

- Home Energy Saver Online Audit: Computerized energy audit analyzes energy use and makes recommendations for efficiency opportunities.

Demand Reduction Programs: LADWP will be launching its Thermal Energy Storage (TES) Program during the first part of FY08/09 to provide incentives and technical assistance for customers who install TES systems that shift load and include energy efficient designs. LADWP's TES Program Budget for FY08/09 includes $1.1 million, corresponding to a projected load shift of 1.7 megawatts.

LOS ANGELES DEPT OF WATER & POWER (LADWP)

Time Period for Reporting Data: Fiscal Year ending 6/30/2007

LADWP		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers									
HVAC	Res Cooling	52	44	33,159	504,938	321	$ 21,653		$ 83,581	$ 105,234
Appliances	Res Dishwashers									
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting	3,890	2,888	6,801,241	61,211,170	31,071	$ 666,729	$ 113,551	$ 1,366,049	$ 2,146,329
Pool Pump	Res Pool Pump	9	4	13,727	137,270	81	$ 2,574		$ 16,276	$ 18,850
Refrigeration	Res Refrigeration	1,280	1,280	8,205,216	66,541,023	35,390	$ 957,589	$ 543,000	$ 1,238,599	$ 2,739,188
HVAC	Res Shell	1	1	355	7,106	4	$ 1,009		$ 866	$ 1,875
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking	2	2	20,994	251,933	133	$ 2,100		$ 3,283	$ 5,383
HVAC	Non-Res Cooling	262	240	2,561,110	50,624,299	29,170	$ 1,193,113		$ 656,021	$ 1,849,134
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting	10,207	8,904	41,818,823	467,172,820	258,679	$ 2,434,934	$ 149,632	$ 2,794,542	$ 5,379,108
Process	Non-Res Motors									
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration	100	100	869,753	3,500,275	1,843	$ 41,768		$ 45,154	$ 86,922
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other	156	156	1,316,542	19,748,131	10,975	$ 125,302		$ 92,588	$ 217,890
SubTotal		15,959	13,618	61,640,922	669,698,964	367,667	$ 5,446,771	$ 806,183	$ 6,296,959	$ 12,549,912
T&D	T&D									
Total		15,959	13,618	61,640,922	669,698,964	367,667	$ 5,446,771	$ 806,183	$ 6,296,959	$ 12,549,912

EE Program Portfolio TRC Test	3.72

Excluding T&D

Period for Forecast Data: Fiscal Year ending 6/30/2008

LADWP		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers									
HVAC	Res Cooling	784	890	801,087	11,229,392	7,144	$ 626,600		$ 687,309	$ 1,313,909
Appliances	Res Dishwashers									
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting	124,723	15,874	88,439,653	795,956,873	403,089	$ 7,500,000	$ 219,209	$ 1,378,689	$ 9,097,897
Pool Pump	Res Pool Pump	340	136	496,052	4,960,516	2,921	$ 81,580		$ 108,950	$ 190,530
Refrigeration	Res Refrigeration	7,274	7,274	44,705,525	717,129,453	381,408	$ 3,245,883	$25,926,329	$ 1,424,000	$ 30,596,212
HVAC	Res Shell	6	6	3,520	70,400	41	$ 10,000		$ 5,152	$ 15,152
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling	1,510	1,510	3,625,790	72,515,792	41,785	$ 2,384,510		$ 488,900	$ 2,873,410
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting	21,081	16,309	97,826,098	1,040,867,758	576,256	$ 15,800,000		$ 1,248,000	$ 17,048,000
Process	Non-Res Motors									
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration	4,324	1,398	11,859,358	139,338,728	73,632	$ 1,200,400		$ 257,200	$ 1,457,600
HVAC	Non-Res Shell	274	274	586,702	8,800,536	5,071	$ 199,833		$ 36,497	$ 236,330
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other	23,727	7,244	26,744,353	373,630,757	205,549	$ 6,316,158		$ 1,299,803	$ 7,615,961
SubTotal		184,042	50,914	275,088,138	3,164,500,206	1,696,894	$ 37,364,964	$26,145,538	$ 6,934,500	$ 70,445,002
T&D	T&D									
Total		184,042	50,914	275,088,138	3,164,500,206	1,696,894	$ 37,364,964	$26,145,538	$ 6,934,500	$ 70,445,002

EE Program Portfolio TRC Test	3.57

Excluding T&D

CITY OF LOMPOC

- Established in 1923
- 14,700 customers; 90 percent are residential, purchasing 44 percent of total sales. Commercial customers use 21.5 percent; industrial and demand customers 25.5 percent; and municipal facilities 9 percent.
- Peak demand – 26 megawatts; (winter peak)
- The City is located in coastal climate zone 4, subsequently, there is virtually no air conditioning needed in residential construction and a limited need in commercial buildings. The City does not offer rebates for retrofit to more efficient air conditioning units. The majority of the energy efficiency programs focus on rebates to increase appliance efficiency.

Lompoc Energy Efficiency Program Highlights

Lompoc initially implemented energy audit programs in 1981. In 1991, the programs were expanded to include energy efficiency education programs. In 2001, energy efficiency rebates and a low-income refrigerator subsidy program were added. Since then, additional programs have been added and existing programs modified to accommodate the community's needs.

Current Commercial Customer Programs:

- Commercial Lighting Rebate: A rebate of $15 per ballast is paid to commercial customers who replace/retrofit current lighting with more energy efficient fixtures or hard wired in lamps and ballasts. This program was first offered in May 2001.
- Exit Sign Rebate: A rebate of $15 to replace existing incandescent or fluorescent-lit exit signs with LED, or $30 the replace same signs with electro-luminescence signs. This rebate was first offered in 2002. (Net Annual Savings: 28,126 kilowatt-hours).

Current Commercial and Residential Customer Programs:

- Refrigerator Rebate: A $120 rebate is paid to electric customers or landlords who rent to City customers to replace working refrigerators or freezers manufactured before 1992 with a new model. The old appliance must be recycled at the City Landfill. (Net Annual Savings [all refrigerator programs]: 85,263 kilowatt-hours.)
- Refrigerator BuyBack Program: $35 is paid to customers who recycle, at the City Landfill, any second working refrigerator or freezer. This program was first offered in May 2001.

- Clothes Washer Rebate: A $120 rebate is paid to customers who replace a working (non Energy Star®) clothes washer with a new Energy Star® model. The old clothes washer must be recycled at the Landfill. This program was first offered in March 2003. (Net Annual Savings: 3,405 kilowatt-hours).
- Dishwasher Rebate: A $50 rebate is paid to electric customers who replace working dishwashers, which were manufactured before 1994, with an Energy Star® model. The old dishwasher must be recycled at the Landfill. This program was first offered in March of 2003. (Net Annual Savings: 1,347 kilowatt-hours).
- Gas Conversion Payment: $100 is paid to electric customers who replace and recycle an electric water heater or clothes dryer with a gas appliance. The electric appliance must be recycled at the Landfill. (Net Annual Savings: 12,717 kilowatt-hours).
- LED Holiday Lighting: A rebate of $4 for up to 35 light strands and $8 for larger strands is paid to utility customers who purchase LED holiday lighting. This program was first offered in October of 2005.
- Renewable Resource Rebate: Any electric customer who installs a grid-tied self-generating electric system that is considered to be renewable energy will receive a rebate of $3.50 per watt. This program was first offered in February 2004. (Net Annual Savings: 24,000 kilowatt-hours).
- Energy Audits: Lompoc provides free energy audits for all customers and an online audit for residential customers.

Current Low Income Customer Programs:

- Income Qualifying Refrigerator Purchase Program: Up to a $570 payment is made for a new refrigerator for income qualifying customers. The old refrigerator must be in working order; must have been manufactured before 1992; and will be recycled at the landfill. The customer is required to repay the City $240 over a one-year time period.
- Rate and Energy Assistance Programs: Lompoc offers a rate discount for low-income customers and a special medical needs rate. Lompoc offers a subsidized refrigerator program to low-income customers.

Current Community Programs:

- Education Programs: Lompoc encourages energy conservation through school and community education programs.

Proposed Lompoc Energy Efficiency Programs and Services: **(2007-08)**

- Evaluate existing programs to determine if incentives are attractive to customers and increase incentive levels if necessary to assure continued participation in all programs.
- Ensure that energy efficiency is part of integrated resource planning by determining and implementing the most cost-effective, reliable, and feasible energy efficiency measures.

New Energy Efficiency Programs:

- Rebate Program: Financial incentives for energy efficiency upgrade of existing equipment for both residential and commercial customers.

System Upgrades:
Lompoc will be continuing the upgrading of all 4 kilovolts lines to 12 kilovolts distribution lines and is purchasing only low-loss transformers.

Lompoc Demand Reduction Programs:
Lompoc offers a Firm Curtailable Load Purchase Program, but no customer has utilized it since it was created. Customers who have an average peak-period demand of at least 500 kilovolt-A during each of the last six summer months may sign up for this rate program. The customer must sign a contract for electric service for a five-year period, and will be required to reduce demand when the City requests such curtailment. The customer receives a demand payment of $6.00 per kilowatt of curtailed demand per season and $0.10 per kilowatt-hour.

CITY OF LOMPOC

Time Period for Reporting Data: Fiscal Year ending 6/30/2007.

Lompoc		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	1	1	2,739	27,392	15	$ 7,440	$ 930	$ 401	$ 8,771
HVAC	Res Cooling									
Appliances	Res Dishwashers			1,258	16,349	9	$ 1,600	$ 640	$ 240	$ 2,480
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting									
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration	8	8	76,082	1,369,469	743	$ 23,650	$ 1,330	$ 19,918	$ 44,898
HVAC	Res Shell									
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling									
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting	1	1	7,544	93,148	51	$ 1,994	$ 252	$ 1,339	$ 3,585
Process	Non-Res Motors									
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other	1	1	13,904	208,560	115	$ 1,100	$ 220	$ 3,101	$ 4,421
SubTotal		12	12	101,526	1,714,917	933	$ 35,784	$ 3,372	$ 25,000	$ 64,156
T&D	T&D									
Total		12	12	101,526	1,714,917	933	$ 35,784	$ 3,372	$ 25,000	$ 64,156

EE Program Portfolio TRC Test	0.98

Excluding T&D

Period for Forecast Data: Fiscal Year ending 6/30/2008.

Lompoc		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	1	1	3,379	33,792	19	$ 8,280	$ 1,035	$ 370	$ 9,685
HVAC	Res Cooling									
Appliances	Res Dishwashers			1,406	18,283	10	$ 1,700	$ 680	$ 201	$ 2,581
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting	15	3	19,038	171,340	91	$ 3,381		$ 1,748	$ 5,130
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration	8	8	83,357	1,500,422	814	$ 32,243	$ 1,480	$ 16,330	$ 50,053
HVAC	Res Shell									
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling									
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting	4	4	26,200	354,200	193	$ 5,905	$ 630	$ 3,841	$ 10,376
Process	Non-Res Motors									
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration	1		4,000	16,000	9		$ 2,500	$ 188	$ 2,688
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other	1	1	13,904	208,560	115	$ 1,100	$ 220	$ 2,320	$ 3,640
SubTotal		32	18	151,284	2,302,598	1,252	$ 52,609	$ 6,545	$ 25,000	$ 84,154
T&D	T&D									
Total		32	18	151,284	2,302,598	1,252	$ 52,609	$ 6,545	$ 25,000	$ 84,154

EE Program Portfolio TRC Test	1.07

Excluding T&D

MERCED IRRIGATION DISTRICT

- For more than 75 years, the Merced Irrigation District (MID) has been in the business of generating wholesale electrical power.
- Twelve years ago, MID determined the best way to leverage its investment in low-cost generating facilities, and to benefit Eastern Merced County communities was to develop its own electric delivery system.
- In 1996, MID created the Electric Services Department, and Foster Farms in Livingston, CA became the District's first electric customer.
- MID's electric distribution system has continued to grow with the addition of a 34-mile transmission loop and a sophisticated distribution system supporting customers in Eastern Merced County.
- MID sells electricity generated at its New Exchequer hydro power plant to PG&E under a long-term contract that expires in 2014.

MID Energy Efficiency Program Highlights

In 2000, MID-Electric Services created and implemented the Public Benefit Programs. These programs promote, assist and educate all electric customers to participate and install energy efficiency measures.

Current Commercial Customer Programs:

- Commercial Energy Retrofit Programs: Any commercial, industrial, or agricultural customer of the District is eligible to receive up to $150,000 in rebates annually. Merced Irrigation District will consider payment for conservation based on total kilowatt-hours saved over one year at a rate of $0.07 or 50 percent of the project cost, whichever is lowest.

- Commercial New Construction Program: Incentives for the Commercial New Construction Program are also available for projects estimated to exceed Title 24 or standard practice baseline by at least 10 percent on a whole building performance basis.

Current Residential Customer Programs:

- Residential Rebate Program: Implemented in 2004, this program encourages residential customers to purchase EnergyStar® labeled products, home appliances and energy-efficient compact fluorescent light bulbs.

- Spruce Up Your Home Shade Tree Program: The Merced Irrigation District did not implement its tree program for 2007. However, there are plans to move forward with this program in 2008.

- Residential Energy Assistance Program (CARE): Since 2000, MID has been providing a 20 percent discount on monthly energy bills for Low-Income Families, and the Medical Baseline and Life-Support Program for those who depend on electrically powered medical equipment were implemented

Proposed MID Energy Efficiency Projects and Services:

- MID will be offering the same programs for the calendar year of 2008.

MID Investment in Renewables:

The MID Board of Directors approved a resolution to acquire 15 percent renewable resources by 2012:

- Since 2003, MID has purchased 5 megawatts of Wind-Power annually towards that goal.
- In 2008, the Merced Irrigation District launched its Solar PV Buydown Program. The amount of the rebate is based on the Estimated Performance (kilowatt-hour production) of the system, and converted to the effective annual AC generating capacity of the PV system measured inn AC watts. The rebate amount for 2008 is $2.80 per AC watt for systems up to a maximum size of 3 kilowatts (residential) and 25 kilowatts (commercial). Currently, the total amount available for rebates the first year is approximately $450,000 for all installations. Rebates are available on a first come, first served basis and are limited to $8,400 per residence and $70,000 per commercial installation. Customers may apply for one incentive over the nine-year lifetime of the program.

MID Demand Reduction Programs:

MID does not currently have any demand reduction programs in place

MERCED IRRIGATION DISTRICT

Time Period for Reporting Data: Calendar Year ending 12/31/2006

Merced		Resource Savings Summary					Cost Summary		
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	4	4	9,152	91,520	51	$ 3,000		$ 174	$ 3,174
HVAC	Res Cooling	(1)		(451)	(4,831)	(3)	$ 540		$ (9)	$ 531
Appliances	Res Dishwashers			58	749		$ 75		$ 1	$ 76
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting	3	1	3,558	32,026	17	$ 265		$ 54	$ 319
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration	1	1	3,806	68,515	37	$ 4,900		$ 127	$ 5,027
HVAC	Res Shell	1	1	862	8,616	5	$ 286		$ 17	$ 303
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling	303	303	1,087,586	20,472,147	11,392	$ 107,977		$ 40,878	$ 148,855
HVAC	Non-Res Heating			898,560	13,478,400	7,168	$ 43,475		$ 23,469	$ 66,944
Lighting	Non-Res Lighting	211	211	1,063,053	17,008,845	9,426	$ 71,895		$ 33,544	$ 105,439
Process	Non-Res Motors									
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration			420,526	6,728,410	3,547	$ 31,549		$ 11,762	$ 43,311
HVAC	Non-Res Shell									
Process	Non Res Process			63,592	953,880	507	$ 4,770		$ 1,661	$ 6,431
Comprehensive	Non Res Comprehensive									
Other	Other	82	82	1,126,319	17,500,162	10,018	$ 103,224		$ 37,439	
SubTotal		604	603	4,676,620	76,338,438	42,165	$ 371,956		$ 149,117	$ 380,411
T&D	T&D									
Total		604	603	4,676,620	76,338,438	42,165	$ 371,956		$ 149,117	$ 380,411

EE Program Portfolio TRC Test	**0.26**

Excluding T&D

Time Period for Reporting Data: Calendar Year ending 12/31/2007

Merced		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	2	2	5,949	59,488	33	$ 1,950		$ 218	$ 2,168
HVAC	Res Cooling			515	5,402	3	$ 206		$ 22	$ 227
Appliances	Res Dishwashers			806	10,483	6	$ 1,050		$ 39	$ 1,089
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting	2		1,859	16,733	9	$ 82		$ 54	$ 136
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration	1	1	3,640	65,520	36	$ 4,800		$ 236	$ 5,036
HVAC	Res Shell									
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling	276		1,851,772	28,054,936	14,823	$ 139,578		$ 94,811	$ 234,389
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting	958	23	1,273,016	17,230,101	9,495	$ 137,972		$ 64,640	$ 202,612
Process	Non-Res Motors	20		108,698	1,630,464	867	$ 13,018		$ 5,493	$ 18,511
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration			206,455	3,096,828	1,633	$ 14,986		$ 10,398	$ 25,384
HVAC	Non-Res Shell	4	4	5,379	80,688	45	$ 8,174		$ 301	$ 8,475
Process	Non Res Process	22		208,551	3,128,268	1,660	$ 18,249		$ 10,532	$ 28,781
Comprehensive	Non Res Comprehensive									
Other	Other	23		106,554	1,598,316	843	$ 12,304		$ 5,373	$ 17,676
SubTotal		1,308	32	3,773,195	54,977,226	29,452	$ 352,369		$ 192,116	$ 544,484
T&D	T&D									
Total		1,308	32	3,773,195	54,977,226	29,452	$ 352,369		$ 192,116	$ 544,484

EE Program Portfolio TRC Test	**3.54**

Excluding T&D

Period for Forecast Data: Calendar Year ending 12/31/2008

Merced		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	3	3	6,864	68,640	38	$ 2,250		$ 405	$ 2,655
HVAC	Res Cooling	26	26	185,184	5,539,074	3,540	$ 250		$ 55,251	$ 55,501
Appliances	Res Dishwashers			864	11,232	6	$ 1,125		$ 67	$ 1,192
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting	25	4	19,824	178,416	95	$ 790		$ 933	$ 1,723
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration	1	1	4,136	74,448	40	$ 5,500		$ 431	$ 5,931
HVAC	Res Shell									
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling			56,000	1,120,000	623	$ 4,871		$ 7,041	$ 11,912
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting	456	23	1,186,419	15,843,656	8,726	$ 128,038		$ 95,513	$ 223,552
Process	Non-Res Motors	20		104,144	1,562,160	831	$ 13,018		$ 8,472	$ 21,490
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration			212,000	3,180,000	1,677	$ 14,986		$ 17,187	$ 32,173
HVAC	Non-Res Shell	5	5	6,560	98,400	55	$ 9,969		$ 590	$ 10,559
Process	Non Res Process			52,000	780,000	411	$ 4,260		$ 4,216	$ 8,476
Comprehensive	Non Res Comprehensive									
Other	Other	23		24,800	372,000	196	$ 5,979		$ 2,011	$ 7,990
SubTotal		560	62	1,858,795	28,828,026	16,239	$ 191,036		$ 192,116	$ 383,152
T&D	T&D									
Total		560	62	1,858,795	28,828,026	16,239	$ 191,036		$ 192,116	$ 383,152

EE Program Portfolio TRC Test	**3.39**

Excluding T&D

MODESTO IRRIGATION DISTRICT

- Established in 1887, the Modesto Irrigation District (MID), located in California's Central Valley, provides electric, irrigation, and drinking water service.
- With more than 108,000 customers, 60 percent of energy sales are commercial/industrial; the remaining 40 percent are primarily residential.
- System Peak Demand: 698 megawatts in July 2006.
- MID's mission is to deliver superior value to irrigation, electric and domestic water customers through teamwork, technology, and innovation.

MID Energy Efficiency Program Highlights

2007 Residential Customer Programs:

- Power Saver Plus: Paid over $127,000 in rebates for the installation of energy efficiency measures in existing homes. Eligible measures included air conditioners, whole house fans, sunscreens and window film. The peak load reduction was 117 kilowatts and the annual energy savings was 389 megawatt-hours.
- LIEE / MID CARES: Paid over $130,000 in direct installation costs for energy efficiency and weatherization measures in 175 qualifying dwellings. The program also provides education, information and community outreach for low-income customers. The peak load reduction was 33 kilowatts and annual energy savings was 141 megawatt-hours.

2007 Commercial Customer Programs:

- Commercial Power Saver: Paid over $240,000 in rebates for the installation of energy efficiency measures in existing commercial and industrial businesses. Eligible measures included air conditioners, lighting, sunscreens, window film and motors. The peak load reduction was 684 kilowatts and the annual energy savings was 3,949 megawatt-hours.
- Custom Power Saver: Paid over $168,000 in rebates for the installation of customized energy efficiency measures in existing commercial and industrial facilities. Qualifying measures included air compressors, chillers and cooking equipment. The peak load reduction was 271 kilowatts and the annual energy savings was 918 megawatt-hours.

2008+ Planned MID Energy Efficiency Programs and Services:

- Significantly expand program offerings
- Provide incentives for high efficiency in new construction
- Evaluate the appropriateness for rebate of new, energy efficiency technologies
- Ensure that energy efficiency is part of integrated resource planning by determining and implementing the most cost-effective, reliable, and feasible energy efficiency

MID Demand Reduction Program Highlights:

Since the early 1980s, MID has continuously operated demand reduction programs. Their purpose is to reduce electricity demand during peak use periods, May through September, when necessitated by operational constraints or supply shortages. Bill discounts are given for both direct load control and curtailable load reduction mechanisms. Following are program highlights for 2007:

- Shave the Energy Peak (STEP): Bill discounts of over $350,000 for residential and commercial customers participating in the "Shave the Energy Peak" (STEP) program. STEP allows MID operators to reduce electricity demand by cycling over 14,000 air conditioners. The available peak load reduction was 13 megawatts.
- Interruptible Rate: Bill discounts of over $390,000 for commercial and industrial customer participants. This program allows MID operators, upon customer notification, to reduce electricity demand by requiring cessation of the curtailable portion of customer load. The available peak load reduction was 22 megawatts.

MID Renewable Energy Program Highlights

On December 16, 2003 MID adopted a Renewables Portfolio Standard Policy, pursuant to Section 387 of the California Public Utilities Code. Per that policy, MID continues to generate or purchase energy from qualifying sources: small hydro and wind power.

- Stone Drop: New investment operation and maintenance costs to continue operating an existing small hydroelectric power plant. The plant capacity is 0.23 megawatts and 2007 energy production was 599 megawatt-hours.
- High Winds 2004 Purchase Power Contract**:** New eligible renewable energy resources from the High Winds Project in Solano County, California. Purchased 25 megawatts of project capacity for a 10-year period, which began in 2004. The 2007 energy delivery was 67,701 megawatt-hours, at an Above Market Rate of $0.00824 per kilowatt-hour.
- Shiloh 2006 Purchase Power Contract: New eligible renewable energy resources from the Shiloh Project in Solano County, California. Purchased 50 megawatts of project capacity for a 10-year period, which began in 2006. The 2007 energy delivery was 161,712 MWH, at an Above Market Rate of $0.00487 per kilowatt-hour.
- Big Horn 2006 Purchase Power Contract: New eligible renewable energy resources from the Big Horn Project in Klickitat County, Washington. Purchased 25 megawatts of project capacity for a 20-year period, which began in 2006. The 2007 energy delivery was 72,261 megawatt hours, at an Above Market Rate of $0.00295/ kWh.

MODESTO IRRIGATION DISTRICT

Time Period for Reporting Data: Calendar Year ending 12/31/06

Modesto		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers									
HVAC	Res Cooling	149	55	132,971	2,392,164	1,529	$ 114,781		$ 163,667	$ 278,448
Appliances	Res Dishwashers									
Consumer Electronics	Res Electronics			3,750	56,250	31		$ 8,595	$ 4,769	$ 13,363
HVAC	Res Heating									
Lighting	Res Lighting	51	7	45,052	405,464	216		$ 12,600	$ 25,774	$ 38,374
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration			66,662	1,199,916	651		$ 59,907	$ 99,628	$ 159,535
HVAC	Res Shell	106	106	115,278	1,166,941	659	$ 23,475	$ 29,860	$ 71,202	$ 124,536
Water Heating	Res Water Heating			4,650	36,410	19		$ 1,292	$ 2,883	$ 4,175
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling	7	5	6,233	93,492	52	$ 4,039		$ 2,661	$ 6,700
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting	309	273	1,414,894	18,269,553	10,125	$ 77,859		$ 522,136	$ 599,995
Process	Non-Res Motors	1	1	4,932	73,980	39	$ 220		$ 1,643	$ 1,863
Process	Non-Res Pumps	1	1	4,800	72,000	39	$ 900		$ 1,637	$ 2,537
Refrigeration	Non-Res Refrigeration	8	8	67,417	1,011,252	533	$ 4,810		$ 26,588	$ 31,398
HVAC	Non-Res Shell	7	7	60,534	605,336	337	$ 3,338		$ 17,069	$ 20,407
Process	Non Res Process	173	139	974,072	19,481,440	10,360	$ 87,240		$ 539,010	$ 626,250
Comprehensive	Non Res Comprehensive									
Other	Other			63,680	191,040	106		$ 9,000	$ 9,696	
SubTotal		812	603	2,964,923	45,055,239	24,697	$ 316,662	$ 121,253	$ 1,488,363	$ 1,907,582
T&D	T&D									
Total		812	603	2,964,923	45,055,239	24,697	$ 316,662	$ 121,253	$ 1,488,363	$ 1,907,582

EE Program Portfolio TRC Test	1.63

Excluding T&D

Time Period for Reporting Data: Calendar Year ending 12/31/2007

Modesto		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	1	1	3,387	33,872	19	$ 5,110		$ 1,070	$ 6,180
HVAC	Res Cooling	133	45	137,855	2,388,181	1,515	$ 93,574	$ 61,289	$ 115,369	$ 270,232
Appliances	Res Dishwashers									
Consumer Electronics	Res Electronics			1,950	29,250	16		$ 4,961	$ 2,124	$ 7,085
HVAC	Res Heating									
Lighting	Res Lighting	439	61	335,967	3,023,699	1,614	$ 13,060	$ 56,400	$ 61,054	$ 130,514
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration			65,530	1,179,540	640		$ 50,702	$ 59,205	$ 109,907
HVAC	Res Shell	72	72	79,264	818,977	463	$ 15,473	$ 25,030	$ 34,649	$ 75,151
Water Heating	Res Water Heating			3,077	23,935	13		$ 878	$ 1,632	$ 2,510
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking	46	46	303,340	3,640,080	1,993	$ 29,000		$ 59,914	$ 88,914
HVAC	Non-Res Cooling	201	174	336,344	6,561,824	3,651	$ 99,089		$ 111,972	$ 211,061
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting	748	651	3,873,365	49,949,040	27,535	$ 220,011		$ 842,968	$ 1,062,979
Process	Non-Res Motors									
Process	Non-Res Pumps			3,269	49,032	27	$ 286		$ 739	$ 1,025
Refrigeration	Non-Res Refrigeration			1,662	19,939	11	$ 257		$ 308	$ 565
HVAC	Non-Res Shell	4	4	29,920	299,200	166	$ 1,650		$ 5,005	$ 6,655
Process	Non Res Process	101	81	302,869	6,057,376	3,221	$ 59,735		$ 100,109	$ 159,844
Comprehensive	Non Res Comprehensive									
Other	Other			82,784	248,352	136		$ 14,040	$ 7,255	$ 21,295
SubTotal		1,745	1,135	5,560,582	74,322,297	41,019	$ 537,244	$ 213,300	$ 1,403,371	$ 2,153,916
T&D	T&D									
Total		1,745	1,135	5,560,582	74,322,297	41,019	$ 537,244	$ 213,300	$ 1,403,371	$ 2,153,916

EE Program Portfolio TRC Test	1.91

Excluding T&D

Period for Forecast Data: Calendar Year ending 12/31/2008.

Modesto		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	1	1	3,387	33,872	19	$ 5,110		$ 1,138	$ 6,248
HVAC	Res Cooling	139	54	141,918	2,445,779	1,549	$ 111,900	$ 72,675	$ 121,420	$ 305,995
Appliances	Res Dishwashers									
Consumer Electronics	Res Electronics			1,950	29,250	16		$ 4,961	$ 1,840	$ 6,801
HVAC	Res Heating									
Lighting	Res Lighting	441	61	338,164	3,043,476	1,625	$ 13,060	$ 57,186	$ 102,557	$ 172,803
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration			73,100	1,315,800	714		$ 58,377	$ 133,918	$ 192,295
HVAC	Res Shell	100	100	109,010	1,141,618	645	$ 35,200	$ 25,974	$ 45,461	$ 106,635
Water Heating	Res Water Heating	1	1	5,669	62,815	34	$ 500	$ 878	$ 2,667	$ 4,045
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking	46	46	303,340	3,640,080	1,993	$ 29,000		$ 64,783	$ 93,783
HVAC	Non-Res Cooling	264	215	471,269	8,587,376	4,745	$ 109,779		$ 156,986	$ 266,765
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting	725	681	4,166,207	54,266,962	30,064	$ 244,429		$ 997,253	$ 1,241,683
Process	Non-Res Motors									
Process	Non-Res Pumps			3,269	49,032	27	$ 286		$ 792	$ 1,078
Refrigeration	Non-Res Refrigeration	384	55	516,785	2,836,304	1,501	$ 14,528		$ 49,394	$ 63,922
HVAC	Non-Res Shell	4	4	36,720	367,200	204	$ 2,025		$ 6,605	$ 8,630
Process	Non Res Process	101	81	302,869	6,057,376	3,221	$ 59,735		$ 109,068	$ 168,803
Comprehensive	Non Res Comprehensive									
Other	Other			82,784	248,352	136		$ 14,040	$ 8,031	$ 22,071
SubTotal		2,206	1,300	6,556,441	84,125,291	46,492	$ 625,552	$ 234,091	$ 1,801,913	$ 2,661,555
T&D	T&D									
Total		2,206	1,300	6,556,441	84,125,291	46,492	$ 625,552	$ 234,091	$ 1,801,913	$ 2,661,555

EE Program Portfolio TRC Test	**1.78**

Excluding T&D

MORENO VALLEY UTILITIES

- The City of Moreno Valley established a municipal utility in 2001, and began serving its first customers in February 2004. Moreno Valley Utility serves residential, commercial, industrial, and agricultural customers.
- Moreno Valley Utility currently serves approximately 5,100 customers. Residential customers have historically comprised the majority of the energy sales for MVU, however energy sales to MVU's commercial and industrial customers are growing.
- Peak Demand: 18.4 megawatts
- Annual Energy Use: 50 gigawatt-hours
- Mission: Moreno Valley Utility strives to provide reliable, economical, and safe electric distribution service to benefit the community and the City.

Moreno Valley Utility Energy Efficiency Program Highlights

In FY 06/07, Moreno Valley spent a little more than $60,000 in incentives to increase energy efficiency for the community. Its "Savings by Design" program has resulted in a load reduction of approximately 298,000 kilowatt-hours per year.

Current Commercial Customer Programs:

- New Construction Savings by Design Program: Moreno Valley Utility offers incentives to business-owners for buildings that exceed California Title 24 requirements by more than 10 percent. Incentives are also provided to the Design Team for building energy efficiencies over 15 percent.

Proposed Energy Efficiency Projects and Services: (2007-08)

- New Construction Savings by Design Program: This program will continue to be offered to any business considering new construction within the service area. Each new business will be presented with incentive program opportunities and encouraged to participate.
- Residential Energy Efficiency Programs: All homes within the service territory are four years old or less. This makes it difficult to offer programs to reduce the use of older appliances and upgrade to something more efficient. We are currently seeking assistance from industry consultants in evaluating which programs can have the best impact.

Demand Reduction Programs:

Moreno Valley Utility does not currently have any demand reduction management programs in place other than the commercial program discussed above.

MORENO VALLEY UTILITIES

Time Period for Reporting Data: Fiscal Year ending 6/30/2007

Moreno Valley		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers									
HVAC	Res Cooling									
Appliances	Res Dishwashers									
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting									
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration									
HVAC	Res Shell									
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling		12	27,000	486,000	280	$ 6,700		$ 2,426	$ 9,126
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting		4	17,000	306,000	170	$ 4,300		$ 1,384	$ 5,684
Process	Non-Res Motors									
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other									
SubTotal			16	44,000	792,000	450	$ 11,000		$ 3,810	$ 14,810
T&D	T&D									
Total			16	44,000	792,000	450	$ 11,000		$ 3,810	$ 14,810

EE Program Portfolio TRC Test	4.44

Excluding T&D

Time Period for Forecast Data: Fiscal Year ending 6/30/2008

Moreno Valley		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers									
HVAC	Res Cooling									
Appliances	Res Dishwashers									
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting									
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration									
HVAC	Res Shell									
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling		12	27,000	486,000	280	$ 6,700		$ 2,426	$ 9,126
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting		4	17,000	306,000	170	$ 4,300		$ 1,384	$ 5,684
Process	Non-Res Motors									
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other									
SubTotal			16	44,000	792,000	450	$ 11,000		$ 3,810	$ 14,810
T&D	T&D									
Total			16	44,000	792,000	450	$ 11,000		$ 3,810	$ 14,810

EE Program Portfolio TRC Test	4.44

Excluding T&D

CITY OF NEEDLES

- The City of Needles Public Utilities Department was established in 1982.
- Needles is located in Nevada Power Company's control area and is not part of the CAISO grid.
- Needles has 2,676 meters, serving 2,309 residential customers, 284 commercial customers, 36 commercial demand customers, and 49 master metered and municipal customers.
- Total energy sales are 58,972,850 kilowatt-hours (2006); 44 percent is residential sales, 48 percent is commercial and the remainder is master metered and municipal sales.
- Peak demand is 19.1 megawatts
- Needles is an extreme summer peaking utility. Summer temperatures (late June through early September) can reach 130 degrees, and daytime temperatures range from minimum temperatures in the mid-90s with afternoon temperatures between 100 and 120 degrees.

City of Needles Energy Efficiency Program Highlights

On an annual basis, Needles' load factor is less than 37 percent. Subsequently, the City of Needles' energy efficiency programs are designed to reduce the summer air conditioning loads and increase the annual load factor. In 2005, the City of Needles' energy efficiency programs reduced peak demand by 32 kilowatt and 28,032 kilowatt-hours. The reduction was estimated by determining the average kilowatt saved per air conditioner upgrade and then calculating the kilowatt savings by the number of hours that air conditioners are used in Needles (essentially all hours when temperature is greater than 90 degrees).

The City of Needles budgets $25,000 annually for the existing energy efficiency programs and will allocate additional funding if customer demand is greater than the program allocation**.** Needles intends to budget an additional $27,500 for solar programs beginning in FY 2007/08. As well, the City of Needles is investigating the possibility of adding solar photovoltaic to the El Garces Hotel, a historic landmark building that the City is re-furbishing.

Current Residential Customer Programs:

- Air Conditioning Rebate Program: Provides installation support and financial rebates to facilitate upgrades to more efficient lighting and air conditioning systems.
- Sun Shade Program: Provides rates for the installation of residential sun shades, designed to lower house temperatures during the summers.

Proposed City of Needles Energy Efficiency Programs and Services: **(2007-08)**
Maintain Existing Programs at current levels and increase funding for solar.

City of Needles Demand Reduction Programs:
The City of Needles does not currently have any demand reduction programs in place.

CITY OF NEEDLES

Time Period for Reporting Data: Fiscal Year ending 6/30/2007

Needles		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers									
HVAC	Res Cooling	1		574	9,008	6	$ 579		$ 1,317	$ 1,896
Appliances	Res Dishwashers									
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting									
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration									
HVAC	Res Shell			517	5,168	3	$ 213		$ 491	$ 704
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling									
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting									
Process	Non-Res Motors									
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other									
SubTotal		1	1	1,091	14,176	9	$ 792		$ 1,808	$ 2,600
T&D	T&D									
Total		1	1	1,091	14,176	9	$ 792		$ 1,808	$ 2,600

EE Program Portfolio TRC Test	**0.81**

Excluding T&D

Time Period for Forecast Data: Fiscal Year ending 6/30/2008

Needles		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers									
HVAC	Res Cooling	11	6	6,844	103,325	66	$ 7,290		$ 4,030	$ 11,320
Appliances	Res Dishwashers									
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting									
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration									
HVAC	Res Shell	3	3	7,752	77,520	45	$ 3,000		$ 1,970	$ 4,970
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling									
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting									
Process	Non-Res Motors									
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other									
SubTotal		13	9	14,596	180,845	110	$ 10,290		$ 6,000	$ 16,290
T&D	T&D									
Total		13	9	14,596	180,845	110	$ 10,290		$ 6,000	$ 16,290

EE Program Portfolio TRC Test	**1.58**

Excluding T&D

CITY OF PALO ALTO UTILITIES

- Established in 1900.
- The City of Palo Alto Utilities (CPAU) is the only municipal utility in California that operates city-owned utility services that provide electric, natural gas and water services to their customers.
- CPAU has 28,653 electric meters
- CPAU's annual electric load is 20 percent residential, 48 percent commercial and 32 percent industrial with a customer base of 90 percent residential, 9.3 percent commercial, and 0.7 percent industrial.
- CPAU's eligible renewable energy resources comprised 8 percent of annual energy supply in 2005, 10 percent in 2006, 13 percent in 2007, and are projected to be 18 percent in 2008. The Long-term Energy Acquisition Plan sets a target of 33 percent by 2015.
- CPAU also offers a voluntary 100 percent renewable energy alternative for retail customers, which added 3 percent in 2005, 4 percent in 2006, and 4.5 percent in 2007 to the energy mix. PaloAlto**Green** was ranked first in the nation based on per capita participation by National Renewable Energy Laboratory in 2005 and 2006, with over 20 percent of customers participating in 2007.

CPAU Energy Efficiency Program Highlights

CPAU implemented energy efficiency programs in the 1970s. In 1996, CPAU approved a policy to fund electric, gas and water efficiency programs at one percent of revenues per year. In 1998, CPAU increased the electric public benefits program budget to approximately 3 percent of revenues, with a one-year increase of an additional 8 percent from the electric commodity purchase budget during the 2001 energy crisis. In April 2007, Palo Alto City Council approved CPAU's Ten-year Energy Efficiency Portfolio Plan, setting aggressive energy efficiency targets and adding funding from supply funds, increasing efficiency budgets by 50 percent for electric and 100 percent for natural gas.

Current Commercial Customer Programs and Services:

- Commercial Advantage Program: Incentives offered to commercial customers for investments in efficient lighting, motors, HVAC and Custom Projects that target peak demand and energy reductions.
- Consultant Assistance for Resource Efficiency: Comprehensive technical assistance for commercial customers to identify efficiency measures to facilitate peak demand reduction and energy savings.

- MeterLinks: Online utility data accessible for large industrial customers to enable the customers in efficient implementation of load management programs and energy usage management.
- Commercial Lighting Retrofit Program: Turnkey program for small commercial customers that provides an analysis of facility lighting needs and installs efficient lighting upgrades with minimal cost to the commercial customer.

Current Residential Customer Programs and Services:

- Smart Energy Programs: A comprehensive energy efficiency incentive program for residential customers. Rebates and technical assistance promote home shell improvements, and the installation of attic/roof insulation, high efficiency cooling and refrigeration equipment, appliances and lighting.

- Low-Income Assistance Programs: CPAU provides weatherization and equipment replacement to low-come residents.

Community Education Program:

- Community Energy Education: CPAU offers free residential online audits and other energy conservation and efficiency education programs to target groups in the community. Activities include hosting commercial Facility Manager Network meetings, residential energy workshops, participation in Chamber of Commerce meetings, neighborhood association events, and local fairs and special events.

Public Schools Program:

- Palo Alto Public Schools (17 schools with 10,000 students): Annual education grants to the local schools to support teacher training programs and the development of curriculums and education projects that promote energy and water efficiency. CPAU also participates in monthly sustainability committee meetings and makes educational presentations to classes on energy efficiency and renewable energy.

Energy Efficiency Programs and Services:

- Training building operators for retro-commissioning commercial facilities.

Generation and Delivery System Efficiency:

CPAU is also investing supply and distribution funds to improve efficiency of generation and power delivery. CPAU financed 35 percent of the cost to replaced hydroelectric turbine runners with higher efficiency units at Western's Shasta dam, resulting in additional energy deliveries to CPAU. CPAU has also been upgrading 4 kilovolt distribution system components to more efficient 12 kilovolts. Generation and power delivery efficiency are not included in the DSM program savings, but are included separately in this year's report for the first time.

Future Energy Efficiency Programs: (beyond 2007-08)

CPAU is increasing its investment in energy efficiency beyond what is funded through the public benefit charge. CPAU has completed a study (performed by Rocky Mountain Institute) to

estimate the cost-effective potential for electric (and gas) energy efficiency in its service territory, which serves as the foundation for CPAU's energy efficiency targets. CPAU is developing enhanced energy efficiency programs during the 2007-2008 fiscal year for implementation as laid out in its Ten-Year Plan. CPAU is conducting a solicitation seeking third-party energy efficiency program administrators and a third-party measurement and verification contractor. These new programs will increase energy efficiency reductions and achieve requirements of AB2021 for outside verification of program results.

CPAU Demand Reduction Programs:
CPAU's current demand response program is voluntary with a few key customers providing 3-5 megawatts of peak reduction upon request. There is no cost for this program. CPAU also owns 4 natural gas fired generation units to add five megawatts of demand during Stage 3 alerts. CPAU is reviewing other Demand Reduction program options for the near future**.**

CITY OF PALO ALTO UTILITIES

CITY OF PALO ALTO
UTILITIES

Time Period for Reporting Data: Fiscal Year ending 6/30/2007

Palo Alto		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	593	593	10,473	104,726	58	$ 17,425		$ 2,395	$ 19,820
HVAC	Res Cooling	1	1	1,378	24,811	15	$ 2,700		$ 856	$ 3,556
Appliances	Res Dishwashers	2	2	6,029	78,374	43	$ 16,925		$ 1,979	$ 18,904
Consumer Electronics	Res Electronics									
HVAC	Res Heating			9,710	193,434	109	$ 39,451		$ 17,793	$ 57,244
Lighting	Res Lighting	971	95	590,895	5,215,363	2,784	$ 76,115		$ 120,550	$ 196,665
Pool Pump	Res Pool Pump	1		1,120	11,200	6	$ 250		$ 282	$ 532
Refrigeration	Res Refrigeration	51	51	333,695	6,006,514	3,258	$ 53,152		$ 150,372	$ 203,524
HVAC	Res Shell	6	6	6,013	120,256	68	$ 3,600		$ 3,950	$ 7,550
Water Heating	Res Water Heating			143	2,148	1	$ 40		$ 50	$ 90
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling	248	230	2,738,516	30,072,664	16,578	$ 76,800		$ 249,461	$ 326,261
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting	93	86	433,127	3,570,629	1,979	$ 34,671		$ 157,715	$ 192,386
Process	Non-Res Motors	16	12	81,489	1,222,332	650	$ 2,645		$ 9,512	$ 12,157
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell	11	11	122,112	1,221,120	679	$ 3,710		$ 10,830	$ 14,539
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other			376,030	1,128,091	623			$ 8,000	$ 8,000
SubTotal		1,992	1,086	4,710,731	48,971,662	26,853	$ 327,483		$ 733,744	$ 1,061,227
T&D	T&D	76	76	2,666,304	133,315,200	74,183		$ 5,115,000		$ 5,115,000
Total		2,068	1,162	7,377,035	182,286,862	101,036	$ 327,483	$ 5,115,000	$ 733,744	$ 6,176,227

EE Program Portfolio TRC Test	**2.83**

Excluding T&D

Time Period for Forecast Data: Fiscal Year ending 6/30/2008

Palo Alto		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	593	593	10,473	104,726	58	$ 17,425		$ 2,568	$ 19,993
HVAC	Res Cooling	1	1	1,378	24,811	15	$ 2,700		$ 856	$ 3,556
Appliances	Res Dishwashers	2	2	6,029	78,374	43	$ 16,925		$ 1,979	$ 18,904
Consumer Electronics	Res Electronics									
HVAC	Res Heating			9,710	193,434	109	$ 39,451		$ 17,793	$ 57,244
Lighting	Res Lighting	971	95	590,895	5,215,363	2,784	$ 76,115		$ 120,550	$ 196,665
Pool Pump	Res Pool Pump	1		1,120	11,200	6	$ 250		$ 282	$ 532
Refrigeration	Res Refrigeration	51	51	333,695	6,006,514	3,258	$ 53,152		$ 150,372	$ 203,524
HVAC	Res Shell	6	6	6,013	120,256	68	$ 3,600		$ 3,950	$ 7,550
Water Heating	Res Water Heating			143	2,148	1	$ 40		$ 50	$ 90
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling	92	74	721,901	9,906,512	5,357	$ 76,800		$ 195,560	$ 272,360
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting	93	86	433,127	3,570,629	1,979	$ 34,671		$ 181,995	$ 216,666
Process	Non-Res Motors	16	12	81,489	1,222,332	650	$ 2,645		$ 23,282	$ 25,927
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell	11	11	122,112	1,221,120	679	$ 3,710		$ 26,507	$ 30,217
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other			376,030	1,128,091	623			$ 8,000	$ 8,000
SubTotal		1,836	930	2,694,116	28,805,510	15,632	$ 327,483		$ 733,744	$ 1,061,227
T&D	T&D									
Total		1,836	930	2,694,116	28,805,510	15,632	$ 327,483		$ 733,744	$ 1,061,227

EE Program Portfolio TRC Test	**1.98**

Excluding T&D

PASADENA WATER AND POWER (PWP)

- Established in 1906, PWP today provides electric service to more than 62,250 metered accounts over a 23 square-mile service area.
- Peak demand: 316 megawatts, occurred August 2006
- Annual energy use is 1,233,916 megawatt-hours
- The mission of PWP's energy efficiency programs is to promote the use of socially and environmentally responsible energy efficient measures and customer assistance programs for the benefit of all Pasadena residents and business customers.
- On September 18, 2006, the City of Pasadena adopted the *United Nations Urban Environmental Accords (*http://www.wed2005.org/pdfs/Accords_11x17.pdf*)*, calling for 10 percent system demand reduction by 2012 as one of 21 environmental goals for the city.
- On December 19, 2005, the City of Pasadena adopted the Green Building Practices Ordinance requiring new standards for new construction and tenant improvements. These standards incorporate energy and water efficiency measures into the design, construction and maintenance of public and private buildings.
- On September 17, 2007, the City of Pasadena adopted the following goals: energy efficiency savings of 13.3 percent by 2016, and the installation of 14 megawatts of customer-owned photovoltaic systems by 2017.

PWP Energy Efficiency Program Highlights

Total program expenditures of $3,199,000 in FY 06/07, resulting in a total savings of more than 69.9 million kilowatt-hours or 4.2 million kilowatt-hours annually, with an average cost-effectiveness test of 2.7 TRC and 5.6 PAC, as follows:

- Residential efficiency programs saved 1.1 million kilowatt-hours and reduced 820 kilowatts.
- Commercial efficiency programs saved 3.0 million kilowatt-hours and reduced 860 kilowatts.
- Water efficiency programs (residential and non-residential) saved 222.9 million gallons and 132,471 kilowatt hours.

PWP Energy Efficiency Program Objectives:

- Identify cost-effective energy-saving opportunities, and provide solutions to help customers achieve reductions in their electric bills.

- Provide direct assistance to qualified customers who are unable to implement cost-saving energy efficiencies on their own.
- Introduce sustainable concepts and operational practices to customers to reduce the energy consumption and environmental impacts of buildings.
- Promote the use of clean, renewable power for all customers.
- Demonstrate new and emerging technologies for market transformation, environmentally friendly distributed generation, energy conservation, and environmental protection.

Current Commercial Customer Programs:

- Energy Partnering Program: This program (now closed) paid the first year's energy savings or 25 percent of the project cost, whichever was less.
- High Performance Building Program: Rebates for new or remodeled buildings which exceed Title 24 energy standards over 12 percent. The program matches one month's electricity savings for each percentage better than code.
- LEED Certification Program: Provide incentives for buildings certified by the U.S. Green Building Council's LEED™ Rating System as follows:
    - LEED™ Certified $15,000
    - LEED™ Silver $20,000
    - LEED™ Gold $25,000
    - LEED™ Platinum $30,000
- Technical Assistance: The Technical Assistance program provides walk-through assessments and audits of facilities, third party reviews of DSM projects and provides information on appropriate technologies to business customers.
- Business Energy Efficiency Outreach & Education: Promotion of PWP's commercial energy conservation programs via events, brochures and advertising.

Current Residential Customer Programs:

- Energy Star® Incentive Program: Designed to encourage residential customers to buy high efficiency household appliances, including refrigerators, hard-wired lighting fixtures and ceiling fans.
- Free Compact Fluorescent Lamps: Coupons are mailed to customers on request and those who sign up for green power. Coupons can be redeemed at a local community center.
- Refrigerator Recycling: This program provides a free pick up and recycling service of old, inefficient refrigerators or retire second units. Customers receive a $25 and $50 incentive for their old refrigerators and freezers, respectively.
- Efficient Home Cooling: Rebates provided to residential customers who install new central air conditioners (14 SEER minimum), Energy Star® doors and windows, room air conditioners, solar attic fans, and window sun shade screens.
- Energy Use Assessments: This program sends energy conservation experts to residents' homes to identify energy conservation opportunities and provide customers with analyses of usage and high billing histories. Additionally provides customers with Home Energy Suite, an online energy analysis tool.
- Cool Residential Trees Rebates: Incentives to residents who plant energy-saving shade trees. Provides detailed guidebook and workshops on siting, planting and maintaining shade trees.

- Residential Programs Outreach & Education: Promotes PWP's residential conservation programs via events, brochures, direct mail pieces, workshops, and advertising.

Current Public Facilities Programs:

- Energy Efficient Municipal Buildings: This initiative pays for some of the cost of efficiency retrofits in city-owned public facilities. Funds first year energy savings or 25 percent of project cost, whichever is less.
- LED Street Signal Retrofit Project: PWP funded energy efficient LED lights for signals, installed by Public Works Department (two-year project).
- Community/Non-Profit Photovoltaic (PV) Demonstrations: Funds installation of PV systems on public non-profit facilities. Lamanda Park Library, PWP Warehouse, Armory Center for the Arts complete. Eaton Canyon Nature Center pending.

Current Public Schools Programs:

- Cool Trees School Grant Program: Provides funding to plant energy saving shade trees for Pasadena Unified School District (PUSD) schools. Almost 300 trees planted in the last 3 years.
- Children Investigate the Environment: The Armory Center for the Arts teaches PUSD students using a curriculum that integrates art and environmental conservation.
- Efficient School Buildings: Funds efficiency measures installed by PUSD at public schools. Lighting, HVAC and other retrofits.
- Cool School Window Film: Provides funds for installing window film to reduce cooling load in public schools.
- School Science Photovoltaic (PV) Demonstration: Funds PV systems on public schools. Pasadena High School complete; Wilson Middle School pending.

Budgeted (FY07/08) Energy Efficiency Program Objectives:

- Identify and implement programs for all cost-effective measures, for all customers. Increase PBC rate to twice historical levels of revenue on 7-1-2008.
- Reduce system-wide customer energy use 1.3% and load 2%.
- Evaluate the appropriateness of new energy efficiency technologies through an Emerging Technologies Direct Installation Demonstration program.

Budgeted (FY07/08) Residential Customer Programs:

- Energy Star® Incentive Program: Continue existing product menu.
- Residential Efficient Cooling: Add window shades and attic insulation to the rebate menu. Offer financing with an interest rate buy-down as an alternative to a cash rebate.
- Income Qualified Refrigerator Exchange: Free pick up and recycling of old refrigerator and delivery of new high-efficient refrigerator to qualified residential customers.
- Residential Pool Pump Program: Provide rebates for efficient pool pumps and encourage timers be set to off-peak hours. Substantially saves energy and reduces peak load.
- Ensure that energy efficiency is part of integrated resource planning by determining and implementing the most cost-effective, reliable, and feasible energy efficiency measures.
- Measure and evaluate the impact and potential for energy efficiency measures and programs.

Budgeted (FY07/08) Commercial Customer Programs:

- Energy Efficiency Partnering Program: Program rolled out March 7, 2008 at Energy & Water Efficiency Expo. The program is on-line based and allows any building technology that saves energy to qualify for a rebate. Creates an electronic processing loop to speed up rebate processing and give the customer a rebate estimate on the spot. Rewards projects that achieve the most cost effective energy and demand reductions. Offers customers an additional incentive bonus for projects that are completed and verified before June 30th and reduce peak load.
- High Efficiency Compressor Program (new): The rebate offered is $150 per ton for installations with Electronic Expansion Valves (EXVs) and $75 per ton for installations without EXVs. The maximum rebate allowed is $30,000 per qualifying compressor.
- Small Business Efficiency Direct Install Program: Expand pilot project with free energy audits, free lighting retrofits and equipment service. Promoted jointly with Southern California Gas Company. Customer has the opportunity to also receive rebates on purchased energy efficient appliances.

Renewable Energy Programs:

- Pasadena Solar Initiative (began January 1, 2008) provides performance-based incentives of $3.50 per watt for residential and business customers, and $4.00 per watt for non-profit customers.
- Study city properties for photovoltaic potential. List of facilities created with highest potential. Further study needed to prioritize facilities with upcoming scheduled roof and efficiency measures.

PWP Demand Reduction Programs:

- Demand Response Pilot Program: Technologies featured in the program provides energy savings to the customer while giving the utility the ability to reduce demand when called upon by the California Independent System Operator. The pilot phase will monitor the effectiveness of the technology, and make our final determination as to move forward on a large scale.
- Staff is evaluating potential technologies for future demand reduction programs, such as smart metering and thermal energy storage.
- Work in conjunction with other POUs and SCPPA on joint RD&D projects.

PASADENA WATER AND POWER (PWP)

Time Period for Reporting Data: Fiscal Year ending 6/30/07

Pasadena		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	6	6	14,407	144,072	83	$ 50		$ 344	$ 393
HVAC	Res Cooling	287	231	142,798	2,240,818	1,428	$ 55,314		$ 5,640	$ 60,954
Appliances	Res Dishwashers			55	718		$ 60		$ 2	$ 62
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting	407	55	324,419	3,040,544	1,540	$ 33,929		$ 7,606	$ 41,535
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration	79	79	484,272	8,716,896	4,636	$ 147,451		$ 18,278	$ 165,729
HVAC	Res Shell	17	17	22,844	449,379	259	$ 17,750		$ 685	$ 18,435
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling	773	773	2,709,661	49,277,842	28,395	$ 866,955		$ 96,707	$ 963,662
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting	87	87	316,703	3,961,454	2,195	$ 54,133		$ 9,039	$ 63,171
Process	Non-Res Motors									
Process	Non-Res Pumps			132,471	1,801,338	949	$ 259,866		$ 1	$ 259,867
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other			90,426	271,277	156	$ 50,836		$ 3,160	$ 53,996
SubTotal		1,656	1,247	4,238,057	69,904,337	39,640	$ 1,486,344		$ 141,461	$ 1,627,805
T&D	T&D									
Total		1,656	1,247	4,238,057	69,904,337	39,640	$ 1,486,344		$ 141,461	$ 1,627,805

EE Program Portfolio TRC Test	2.66

Excluding T&D

Time Period for Forecast Data: Fiscal Year ending 6/30/2008

Pasadena		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	6	6	14,407	144,072	83	$ 50		$ 342	$ 392
HVAC	Res Cooling	273	209	136,291	2,193,866	1,394	$ 58,244		$ 5,348	$ 63,592
Appliances	Res Dishwashers			276	3,588	2	$ 300		$ 9	$ 309
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting	401	53	314,836	2,962,004	1,500	$ 33,830		$ 7,904	$ 41,735
Pool Pump	Res Pool Pump	38	22	56,000	560,000	330	$ 11,250		$ 2,169	$ 13,419
Refrigeration	Res Refrigeration	79	79	489,448	8,810,064	4,686	$ 148,101		$ 18,253	$ 166,354
HVAC	Res Shell	18	18	24,295	467,144	269	$ 18,140		$ 699	$ 18,839
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling	1,387	1,387	4,269,729	77,258,273	42,168	$ 821,418		$ 85,092	$ 906,510
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting	82	83	392,954	4,017,378	2,226	$ 73,940		$ 6,489	$ 80,430
Process	Non-Res Motors									
Process	Non-Res Pumps			105,977	1,441,071	759	$ 259,866		$ 1	$ 259,867
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other			90,744	272,232	157	$ 51,015		$ 991	$ 52,006
SubTotal		2,285	1,857	5,894,957	98,129,692	53,573	$ 1,476,155		$ 127,296	$ 1,603,450
T&D	T&D									
Total		2,285	1,857	5,894,957	98,129,692	53,573	$ 1,476,155		$ 127,296	$ 1,603,450

EE Program Portfolio TRC Test	1.71

Excluding T&D

PLUMAS-SIERRA RURAL ELECTRIC COOP (PSREC)

Mission: To provide electric service with a high level of reliability for fair and reasonable costs. PSREC is dedicated to improving the quality of life of its member-owners and rural communities.

- Established in 1937
- 7,677 member-owners served (Revenue by rate class: 50 percent residential, 44 percent commercial/industrial, 5 percent irrigation and 1 percent other.)
- Annual energy use: 155 GWh (50 Commercial/Industrial, 43 percent Residential, 6 percent Irrigation, 1 percent Other)
- Peak demand: 31 megawatts (winter hours 5-10am) Estimated growth rate of 1.7 percent per year.
- PSREC facilities include: two 69 kilovolt interconnect substations, 150 miles of transmission line, 11 distribution subs and 1,200 miles of 12.47/7.2 kilovolt distribution line.
- 78 employees, including telecommunications subsidiaries

Plumas-Sierra Energy Efficiency Program Highlights

PSREC implemented energy efficiency programs beginning in the early 1980s. Our programs are designed to encourage members to be more energy efficient, decrease their energy demand and costs, and conserve resources. PSREC has consistently exceeded our AB 1890 spending requirements. PSREC uses KEMA's data for energy efficiency measure quantification.

Current Energy Efficiency Programs and Services (Calendar year 2007)
PSREC manages a comprehensive energy efficiency incentive program, helping members retrofit their homes to be more energy efficient. Generous rebates and solid technical support are available to Members who purchase and install high-efficiency air and water heating systems, appliances, and lighting. The GeoExchange Program is one of the most successful in the nation.

- GeoExchange Program: Rebates and 0% interest loans offered for installation of ground-source heat pumps in residences and businesses.
- EnergyStar® Appliance Rebates: Rebates offered for the purchase of an EnergyStar® refrigerator, dishwasher, clothes washer or small appliances.
- Non-essential Freezer/Fridge Retirement: Rebates offered for recycling a non-essential freezer or refrigerator.

- Marathon Water Heater Program: Discounted sales of high-efficiency electric water heaters.
- Compact Fluorescent Light Bulb Program: Discounted sales of CFLs and several events to give members FREE CFLs.
- Energy Efficient Equipment Discounts: Discounted sales of water heater blankets, low-flow showerheads, and ConvectAir heaters.
- Energy Audits: Free energy audits to assist members with energy conservation or troubleshooting in their home or business.
- Meter Lending Program: Members can borrow our kWh meters to plug in 120-volt appliances and help them troubleshoot energy usage.
- Green Building Program: Quarterly presentations to introduce contractors on new technologies for building more energy efficient homes.
- Education/Outreach: Provide energy efficiency and conservation information to interested members to help them reduce their bills. This year, we also provided books to local libraries about energy efficiency and conservation.

2007 Program Summary:
Total Program Costs: $666,410
Total kW demand reduction: 225 kilowatts
Total Lifecycle kWh reduction: 11,526,994

T&D System Upgrades (Calendar year 2007)
Due to the remote nature of the PSREC system and the substantial distribution system necessary to reach all our rural members, PSREC is subject to significant system operational losses (~17,520 MWh/year). Investment in construction projects to upgrade our lines yields the following estimated efficiency savings:
- Clio Overhead rebuild project is two-thirds complete and should reduce system peak losses by 90 kilowatts.
- Wingfield Road rebuild project was completed and should reduce system peak losses by 1 kilowatt.

Proposed PSREC Energy Efficiency Programs and Services (2008)
- Maintain existing programs at current levels, or, in some cases, increase rebate amounts.
- Expand CFL program to allow members to receive rebates for CFLs purchased at any retail store.
- Target businesses with large lighting loads to provide incentives to encourage lighting retrofits.
- Evaluate new energy efficiency programs and technologies and implement, as applicable.

PLUMAS-SIERRA RURAL ELECTRIC COOP (PSREC)

Time Period for Reporting Data: Calendar Year ending 12/31/2006

Plumas-Sierra		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	3	3	7,093	70,928	39	$ 1,550		$ 1,614	$ 3,164
HVAC	Res Cooling									
Appliances	Res Dishwashers	1	1	1,613	20,966	12	$ 980		$ 478	$ 1,458
Consumer Electronics	Res Electronics			103	929	1	$ 30		$ 21	$ 51
HVAC	Res Heating	134	14	300,477	9,014,304	4,536	$ 463,202		$ 198,625	$ 661,827
Lighting	Res Lighting	36	6	23,244	209,196	112	$ 6,871		$ 4,219	$ 11,090
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration	1	1	8,822	158,803	86	$ 4,800		$ 3,514	$ 8,314
HVAC	Res Shell									
Water Heating	Res Water Heating	2	2	7,650	114,756	61	$ 21,753		$ 2,375	$ 24,128
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling									
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting									
Process	Non-Res Motors									
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other			95,520	286,560	158			$ 6,154	
SubTotal		176	27	444,522	9,876,442	5,005	$ 499,186		$ 217,000	$ 710,032
T&D	T&D									
Total		176	27	444,522	9,876,442	5,005	$ 499,186		$ 217,000	$ 710,032

EE Program Portfolio TRC Test	**1.15**

Excluding T&D

Time Period for Reporting Data: Calendar Year ending 12/31/2007

Plumas-Sierra		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	3	3	6,406	64,064	35	$ 1,400		$ 3,621	$ 5,021
HVAC	Res Cooling									
Appliances	Res Dishwashers		1	1,382	17,971	10	$ 840		$ 3,101	$ 3,941
Consumer Electronics	Res Electronics			69	619		$ 40		$ 258	$ 298
HVAC	Res Heating	147	16	329,555	9,886,656	4,975	$ 484,092		$ 50,578	$ 534,670
Lighting	Res Lighting	60	10	39,031	351,281	188	$ 11,657		$ 398	$ 12,055
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration	3	3	21,934	394,805	214	$ 7,725		$ 8,947	$ 16,672
HVAC	Res Shell									
Water Heating	Res Water Heating	2	2	9,755	146,328	78	$ 32,184		$ 9,052	$ 41,236
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling									
HVAC	Non-Res Heating	4		9,693	290,784	162	$ 14,238		$ 1,800	$ 16,038
Lighting	Non-Res Lighting	5	1	27,600	248,400	138	$ 940		$ 209	$ 1,149
Process	Non-Res Motors									
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other			42,029	126,086	70			$ 35,336	$ 35,336
SubTotal		225	36	487,454	11,526,994	5,870	$ 553,116		$ 113,300	$ 666,416
T&D	T&D	61	61	267,000	10,680,000	5,943			$ 1,521	$ 1,521
Total		286	97	754,454	22,206,994	11,812	$ 553,116		$ 114,820	$ 667,937

EE Program Portfolio TRC Test	**1.44**

Excluding T&D

Time Period for Forecast Data: Calendar Year ending 12/31/2008

Plumas-Sierra		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	3	3	6,864	68,640	38	$ 1,500		$ 3,622	$ 5,122
HVAC	Res Cooling									
Appliances	Res Dishwashers		1	1,440	18,720	10	$ 875		$ 3,101	$ 3,976
Consumer Electronics	Res Electronics			172	1,548	1	$ 100		$ 258	$ 358
HVAC	Res Heating	173	18	387,712	11,631,360	5,853	$ 560,000		$ 52,602	$ 612,602
Lighting	Res Lighting	78	13	50,700	456,300	244	$ 14,890		$ 593	$ 15,483
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration	4	4	26,960	485,280	263	$ 8,875		$ 8,960	$ 17,835
HVAC	Res Shell									
Water Heating	Res Water Heating	2	2	10,510	157,656	85	$ 31,822		$ 6,023	$ 37,845
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling									
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting									
Process	Non-Res Motors									
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other			47,760	143,280	79			$ 35,339	$ 35,339
SubTotal		261	41	532,118	12,962,784	6,572	$ 618,062		$ 110,498	$ 728,560
T&D	T&D	48	48	211,000	8,440,000	4,696			$ 1,291	$ 1,291
Total		309	89	743,118	21,402,784	11,269	$ 618,062		$ 111,789	$ 729,852

EE Program Portfolio TRC Test	**1.44**

Excluding T&D

PORT OF OAKLAND

- Approximately 300 customers, 100 percent are commercial
- Peak demand – 12 megawatts
- Annual energy use: 74 gigawatt-hours

Port of Oakland Energy Efficiency Program Highlights

Current Commercial Programs:

- Energy Audits: The Port is currently conducting an Energy Audit program that will result in recommendations of five major energy saving retrofit/improvement projects that could be undertaken to effectively support load reduction and the more efficient use of energy in the area. The proposed energy efficiency projects will be prioritized by highest to lowest energy savings. Rebates will be provided for the energy efficiency projects completed based on the energy audit recommendations, and up to 100 percent of the total energy audit cost.

- Energy Saving Measures Exceeding Title 24 Standards: Port will provide a rebate for any new facility constructed within the Port by its electricity customers that exceed the Title 24 standards in energy saving measures. Eligible facility must reduce energy usage by a minimum of 10 percent compared to the standard Title 24 facility. This rebate will pay for a percentage of the cost difference between a standard and an upgraded Title 24 equipment (such as HVAC units) and material.

- Energy Saving Equipment Retrofits/Improvements Rebates: The Port has implemented a program that provides generous rebates and solid technical support for the installation of new energy efficient equipment/improvements by our commercial customers. Under our program, the eligible projects must reduce energy usage by a minimum of 20 percent, to be eligible for a rebate of the equipment cost differential (up to a 90 percent rebate for energy saving of 90 percent or more).

- Lighting Retrofit: A program providing rebates for the installation of energy efficient lighting that reduces annual energy usage by at least 35 percent in commercial facilities. This rebate is based on a single flat incentive rate of $0.05 per annual kilowatt-hours saved.

- Energy Saving / Efficiency Research, Development, and Demonstration Programs: Port electricity customers that do research, development and demonstrate new energy saving/efficiency programs are entitled to a rebate up to 20 percent of the cost of a project based on availability of funds. To qualify for a rebate under this program all Energy

Savings/Efficiency Research, Development and Demonstration Programs must be based on environmental friendly natural resources (or waste products).

Proposed Port of Oakland Energy Efficiency Programs and Services: **(2007-08)**

- Maintain existing programs at current levels

New Port of Oakland Renewable (or Green) Energy Programs:

- Photovoltaic (PV) Power Generating Systems In Accordance with Senate Bill 1 (SB1): Beginning January 1, 2008, this rebate will reimburse new solar energy generating facilities a one time flat rate of $3.50 per watt (Alternating Current) of installed capacity. In the event the new solar facility generates more than the electric customer's monthly electric consumption, then the Port will purchase the excess solar electric power from said facility at the same rate the Port sells power to said facility. In addition, the new solar energy generating facilities must obtain Port approval and must comply with all regulatory requirements prior to the construction of the facility. This rebate is subjected to 7 percent annual reduction per SB1.

- Other Renewable (or Green) Energy Programs: Beginning January 1, 2008, this rebate will reimburse new clean wind energy generating facilities that generates over 7.5 kilowatts a one time flat rate of $1.50 per watt (alternating current) of installed capacity and if the facility generates less than 7.5 kilowatts then the rebate will be a one time flat rate of $2.50 per watt (alternating current) of installed capacity. In the event the new wind power facility generates more than the electric customer's monthly electric consumption, then the Port will purchase the excess electric power from said facility at the same rate the Port sells electric power to said facility. In addition, the new wind power energy generating facilities must obtain Port approval and must comply with all regulatory requirements prior to the construction of the facility. All other renewable generation that qualify under this program are given a maximum rebate of 20 percent of the construction cost of the generating facility, based on the availability of funds.

Port of Oakland Demand Reduction Programs: The Port of Oakland does not currently have any demand reduction programs in place.

PORT OF OAKLAND

Time Period for Reporting Data: Fiscal Year ending 6/30/07.

Port of Oakland		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers									
HVAC	Res Cooling									
Appliances	Res Dishwashers									
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting									
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration									
HVAC	Res Shell									
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling									
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting	11	9	53,117	849,872	471	$ 1,925	$ 78,000		$ 79,925
Process	Non-Res Motors									
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other									
SubTotal		11	9	53,117	849,872	471	$ 1,925	$ 78,000		$ 79,925
T&D	T&D									
Total		11	9	53,117	849,872	471	$ 1,925	$ 78,000		$ 79,925

EE Program Portfolio TRC Test	0.93

Excluding T&D

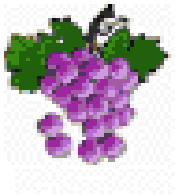
Time Period for Forecast Data: Fiscal Year ending 6/30/08.

Port of Oakland		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers									
HVAC	Res Cooling									
Appliances	Res Dishwashers									
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting									
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration									
HVAC	Res Shell									
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling									
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting	39	33	193,079	2,391,710	1,325	$ 35,333	$ 100,000		$ 135,333
Process	Non-Res Motors									
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other									
SubTotal		39	33	193,079	2,391,710	1,325	$ 35,333	$ 100,000		$ 135,333
T&D	T&D									
Total		39	33	193,079	2,391,710	1,325	$ 35,333	$ 100,000		$ 135,333

EE Program Portfolio TRC Test	1.25

Excluding T&D

RANCHO CUCAMONGA MUNICIPAL UTILITY



- The electric utility was established in 2001 to enable the City to deal with energy issues at the local level.
- Developments expected to be served by the municipal electric utility include 3.0 million square feet of commercial and industrial facilities.
- In the first 5 years of operation, the utility is forecasted to serve 500 customers, a peak demand of 16.4 megawatts and sales of 72,000 megawatt-hours.
- Based upon comparable facilities in comparable climate zones, peak demand would grow to 18 megawatts and annual electric sales to 90,000 megawatt-hours by 2010.

Rancho Cucamonga Energy Efficiency Program Highlights

Commercial Customer Programs:

- Energy Audits - On-site energy audits are available free of charge to all RCMU customers. Energy efficiency measures are recommended based on each audit.
- Commercial Lighting Rebate - A rebate of $0.05 per kilowatt-hour is offered for delighting and energy efficiency upgrades.
- HVAC Tune-up Rebate - A rebate of up to $300 is offered to customers who have their HVAC tuned up.
- Customized Energy Programs - Measures included are sunscreens, window film, and cool roofs.
- LEED Certification Program - RCMU Green Building Program promotes the design and construction of environmentally responsible and energy efficient buildings.

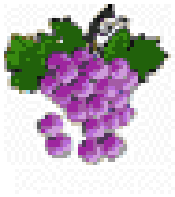
Commercial Customer Education Programs:

- Energy Usage and Demand Analysis - RCMU analysis's energy usage and demand to facilitate customers understanding of how their usage impacts costs.

Rancho Cucamonga Demand Reduction Programs:

Rancho Cucamonga currently has a limited demand reduction program in place.

RANCHO CUCAMONGA MUNICIPAL UTILITY



Time Period for Reporting Data: Fiscal Year ending 6/30/2007

Rancho Cucamonga	Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers									
HVAC	Res Cooling									
Appliances	Res Dishwashers									
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting									
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration									
HVAC	Res Shell									
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling									
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting									
Process	Non-Res Motors									
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other			56,994	170,981	98	$ 67,125		$ 33,000	$ 100,125
SubTotal				56,994	170,981	98	$ 67,125		$ 33,000	$ 100,125
T&D	T&D									
Total				56,994	170,981	98	$ 67,125		$ 33,000	$ 100,125

EE Program Portfolio TRC Test	0.38

Excluding T&D

Time Period for Forecast Data: Fiscal Year ending 6/30/2008

Rancho Cucamonga	Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers									
HVAC	Res Cooling									
Appliances	Res Dishwashers									
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting									
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration									
HVAC	Res Shell									
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling	406	406	357,280	3,572,800	2,059	$ 100,000		$ 31,154	$ 131,154
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting									
Process	Non-Res Motors									
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell	1	1	12,500	125,000	72	$ 2,083		$ 1,090	$ 3,173
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other			31,840	95,520	55	$ 37,500		$ 756	$ 38,256
SubTotal		408	408	401,620	3,793,320	2,186	$ 139,583		$ 33,000	$ 172,583
T&D	T&D									
Total		408	408	401,620	3,793,320	2,186	$ 139,583		$ 33,000	$ 172,583

EE Program Portfolio TRC Test	2.26

Excluding T&D

REDDING ELECTRIC UTILITY (REU)

- REU provides electric service to approximately 42,000 residential and business customers within the City of Redding
- Annual energy use – 842 gigawatt hours
- Peak demand – 245 megawatts
- Summer peaking utility
- Renewable Supply Portfolio – 26 percent of supply resources are renewable (including only small hydro) and 50 percent renewable (including large hydro)

REU Energy Efficiency Program Highlights

Since 1998, REU has spent more than $15 million in numerous rebate and incentive programs to increase the energy efficiency in the Redding community. These programs have raised customer awareness of energy efficiency with the installation of high efficiency measures and through increased education. REU's programs have reduced peak demand by more than 11 megawatts with an associated cumulative energy savings of 28,000 megawatt-hours.

Current REU Energy Efficiency programs:

- High Efficiency Heating Ventilation and Air-Conditioning (HVAC) Rebate Program: REU provides financial incentives for HVAC systems with a SEER of 14 or greater and a minimum EER of 11. These incentives also include requirements for duct pressure testing results above Title 24 standards. REU's HVAC program also provides incentives for duct repair/replacement and HVAC servicing, as well as installation of evaporative coolers and whole house fans.
- Energy Star® Appliances: To date, REU has provided more than 17,000 rebates to customers for purchasing Energy Star®-approved dishwashers, clothes washers, refrigerators, and windows, as well as high-efficiency electric water heaters.
- Weatherization Programs: REU supports the installation of insulation, caulking, weather stripping, water heater wraps, radiant barrier roof sheathing and window treatments to improve the thermal integrity of building envelopes through rebate programs for our customers.
- Earth Advantage® Green Building Program: REU's Green Building program includes many environmental benefits. All homes that are built to Earth Advantage standards must be at least 20 percent more efficient than Title 24 requirements. In addition to this feature and the many sustainable building products and measures that can be included in these homes, REU performs blower door and duct pressurization testing and verification

of all Earth Advantage homes to insure they meet our program criteria and will provide long-term energy savings and comfort to the occupants. Twenty percent of the homes completed in Redding during 2007 were built to Earth Advantage standards.

Potential REU Energy Efficiency Programs and Services:

- Maintain existing programs and provide enhancements to increase utilization and continue to improve their cost-effectiveness.
- Significantly expand residential and commercial lighting incentive programs, pursuant to AB2021 report and forecast of REU's potential.

Potential REU Demand Reduction Programs:

- REU Pool Timer Program: REU is considering the introduction of a new peak demand shifting program. The REU Pool Timer Program is designed to educate and incent residential pool owners to change their pool pump operations from on-peak periods to the off-peak hours. REU recognizes this program as a very cost effective method of shifting peak demand. REU may realize up to five megawatts of peak demand shift, improving REU's overall system efficiency or load factor. This program was postponed from 2007 due to utility concerns that the costs of implementing this peak shifting program may be deemed to be too high because there are only marginal energy savings achieved through this program. REU has not adequately confirmed that proper credit or value will be assigned to this program through the energy efficiency program evaluation or modeling techniques currently employed by the State.

- Thermal Energy Storage: REU has begun the introduction and implementation of an aggressive thermal energy storage program. This program will use both large-scale, chiller-based refrigeration and small-scale, refrigerant-based air conditioning systems to make ice in off-peak hours for use during on-peak hours to cool the building and shift air conditioning load to off-peak hours. Local test results show a 94-95 percent reduction in peak demand and an overall energy savings of 15-20 percent.

REDDING ELECTRIC UTILITY (REU)

Time Period for Reporting Data: Fiscal Year ending 6/30/2007

Redding		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	18	18	44,014	440,140	243	$ 14,750		$ 3,472	$ 18,222
HVAC	Res Cooling	288	246	255,037	4,584,298	2,931	$ 397,574		$ 53,916	$ 451,490
Appliances	Res Dishwashers	5	4	13,910	180,835	100	$ 13,800		$ 1,434	$ 15,234
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting	57	57	501,232	5,513,552	2,982	$ 34,810		$ 40,187	$ 74,997
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration	9	9	53,626	965,261	524	$ 55,875		$ 7,431	$ 63,306
HVAC	Res Shell	952	952	757,443	10,674,327	6,023	$ 900,575		$ 89,163	$ 989,737
Water Heating	Res Water Heating	1	1	2,446	36,696	20	$ 1,275		$ 267	$ 1,542
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling	2	2	1,556	28,015	18	$ 992		$ 330	$ 1,322
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting	9	8	47,866	580,698	317	$ 3,264		$ 4,521	$ 7,785
Process	Non-Res Motors									
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other									
SubTotal		1,341	1,297	1,677,131	23,003,822	13,157	$ 1,422,915		$ 200,720	$ 1,623,635
T&D	T&D									
Total		1,341	1,297	1,677,131	23,003,822	13,157	$ 1,422,915		$ 200,720	$ 1,623,635

EE Program Portfolio TRC Test	**1.30**

Excluding T&D

Time Period for Forecast Data: Fiscal Year ending 6/30/2008

Redding		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	13	13	31,000	310,000	171	$ 11,250		$ 1,852	$ 13,102
HVAC	Res Cooling	288	246	255,037	4,584,298	2,931	$ 397,574		$ 41,224	$ 438,798
Appliances	Res Dishwashers	4	4	12,000	156,000	86	$ 12,500		$ 942	$ 13,442
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting	121	121	1,061,160	11,672,760	6,310	$ 66,100		$ 64,476	$ 130,576
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration	9	9	53,626	965,261	524	$ 55,875		$ 5,685	$ 61,560
HVAC	Res Shell	899	899	718,953	10,098,424	5,698	$ 836,067		$ 64,290	$ 900,357
Water Heating	Res Water Heating			2,187	32,808	18	$ 1,200		$ 182	$ 1,382
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling	2	2	1,556	28,015	18	$ 992		$ 252	$ 1,244
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting	147	114	679,480	7,620,680	4,211	$ 30,000		$ 46,097	$ 76,097
Process	Non-Res Motors									
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other									
SubTotal		1,484	1,408	2,814,999	35,468,245	19,966	$ 1,411,558		$ 225,000	$ 1,636,558
T&D	T&D									
Total		1,484	1,408	2,814,999	35,468,245	19,966	$ 1,411,558		$ 225,000	$ 1,636,558

EE Program Portfolio TRC Test	**1.86**

Excluding T&D

RIVERSIDE PUBLIC UTILITIES

Established in 1895, Riverside Public Utilities is a consumer-owned water and electric utility that is governed by a Board of nine community volunteers. Riverside Public Utilities serves over 105,000 electric and 63,000 water customers within the City of Riverside. Peak demand was reached on August 31, 2007, with 609 megawatts. Annual energy use is approximately 2,500 gigawatt-hours. RPU is committed to the highest quality water and electric services at the lowest possible rates to benefit the community.

RPU Energy Efficiency Program Highlights

Total program expenditures of $1.95 million in FY06/07 resulted in savings of more than 5.8 million kilowatt-hours. Since FY01/02, total program costs for all energy efficiency programs were $40,202,048, resulting in 71.96 gigawatt-hour reductions.

RPU Energy Efficiency Program Objectives:

- Work collaboratively with City Departments to support common economic and business development goals and promote public outreach.
- Explore new opportunities to increase Energy Efficiency Program awareness.
- Implement energy efficiency measures at various City facilities for demonstration of new technologies in a responsible and cost-effective manner.
- Introduce and encourage latest energy technologies to advance market transformation.
- Evaluate program effectiveness and the needs of the customer and make the necessary guideline revisions to increase program participation.
- Develop a comprehensive weatherization program targeting low-income customers that includes an educational component.
- Increase current School Education Program efforts with additional funding.
- Expand awareness of "green power" by educating customers on the benefits of reducing the use of traditional electric generation and how it can reduce harmful effects on the environment.
- Support energy efficiency research and development efforts of large commercial and industrial customers.

Current Commercial Customer Programs:

- Air Conditioning Rebate for Replacement and/or New Units: Offers incentives for replacement or installation of HVAC units with high efficiency equipment. The incentive is intended to close the gap in cost between new standard HVAC equipment

and high efficiency equipment. Incentive amounts are based on the unit's rating - Seasonal Energy Efficiency Ratio (SEER) as defined by California Title 24 codes.

- New Construction: Offers non-residential customers technical assistance during the design and planning stages of pre-construction of facility additions to maximize their energy efficiency and energy savings by exceeding California's Title 24 state standards.
- Custom Energy Efficiency Technology Grant Program: Supports businesses, non-profit organizations, educational institutions or groups of customers working in collaboration in research, development, and effective use of innovative energy technologies. Grant funding supports projects related to the efficient and innovative use of energy that are not covered under our existing non-residential programs.
- Energy Innovations Grant for Post-Secondary Educational Institutions: This program is for the funding of research, development, and demonstration programs for the public interest to advance science or technology in electric related projects in the institutions of higher education within the city of Riverside.
- Energy Efficiency Incentives for Lighting: Offers incentives for replacing older inefficient lighting with high efficiency units. The incentive is offered to close the gap between standard lighting equipment and high-efficiency equipment.
- Technical Assistance Program: Offers all non-residential customers a comprehensive energy audit using a software program designed specifically for businesses. Demand Rate and Time-of-Use customers can receive the services of a technical assistance consultant in addition to the audit.
- Energy Management Systems Assistance Program: Provides incentives for energy management system upgrades for non-residential customers. RPU offers cost sharing incentives to assist the customer in technology purchases that provide energy savings. The incentive is the cost sharing of 1/2 of the project based on overall customer load.
- Shade Tree Planting for Cooling Efficiency: Provides incentives to non-residential customers to plant shade trees around their business or organization to help save on summer cooling costs. Program is based on the American Public Power Associations" Tree Power" program. Customers receive a rebate check from RPU for up to $25 per tree toward their cost to purchase up to five trees annually.
- Energy Education Campaign - Residential, Business: Energy information is provided to all residential and business classes; small and large commercials customers on energy conservation and demand reduction. On-site energy audits are also available.
- Thermal Energy Storage and Feasibility Study Incentives: Incentives are provided to close the gap in cost between standard HVAC equipment and new cooling technologies such as thermal energy storage. The incentive amount of $200 per kilowatt is based on the on-peak kilowatt demand savings. Funding for 50 percent or up to $5,000 is also available for a study to analyze the feasibility of installing a system. A feasibility study is required prior to a customer entering into the agreement development phase of the program.
- Customer Directed Funding: Customers who enter into multi-year, energy service agreements with RPU can direct a portion of their Public Benefit funds directly to their specific needs. Customer directed funds can be used for a variety of energy conservation and assistance programs that promote renewable resources, and research and development.

- Auto Meter Reading: This program provides a tool to non-residential customers that monitor the electric load on 15-minute intervals. The program allows non-residential customers the ability to view, via the internet, usage patterns.
- Efficient Motors: Incentives for the replacement or purchase of new premium motors.

Current Residential Customer Programs:

- Air Conditioning Rebates for New or Replacement Units: Offers incentives for replacement or installation of central HVAC units and/or room units with high efficiency equipment. The incentive is intended to close the gap in cost between standard HVAC equipment and high efficiency equipment. Incentive amounts are based on the unit's rating - SEER as defined by California Title 24 codes.
- Energy Star® Appliance Rebates: In conjunction with the Department of Energy this program offers rebates to customers who purchase appliances or equipment carrying the "Energy Star®" label.
- Refrigerator Purchase Rebate: Provides incentives for the purchase of new high efficiency Energy Star® rated refrigerators that use 20-50 percent less electricity than standard units of comparable size.
- Online Home Energy Analysis: Generates an analysis of home energy that identifies energy efficiency measures and savings. Customers complete the survey online and can view the results instantly. The web also provides conservation information.
- Refrigerator/Freezer Recycling: This program provides for recycling of old operating inefficient refrigerators and/or stand alone freezers that are picked up and transported to a recycling facility for processing.
- Shade Tree Planting for Cooling Efficiency: Incentives for residential customers to plant shade trees around their home to help save on summer cooling costs. Customers receive rebates of up to $25 per tree for the purchase of up to five trees annually. In addition, every March a free Shade Tree Coupon comes on the back of the March bill. The coupon can be redeemed for one tree worth up to $25.
- Pool Saver Swimming Pool Pump Incentive: This program offers swimming pool owners a $5 credit on their monthly electric bill for setting their pool pump timers to operate off-peak hours.
- Low-Income Assistance: Credit of up to $150 toward their electric deposit or bill payment assistance for qualified low-income applicants once every 12 months.
- We Care Program: Provides disabled, seniors, and/or low-income residents free installation by a representative of energy efficient/weatherization products in the home.
- Weatherization Incentive Rebate: This program is a whole house approach to improving the energy efficiency of residential homes by providing rebates on attic insulation, duct insulation, duct testing/sealing, window replacement, window shading, whole house fans, programmable thermostats, and evaporative coolers.

Public Facilities/Community:

- Photovoltaic (PV) Projects: As part of RPU's renewable goal of having one megawatt of local renewable generation, the following are the completed projects as of December 2007 totaling over 640 kilowatts.

- Utilities Operations Center Carport: Located in the employee parking lot of the Utilities Operations Center. The system provides enough power to run approximately 100 homes. Built to serve as a carport, the modules also provide shade for 152 parking spaces.
- La Sierra Metrolink Station Carport: Located at the La Sierra Metrolink Station, the system creates enough power to run approximately 100 homes. The structure provides a shade structure for over 200 commuters.
- Autumn Ridge Apartments: The Autumn Ridge Apartment complex was a joint effort with Riverside Housing Development Corporation, and provides low-income residents an opportunity to reap the benefit of a very low electric bill every month.
- Oak Tree Apartments: The Oak Tree Apartment complex was a joint effort with Riverside Housing Development Corporation, and provides low-income residents an opportunity to reap the benefit of a very low electric bill every month.
- City Pool Facilities: Provides power to the pool facilities before energizing the grid.
- Janet Goeske Senior Center Carport: Located in the Janet Goeske Senior Center parking lot, the system provides enough power to run approximately 75 homes. Built to serve as a carport, the modules also provide shade for 100 parking spaces.
- City Hall 7th Floor Patio Structure: Located on the 7th floor of City Hall on the Mayor's Patio.

City Schools:

- School Education Program: RPU supports public and private schools by providing a variety of energy and water-related curriculum, conducting field trips and classroom presentations. To date over 23,000 students have been reached. (The water portion of this program is provided by water operation funds, which are not included in this budget).

Proposed RPU Energy Efficiency Programs and Services: (2007-08)

RPU plans to maintain the current level of programs and services to its customers. A few additions will be made to some existing programs including:

- Commercial PV Program
- PV for the Schools
- PV for City Facilities
- Green Power Premium
- Residential and Small Business HVAC Tune-Ups
- Low-Income Refrigerator Giveaway
- Residential CFL Direct Mail

RIVERSIDE PUBLIC UTILITIES

Time Period for Reporting Data: Fiscal Year ending 6/30/07

Riverside		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	7	7	17,075	170,752	98	$ 55,200		$ 893	$ 56,093
HVAC	Res Cooling	443	478	3,089,551	92,667,621	58,989	$ 323,906		$ 836,673	$ 1,160,578
Appliances	Res Dishwashers	5	6	15,309	199,014	105	$ 29,900		$ 943	$ 30,843
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting									
Pool Pump	Res Pool Pump	39	22	57,120	571,200	336	$ 6,375		$ 3,180	$ 9,555
Refrigeration	Res Refrigeration	18	18	101,537	1,827,662	972	$ 138,300		$ 8,975	$ 147,275
HVAC	Res Shell	78	78	33,030	659,446	380	$ 67,044		$ 3,695	$ 70,739
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling	1	1	2,370	37,388	20	$ 30,500		$ 184	$ 30,684
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting	739	739	2,457,600	27,033,600	15,024	$ 273,900		$ 140,607	$ 414,507
Process	Non-Res Motors	11	8	69,885	1,048,272	552	$ 20,000		$ 4,850	$ 24,850
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other									
SubTotal		1,342	1,358	5,843,476	124,214,956	76,477	$ 945,125		$ 1,000,000	$ 1,945,125
T&D	T&D									
Total		1,342	1,358	5,843,476	124,214,956	76,477	$ 945,125		$ 1,000,000	$ 1,945,125

EE Program Portfolio TRC Test	**5.24**

Excluding T&D

Time Period for Forecast Data: Fiscal Year ending 6/30/08

Riverside		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	6	6	13,920	139,200	80	$ 45,000		$ 611	$ 45,611
HVAC	Res Cooling	435	476	3,027,301	90,855,397	57,844	$ 338,750		$ 688,634	$ 1,027,384
Appliances	Res Dishwashers	5	6	15,360	199,680	105	$ 30,000		$ 794	$ 30,794
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting	7,012	938	5,142,667	46,284,000	23,439		$ 444,792	$ 168,431	$ 613,223
Pool Pump	Res Pool Pump	38	22	56,000	560,000	330	$ 6,250		$ 2,617	$ 8,867
Refrigeration	Res Refrigeration	18	18	103,600	1,864,800	992	$ 140,000		$ 7,686	$ 147,686
HVAC	Res Shell	77	77	32,832	655,576	378	$ 65,500		$ 3,082	$ 68,582
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling	4	3	5,840	96,760	53	$ 130,000		$ 422	$ 130,422
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting	736	736	2,448,000	26,928,000	14,965	$ 265,500		$ 117,546	$ 383,046
Process	Non-Res Motors	28	21	174,712	2,620,680	1,380	$ 25,000		$ 10,176	$ 35,176
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other									
SubTotal		8,358	2,302	11,020,232	170,204,093	99,566	$ 1,046,000	$ 444,792	$ 1,000,000	$ 2,490,792
T&D	T&D									
Total		8,358	2,302	11,020,232	170,204,093	99,566	$ 1,046,000	$ 444,792	$ 1,000,000	$ 2,490,792

EE Program Portfolio TRC Test	**4.20**

Excluding T&D

ROSEVILLE ELECTRIC (RE)

- Established in 1912
- 50,633 customers (44,612 residential and 6,021 businesses). Roseville projects an average 1724 new meters annually for the next 10 years.
- Peak demand – 342.9 megawatts; summer afternoon peak.
- Annual energy use: 1,233 gigawatt-hours (FY07).
- 140 employees

Roseville Electric Energy Efficiency Program Highlights

- RE began offering energy efficiency programs in the early 1980s.
- From 2001-07, these programs reduced peak demand by 11.2 megawatts and cumulative energy savings by over 86,000 megawatt-hours.
- Roseville's total expenditures for energy efficiency programs during fiscal year ending June 30, 2007: $1,115,911.

Time Period for Program Performance Data - Fiscal year ending June 30, 2007.

Current Business and Residential Customer Programs

- Energy Efficiency Technical Support Program - RE offers comprehensive technical support and incentives to facilitate installation of incrementally higher-efficiency cooling and refrigeration equipment, envelope measures, appliances, lighting and controls for business and residential customers.
- Energy Audits - Free, on-site energy audits by RE personnel are available for both business and residential customers. Online audit tool kits are also available for residential customers.
- Shade Tree Program - Provides complimentary shade trees for the properties of both residential and business customers to reduce air conditioning load. The program also provides educational information regarding the care of trees to help ensure energy savings.

Rate and Energy Assistance Programs

- Low Income Rate Assistance - A rate discount is available for low-income seniors, low-income customers with special medical needs and very low-income customers.
- Large General Service Rates - Time-of-use to encourage energy conservation during peak periods.

New Construction Programs

- New Construction Agreements - RE requires developers to commit to new construction development agreements that contain specific energy efficiency requirements, including increased efficiency requirements for air conditioners.
- Residential New Construction Program - RE also provides incentives to builders to exceed the above agreements. The Preferred Homes energy efficiency and the BEST Homes energy efficiency and roof-top solar electric programs are popular among local builders.
- Business New Construction Program - Program provides assistance in bringing energy efficiency into the design and construction of the facility. The goal is to control peak load and reduce overall energy use. The program includes lighting, mechanical, envelope or whole-building measures. RE's Business New Construction Design Incentives feature tiered incentive levels that encourage owners and builders to include measures that conserve energy during the project's design phase. The earlier the customer plans, the larger the rebate.

Municipal Facilities Programs

- Municipal Facilities Upgrades - RE is continuing a ten-year plan to upgrade the efficiency of municipal facilities beyond code requirements during capital improvement, renovation and new construction projects, including upgrades to improve the operations and performance of electrical and mechanical systems.
    - Lighting re-designs to reduce watts per square foot in City buildings and improve worker environment.
    - HVAC upgrades to more efficient HVAC units.
    - Use of properly selected and planted shade trees to reduce energy consumption.
    - Thermally restrictive windows (dual pane) to reduce the heat gain in the building space
    - Solar electric generation on select City buildings
    - New construction design features on City buildings including; LEED certification, shade overhanging eves and skylights to reduce lighting needs
- Utility Exploration Center - RE and other City departments opened the doors to the new "Utility Exploration Center" in December 2007. This facility is an educational resource for the community emphasizing energy and water efficiency and conservation as well as recycling solid waste.
- Photovoltaic Systems: Three community buildings and one public pool generate power through rooftop photovoltaic systems.

School Programs

- Assisted local schools with T-12 to T-8 and T-12 to T-5 retrofits.
- Replacement of incandescent or fluorescent exit signs with LED signs.
- Installation of programmable thermostats.
- Replace computer monitors with more efficient monitors.

Proposed Energy Efficiency Programs (2007-08)

- RE is revising its demand side resources plan to update programs in order to meet the new CEC goals. Focus on increasing participation in the residential and small business air conditioning and lighting programs.
- BEST Homes program goal is 20 percent participation of all new homes. First year reservations are exceeding the goal for the first three years of the program. This new construction program encourages customer independence by incorporating energy efficient measures and PV systems in new homes.
- Promote the new construction program for businesses to encourage all new buildings to surpass Title 24.
- Investigate new energy efficient strategies.

RE Demand Reduction Programs - RE's goal for all programs is five percent of load by 2012.

- **FY06/07 -** Commercial/Industrial load reduction program with a 4 megawatt potential.
- **Proposed FY07/08**
  - Implement residential load management program using AC switches and thermostats. RE goal is 3.0 megawatts in 2008 summer
  - Large business customer load reduction goal of six megawatts
  - Investigate new demand reduction and load shifting technologies such as thermal energy storage.

RE Renewable Energy Development

- **FY06/07**
  - As of June 30, 2007, RE's Green Roseville (green energy) program for residential and business customers had 1,435 participants.
  - As of June 30, 2007, 554 kilowatts of solar generation had been installed in Roseville.
  - Continued the solar incentive programs for the existing and new construction markets for both residential and business customers.
  - RE is also working with NCPA to insure the efficiency and longevity of the geothermal resources.

- **Proposed FY07/08**
  - Continue with 2007 programs and initiatives.
  - Install photovoltaic panels on several City facilities.
  - Continue to partner with builders to install renewable energy generation facilities in new developments.

ROSEVILLE ELECTRIC (RE)

Time Period for Reporting Data: Fiscal Year ending 6/30/07

Roseville	Resource Savings Summary						Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	5	5	13,201	132,008	73	$ 14,225	$ 2,987	$ 1,011	$ 18,224
HVAC	Res Cooling	425	398	863,947	17,916,842	11,454	$ 238,931	$ 82,428	$ 240,068	$ 561,428
Appliances	Res Dishwashers	2	3	7,962	103,501	57	$ 12,925	$ 1,633	$ 810	$ 15,368
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting			51,550	515,496	275		$ 2,427	$ 4,405	$ 6,832
Pool Pump	Res Pool Pump	4	1	6,240	62,400	34	$ 2,500	$ 63	$ 478	$ 3,041
Refrigeration	Res Refrigeration	82	82	526,642	9,479,563	5,142	$ 36,450	$ 2,147	$ 71,871	$ 110,468
HVAC	Res Shell	62	62	59,137	739,192	417	$ 39,642	$ 1,323	$ 6,025	$ 46,990
Water Heating	Res Water Heating			267,092	1,335,460	714		$ 14,580	$ 10,643	$ 25,223
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling	42	39	54,156	805,642	448	$ 48,165		$ 4,263	$ 52,428
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting	100	410	2,150,681	23,666,607	13,117	$ 231,693		$ 110,231	$ 341,924
Process	Non-Res Motors									
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell	10	10	54,362	569,749	317	$ 13,200		$ 2,572	$ 15,771
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other			270,958	812,875	449	$ 4,408		$ 11,909	$ 16,317
SubTotal		732	1,010	4,325,928	56,139,336	32,499	$ 642,140	$ 107,588	$ 464,287	$ 1,214,014
T&D	T&D									
Total		732	1,010	4,325,928	56,139,336	32,499	$ 642,140	$ 107,588	$ 464,287	$ 1,214,014

EE Program Portfolio TRC Test	2.38

Excluding T&D

Time Period for Forecast Data: Fiscal Year ending 6/30/08

Roseville	Resource Savings Summary						Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	6	6	13,920	139,200	77	$ 15,000	$ 3,150	$ 794	$ 18,944
HVAC	Res Cooling	702	652	1,349,861	27,112,886	17,333	$ 565,055	$ 2,601	$ 265,414	$ 833,070
Appliances	Res Dishwashers	4	5	12,800	166,400	92	$ 12,500	$ 2,625	$ 970	$ 16,095
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting	634	81	529,280	4,843,520	2,586	$ 24,000	$ 4,050	$ 23,591	$ 51,641
Pool Pump	Res Pool Pump	4	2	5,600	56,000	31	$ 1,000	$ 26	$ 320	$ 1,346
Refrigeration	Res Refrigeration	101	101	690,016	12,420,288	6,737	$ 40,000	$ 53,100	$ 70,129	$ 163,229
HVAC	Res Shell	72	72	77,728	909,760	513	$ 44,000	$ 2,310	$ 5,475	$ 51,785
Water Heating	Res Water Heating			160,000	1,600,000	856			$ 8,011	$ 8,011
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling	582	582	1,324,000	19,860,000	11,051	$ 412,258		$ 101,304	$ 513,562
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting	1,268	1,268	3,588,000	39,468,000	21,873	$ 924,339		$ 198,465	$ 1,122,804
Process	Non-Res Motors									
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other									
SubTotal		3,372	2,769	7,751,205	106,576,054	61,149	$ 2,038,152	$ 67,862	$ 674,473	$ 2,780,487
T&D	T&D									
Total		3,372	2,769	7,751,205	106,576,054	61,149	$ 2,038,152	$ 67,862	$ 674,473	$ 2,780,487

EE Program Portfolio TRC Test	2.13

Excluding T&D

SACRAMENTO MUNICIPAL UTILITY DISTRICT (SMUD)

SMUD Profile (Source: 2006 Annual Report):

- Total Customers: 585,221
- Annual Energy Sales to Customers: 10,799,230 kilowatt-hours (thousands)
- Net System Peak Demand - One hour: 3,280 Megawatts (July 24, 2006)

SMUD Energy-Efficiency Program Highlights

- SMUD has been continuously operating energy-conservation, load management, and energy-efficiency programs since 1976.
- In 2007, SMUD spent $21.9 million for residential and commercial energy-efficiency programs. These programs delivered 21.9 megawatts of peak-load reduction and 96 gigawatt-hours of annual energy savings.
- For 2008 residential and commercial energy-efficiency programs, SMUD is currently projecting to spend $34.4 million on its energy efficiency programs, a significant increase from 2007. These programs are projected to save 28 megawatts and 107 gigawatt-hours of annual energy savings.
- In 2007, the SMUD Board of Directors approved a significant expansion in goals for energy efficiency designed to increase annual savings from approximately 0.6 percent of total sales to approximately 1.5 percent per year on average over the next decade. SMUD is presently in the midst of redesigning its energy efficiency portfolio to expand existing programs, plan and implement new programs, and develop and implement a broader marketing and engagement plan to promote the Board's vision to "empower our customers with solutions and options that increase energy efficiency, protect the environment, reduce global warming, and lower the cost to serve our region."

Commercial/Industrial Retrofit Programs: (2008)
Commercial/industrial energy efficiency retrofit programs are budgeted for $9.3 million, with goals of 8.4 megawatts of peak-load reduction and 44 gigawatt-hours in annual energy savings.

- Customized Energy Efficiency Incentives: Promotes the installation of energy efficient equipment controls and processes at all commercial and industrial customer facilities. Provides incentives to contractors and/or customers to promote efficient practices for the following measures: lighting and controls, HVAC and controls, refrigeration and controls, and processes.
- Express Efficiency Incentives: Provides prescriptive incentives to participating qualified contractors for high-efficiency equipment across a variety of end-uses including lighting, HVAC, refrigeration, and food-service equipment. Incentives are targeted to the contractor rather than the end user in an effort to transform markets by stimulating

suppliers to promote energy-efficient equipment and services, and are designed to cover a significant portion of the incremental cost of equipment installed.

- Retrocommissioning (RCx): Designed to garner cost-effective energy savings and reductions in peak demand by fine-tuning energy control systems and ensuring that major energy-using equipment is operating at design efficiency levels. The RCx program is designed to reduce overall building energy consumption through low-cost/no-cost operational improvements and on-site training of building operators. A secondary goal is to guide the customer toward more far-reaching improvements that may become evident in the course of the commissioning process.
- Prescriptive Lighting: Promotes the installation of energy efficient lighting equipment and controls at smaller commercial and industrial customer facilities. Provides incentives to contractors to promote efficient practices for lighting and controls.
- Distributor Rebates: Promotes the installation of energy efficient packaged HVAC equipment and premium motors. Provides incentives to manufacturers and distributors to encourage warehouse stocking and marketing of premium efficiency motors and high efficiency packaged HVAC units. These incentives are paid per sale of energy efficient packaged HVAC unit and per sale of premium efficiency motor.

Residential Programs: (2008)

Residential energy-efficiency programs were budgeted for $12.3 million, with goals of 13.2 megawatts of peak-load reduction and 53 gigawatt-hours in annual energy savings.

- Residential Shade Tree: Provides free shade trees to SMUD customers. Implemented through the community-based non-profit Sacramento Tree Foundation (STF). STF foresters review tree selection and site locations with customers, who plant the trees.
- Residential Advisory Service: Provides on-site energy audits of homes; on-line, and CD-based energy audits; as well as telephone assistance for customers on ways to reduce their energy use (and bills) by implementing practices or conducting home improvement projects to increase the energy efficiency of their dwellings.
- Residential Appliance Efficiency: Provides rebates for qualifying (Energy Star®, Consortium for Energy Efficiency) appliances: clothes washers, dishwashers, refrigerators, and room air conditioners. A separate but related program provides rebates for the free pick-up and environmental recycling of old refrigerators and freezers.
- Residential Equipment Efficiency: Provides rebates and/or SMUD financing for qualifying (Energy Star®, Consortium for Energy Efficiency, other high-efficiency) efficiency improvements to homes' building shell and equipment: central air conditioners and heat pumps, duct sealing, refrigerant charge and airflow, windows, attic and wall insulation, insulated siding, solar domestic water heating, and cool roofs.
- Residential Lighting: Brings a variety of Energy Star® lighting products, at reduced prices, to local hardware, grocery, drug, discount, big-box, and home-improvement retailers. Implemented through agreements with manufacturers and retailers that involve cost buy-downs, marketing, and/or advertising by SMUD and/or manufacturer and retailer partner.
- Residential Pool Pumps: Provides educational information to customers on the benefits of installing high efficiency multi-speed or variable-speed pumps and motors and encourages customers to operate pool equipment during off-peak hours. Another component of this program focuses on education of the pool contracting community on

practices for retrofit and new pool installations that maximize pumping efficiency and minimize energy use and peak demand.

New Construction Programs: (2008)
New construction programs are budgeted for $6.9 million, with goals of 4.7 megawatts of peak-load reduction and 6.5 gigawatt-hours in annual energy savings.

- Residential New Construction: Provides incentives to builders to build homes that exceed the Title 24 energy efficiency standards by 20 percent or more. A separate but integrated Solar Smart Energy Homes component provides incentives and marketing support to builders that build homes that include PV and have net energy consumption that is 60 percent lower than typical new homes.
- Savings by Design: Provides incentives to builders and their design teams to design new commercial and industrial buildings to be 10-30 percent more energy efficient than required by Title 24 (or typical new construction in the case of Title 24 exempt buildings and processes).

Other Efficiency Programs: (2008)
SMUD will also be launching a number of new programs in 2008 as part of a ramp-up process to expand its energy efficiency programs and services to meet its goals in the future. Some of these programs include:

- Whole-House Performance: Participating contractors will use diagnostic equipment to evaluate the current performance of the whole house and recommend comprehensive improvements that will yield an optimal combination of savings and comfort for homeowners. Once the homeowner selects the improvements that fit their needs and budget, contractors who participate in the program will do the work or enlist other professionals to have the job done. In 2008, the focus will be to develop and educate the contractor base from which to launch a more comprehensive program in later years.
- Home Electronics: This program will focus on consumer education on ways to reduce usage by the increasingly proliferating electronic devices in homes that consume energy even when turned off. SMUD will also collaborate with other utilities, regional and national organization, and the EPA on implementing standards that will help to reduce the parasitic energy use from such devices in the future.
- Home Energy Use Display: Will provide residential customers an idea of how their energy use actions influence their electric bills in real time by providing an in-home, real-time, energy use display unit that customers can purchase for a discounted price and install themselves to assist them in making smart energy use choices. This program is considered a bridge program until full deployment of Automated Metering is completed over the next several years.
- Multi-Family (Apartment and Condominium) Retrofit: This program is designed to capture some of the significant energy-savings potential in existing apartments and condominiums and their common areas not addressed by current SMUD programs. The foundation of the proposed program is developing business relationships among the key players affecting the multi-family (MF) market segment, for the sole purpose of maximizing the efficiency of MF energy use. The program will target, build, and foster relationships with property managers and owners of MF rental property, owners of

condominiums, property-management associations, condo-homeowners associations, vendors, and service providers.

SMUD Demand Reduction Programs:

- Peak Corp Program: Voluntary program where participants allow SMUD to install a cycling device and send a radio signal to switch-off (or cycle) participant's central air conditioners. Cycling can occur periodically between June 1 and September 30.
- Demand Bid Program: Pays participants to reduce at least 75 kilowatts of non-critical load for blocks of at least two hours from 2-6 pm on weekdays between June and September. Customers receive a bill credit for load reductions below a calculated baseline based on their previous 10 business days' hourly average loads. Customers are compensated for curtailment performance meeting their load reduction bid. For performance less than their bid, the credit is reduced. Customers have access to a Web-based management system provided by SMUD for daily monitoring on non-curtailment days, and near-real time monitoring on curtailment days.
- Voluntary Emergency Curtailment Program: Calls on participants to reduce their electrical use by a pre-determined amount. There is no obligation and no penalty if the business is unable to respond to SMUD's request to reduce usage.

SACRAMENTO MUNICIPAL UTILITY DISTRICT (SMUD)

SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT
The Power To Do More.®

Time Period for Reporting Data: Calendar year ending 12/31/06

SMUD		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	120	120	299,000	4,485,000	1,816	$ 101,025		$ 33,466	$ 134,491
HVAC	Res Cooling	2,845	2,845	1,965,000	29,475,000	11,937	$ 2,397,011		$ 488,317	$ 2,885,328
Appliances	Res Dishwashers	6	6	18,000	270,000	109	$ 7,200		$ 9,345	$ 16,545
Consumer Electronics	Res Electronics									
HVAC	Res Heating			551,000	9,918,000	4,017	$ 300,000		$ 61,241	$ 361,241
Lighting	Res Lighting	4,500	4,500	28,793,000	273,533,500	110,781	$ 1,378,759		$ 1,343,592	$ 2,722,351
Pool Pump	Res Pool Pump	824	824	287,000	4,305,000	1,744	$ 33,150		$ 213,206	$ 246,356
Refrigeration	Res Refrigeration	544	544	3,198,000	35,880,931	14,532	$ 424,000		$ 857,049	$ 1,281,049
HVAC	Res Shell	84	84	437,000	8,740,000	3,540	$ 3,056		$ 10,861	$ 13,917
Water Heating	Res Water Heating	4	4	23,000	460,000	186	$ 12,000		$ 1,040	$ 13,040
Comprehensive	Res Comprehensive	2,482	2,482	2,740,000	54,800,000	22,194	$ 1,263,750		$ 2,093,788	$ 3,357,538
Process	Non-Res Cooking									
HVAC	Non-Res Cooling	2,166	2,166	6,524,000	65,240,000	26,422	$ 726,000		$ 1,394,705	$ 2,120,705
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting	4,080	4,080	22,305,000	223,050,000	90,335	$ 2,673,787		$ 1,343,112	$ 4,016,899
Process	Non-Res Motors	130	130	230,000	2,300,000	932	$ 42,000		$ 24,821	$ 66,821
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration			103,000	1,030,000	417	$ 6,835		$ 21,532	$ 28,367
HVAC	Non-Res Shell									
Process	Non Res Process	484	484	4,224,000	42,240,000	17,107	$ 162		$ 555,905	$ 556,067
Comprehensive	Non Res Comprehensive	1,770	1,770	6,882,000	137,640,000	55,744	$ 370,000		$ 1,378,890	$ 1,748,890
Other	Other	101	101	701,000	10,515,000	4,259			$ 991,180	$ 991,180
SubTotal		20,140	20,140	79,280,000	903,882,431	366,072	$ 9,738,735		$ 10,822,048	$ 20,560,783
T&D	T&D									
Total		20,140	20,140	79,280,000	903,882,431	366,072	$ 9,738,735		$ 10,822,048	$ 20,560,783

EE Program Portfolio TRC Test	1.24

Excluding T&D

Time Period for Reporting Data: Calendar year ending 12/31/07

SMUD		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	53	53	362,000	5,430,000	2,199	$ 104,560		$ 39,716	$ 144,276
HVAC	Res Cooling	2,460	2,460	1,724,000	25,860,000	10,473	$ 1,586,802		$ 617,014	$ 2,203,816
Appliances	Res Dishwashers	7	7	52,000	780,000	316	$ 13,570		$ 18,235	$ 31,805
Consumer Electronics	Res Electronics									
HVAC	Res Heating			649,000	11,682,000	4,731	$ 252,288		$ 86,484	$ 338,772
Lighting	Res Lighting	6,682	6,682	43,087,000	357,622,100	144,837	$ 2,016,842		$ 1,752,990	$ 3,769,832
Pool Pump	Res Pool Pump	1,047	1,047	236,890	3,553,350	1,439	$ 95,625		$ 222,631	$ 318,256
Refrigeration	Res Refrigeration	1,100	1,100	7,237,000	64,712,160	26,208	$ 704,435		$ 1,360,290	$ 2,064,725
HVAC	Res Shell	70	70	343,000	6,860,000	2,778	$ 6,303		$ 9,560	$ 15,863
Water Heating	Res Water Heating	31	31	197,000	3,940,000	1,596	$ 102,000		$ 13,566	$ 115,566
Comprehensive	Res Comprehensive	1,600	1,600	2,225,000	44,500,000	18,023	$ 727,180		$ 2,631,638	$ 3,358,818
Process	Non-Res Cooking									
HVAC	Non-Res Cooling	1,740	1,740	4,067,961	40,679,610	16,475	$ 640,057		$ 590,106	$ 1,230,163
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting	4,400	4,400	24,460,346	244,603,460	99,064	$ 2,670,666		$ 2,192,787	$ 4,863,453
Process	Non-Res Motors	170	170	339,600	3,396,000	1,375	$ 59,056		$ 23,811	$ 82,867
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration	50	50	215,869	2,158,690	874	$ 28,424		$ 97,038	$ 125,462
HVAC	Non-Res Shell									
Process	Non Res Process	800	800	3,658,446	36,584,460	14,817	$ 141,496		$ 555,073	$ 696,569
Comprehensive	Non Res Comprehensive	1,649	1,649	6,342,888	126,857,760	51,377	$ 567,437		$ 1,331,273	$ 1,898,710
Other	Other	121	121	752,000	11,280,000	4,568			$ 679,656	$ 679,656
SubTotal		21,980	21,980	95,950,000	990,499,590	401,152	$ 9,716,741		$ 12,221,869	$ 21,938,610
T&D	T&D									
Total		21,980	21,980	95,950,000	990,499,590	401,152	$ 9,716,741		$ 12,221,869	$ 21,938,610

EE Program Portfolio TRC Test	1.33

Excluding T&D

Time Period for Forecast Data: Calendar year ending 12/31/08

SMUD		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	25	25	234,000	3,510,000	1,422	$ 65,000		$ 35,421	$ 100,421
HVAC	Res Cooling	3,400	3,400	2,250,000	33,750,000	13,669	$ 2,258,700		$ 1,078,969	$ 3,337,669
Appliances	Res Dishwashers	5	5	35,000	525,000	213	$ 15,250		$ 21,260	$ 36,510
Consumer Electronics	Res Electronics									
HVAC	Res Heating			551,000	9,918,000	4,017	$ 271,300		$ 121,828	$ 393,128
Lighting	Res Lighting	6,180	6,180	39,576,000	328,480,800	133,035	$ 2,100,000		$ 1,984,194	$ 4,084,194
Pool Pump	Res Pool Pump	1,240	1,240	24,000	360,000	146			$ 120,343	$ 120,343
Refrigeration	Res Refrigeration	1,000	1,000	7,000,000	53,666,667	21,735	$ 600,000		$ 1,788,505	$ 2,388,505
HVAC	Res Shell	200	200	550,000	11,000,000	4,455	$ 24,850		$ 19,792	$ 44,642
Water Heating	Res Water Heating	70	70	400,000	8,000,000	3,240	$ 225,000		$ 37,394	$ 262,394
Comprehensive	Res Comprehensive	5,900	5,900	9,000,000	70,552,569	28,574	$ 4,249,780		$ 4,923,874	$ 9,173,654
Process	Non-Res Cooking									
HVAC	Non-Res Cooling	1,700	1,700	2,600,000	26,000,000	10,530	$ 564,250		$ 497,049	$ 1,061,299
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting	5,000	5,000	27,000,000	270,000,000	109,350	$ 4,176,500		$ 2,664,389	$ 6,840,889
Process	Non-Res Motors	170	170	230,000	2,300,000	932	$ 57,000		$ 42,498	$ 99,498
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration	90	90	250,000	2,500,000	1,013	$ 20,500		$ 47,194	$ 67,694
HVAC	Non-Res Shell									
Process	Non Res Process	520	520	3,600,000	36,000,000	14,580	$ 256,250		$ 607,016	$ 863,266
Comprehensive	Non Res Comprehensive	2,500	2,500	13,700,000	274,000,000	110,970	$ 1,645,500		$ 2,928,811	$ 4,574,311
Other	Other								$ 988,188	$ 988,188
SubTotal		28,000	28,000	107,000,000	1,130,563,035	457,878	$ 16,529,880		$ 17,906,723	$ 34,436,603
T&D	T&D									
Total		28,000	28,000	107,000,000	1,130,563,035	457,878	$ 16,529,880		$ 17,906,723	$ 34,436,603

EE Program Portfolio TRC Test	**1.08**

Excluding T&D

CITY OF SHASTA LAKE

- Electric utility was established in 1945 with the City incorporating in 1993.
- City owns and operates electric transmission and distribution facilities, including two small solar installations. The largest is 11.4 kilowatts and both are located on City facilities.
- City provides retail electric service to customers located with in the City's corporate limits, as well as certain adjacent areas.
- City serves approximately 4,422 retail customers (meters), of which 4,072 are residential. Residential users account for approximately fifty percent of annual retail sales.
- Shasta Lake has eight industrial customers with retail sales representing 28.65 percent of total retail sales. One additional industrial customer is served under a separate sales contract and not served as a retail customer.
- The City's power and energy requirements are greatly influenced by residential customers, with year-to-year variations in peak demand and energy sales representative, in part, of the effect of local weather conditions on the residential class usage patterns.
- Peak demand: 33.3 megawatts on July 17, 2006, at 2 pm
- Annual energy use is 390 gigawatt-hours.

Shasta Lake Energy Efficiency Program Highlights

The City of Shasta Lake energy efficiency programs are primarily focused on residential appliance rebates and lighting as 90 percent of customers are residential. The utility's goal is to help customers use their electricity more efficiently.

Overview of Shasta Lake Energy Efficiency Programs

Current Commercial and Industrial Customer Programs

- Free Energy Audits and Rebates: This program offers free, on-site energy audits and is available for both commercial and industrial customers. Energy efficiency recommendations and follow up visits support implementation of recommended energy efficiency measures. Rebates are available for energy efficiency upgrades identified in these audits.

Current Residential Customer Programs

- Rebate Program: Comprehensive technical support and incentives to facilitate installation of incrementally higher efficiency cooling and refrigeration equipment, envelope measures, appliances, lighting and controls for residential customers.
- Low Income Program: The City's low-income program provides a 17 percent reduction in rates for the first 800 kilowatt-hours to customers that meet the City's eligibility of low-income with disabilities.

Public Facilities

- Free Energy Audits: Free, on-site energy audits as requested for all public facilities. Energy efficiency recommendations and audit follow up visits support implementation of recommended energy efficiency measures.

City Schools

- Free Energy Audits: Free, on-site energy audits as requested for all city school buildings. Energy efficiency recommendations and audit follow up visits support implementation of recommended energy efficiency measures.

Proposed Shasta Lake Energy Efficiency Programs and Services (2007-2008)

- Operate revised/updated programs at updated funding levels.
- Ensure that all new electric load is efficient.
- Evaluate the appropriateness of any new energy efficiency technologies.
- Ensure that energy efficiency is part of integrated resource planning by determining and implementing the most cost-effective, reliable, and feasible energy efficiency measures.
- Measure and evaluate the impact of energy efficiency programs.

Proposed New Energy Efficiency Programs: (2006-2007)

The City of Shasta Lake has recently revised and updated their energy efficiency programs and anticipates that energy efficiency will be an integral part of the City's ongoing greenhouse gas emission reduction program.

Shasta Lake Demand Reduction Programs:

The City does not currently have a demand reduction program in place, but the City Council approved in November 2006 the installation of 50 electric and water advanced meters as a demonstration program. With the completion of this test, the City is now installing remote meter reading capabilities for all its electric and water customers. With the completion of this project the City could implement interruptible load programs, time of use metering and other such programs with Council approval

CITY OF SHASTA LAKE

Time Period for Reporting Data: Fiscal Year ending 6/30/2007

Shasta Lake		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	2	2	3,878	38,784	21	$ 1,200		$ 1,906	$ 3,106
HVAC	Res Cooling	10	8	8,349	149,461	96	$ 10,011		$ 10,967	$ 20,978
Appliances	Res Dishwashers			528	6,864	4	$ 200		$ 339	$ 539
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting			213	1,920	1	$ 16		$ 83	$ 99
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration	1	1	4,867	87,610	48	$ 2,325		$ 4,209	$ 6,534
HVAC	Res Shell	8	8	9,299	137,859	78	$ 10,475		$ 7,242	$ 17,717
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling	4	3	19,800	356,400	198	$ 1,200		$ 18,248	$ 19,448
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting									
Process	Non-Res Motors									
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other									
SubTotal		25	22	46,935	778,897	445	$ 25,427		$ 42,994	$ 68,421
T&D	T&D									
Total		25	22	46,935	778,897	445	$ 25,427		$ 42,994	$ 68,421

EE Program Portfolio TRC Test	0.77

Excluding T&D

Time Period for Forecast Data: Fiscal Year ending 6/30/2008

Shasta Lake		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	6	6	15,514	155,136	86	$ 4,800		$ 2,476	$ 7,276
HVAC	Res Cooling	40	33	33,569	600,965	384	$ 40,225		$ 14,319	$ 54,544
Appliances	Res Dishwashers	1	1	2,112	27,456	15	$ 800		$ 441	$ 1,241
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting	1		853	7,680	4	$ 63		$ 108	$ 171
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration	3	3	19,469	350,438	190	$ 9,300		$ 5,467	$ 14,767
HVAC	Res Shell	42	42	48,902	720,400	406	$ 45,000		$ 12,284	$ 57,284
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling	5	4	26,400	475,200	264	$ 1,600		$ 7,900	$ 9,500
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting									
Process	Non-Res Motors									
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other									
SubTotal		98	90	146,819	2,337,276	1,350	$ 101,788		$ 42,994	$ 144,782
T&D	T&D									
Total		98	90	146,819	2,337,276	1,350	$ 101,788		$ 42,994	$ 144,782

EE Program Portfolio TRC Test	0.82

Excluding T&D

SILICON VALLEY POWER

- Established in 1896
- 51,111 customers; 83.7 percent are residential customers but only 9 percent of power sales are residential. 87.4 percent of sales are to the 1,932 industrial customers. SVP projects an average increase of 7.8 percent annually in sales.
- Peak demand: 486.5 megawatts; occurred July 25, 2006; 69 percent load factor.
- Annual energy use: 2,879 gigawatt-hours in 2006.
- SVP owns power generation facilities. Has invested in joint ventures that produce electric power and trades on the open market. Over 30 percent of its power comes from geothermal, wind, and other eligible renewable sources.
- The City of Santa Clara employs 144 in the Electric Department (SVP).
- SVP mission: To ensure the citizens, organizations and businesses of Santa Clara a low-cost, reliable and stable source of electric power.

SVP Energy Efficiency Program Highlights

SVP's Public Benefit Programs are separated into residential and business programs, with the majority of funding toward the business sector since that is the customer class that represents 90.4% of the sales. Total program expenditures are about $5.7 million per year. Savings of more than 165 million kilowatt-hours were achieved in the first year of the program in 1998. Total program cost for energy efficiency programs in FY06/07 was $3,602,097 ($4,741,636 on all public benefit programs), resulting in 1,182 kilowatt demand reduction and 10,889 gigawatt-hour reductions. Since 1998, total program costs for all public benefit programs were $42,697,546, resulting in 896,104 gigawatt-hour reductions.

SVP's goals and objectives for implementation of energy efficiency programs include:

- cost-effective programs to lower energy use
- programs that create value to for the community and meet all applicable legal requirements.
- programs that assist Divisions and City Departments in achieving optimal energy efficiency at City facilities and assist in implementing new energy related technologies for the benefit of the City and community
- programs to support renewable power generation that increase resource diversity and minimize adverse environmental impacts from electric generation and operation of the electric system.
- programs that support emerging technologies
- programs that assist low-income residents in paying their electric bills and installing energy efficient appliances and other measures.

- determination of the best energy programs to offer Santa Clara customers by collecting input from community organizations, businesses and other City departments.

Current Commercial Customer Programs:

- "Optimal Power Use Service[sm]" (OPUS): Provides installation support and financial rebates to small and medium sized businesses to facilitate upgrades to more efficient lighting and air conditioning systems.
- Business Audits: Free energy efficiency audits to business customers.
- Rebates: A comprehensive portfolio of energy efficiency rebates (for purchase and installation of energy efficient lighting, motors, air conditioners, motion sensors, programmable thermostats, new construction, and customized energy-efficiency installations).
- Business Energy Information: Management information on energy usage through 15-minute interval meters, Itron's 'EEM Suite' software, training, and other sources.
- Energy Innovation Program: This program encourages businesses to demonstrate new products and product applications not yet commercially viable in today's marketplace, install energy efficient technologies not generally known or widely accepted, yet show potential for successful market growth, successfully apply energy efficiency solutions in new ways, or introduce energy efficiency into industries or businesses that are resistant to adopting new technologies or practices.
- LEED Rebate for Energy Efficient Building Design: If a building meets LEED criteria and exceeds Title 24 energy requirements by at least 10 percent, the business can receive a rebate of up to $47,500.

Current Residential Customer Programs:

- Residential In-Home Energy Audits and Education: Through this technical support program SVP staff provides on-site audit analysis, energy efficiency recommendations and distributes energy saving items (four compact fluorescent lights, "lime lites," and programmable thermostats). The Solar Explorer and the SVP information booth participate in major city events, providing education on energy efficiency and solar electric generation systems. In collaboration with the Santa Clara Police Department, CFLs and educational materials are distributed to residents participating in the National "Night Out" Program in August.
- Residential Appliance Rebates: Rebates encourage residents to purchase and install ENERGY STAR® labeled refrigerators and recycle their old refrigerators.
- Residential Attic Insulation Rebates: These rebates encourage the installation of attic insulation by providing incentives for both single-family and multi-family units. All homes are inspected to ensure installation has been completed.
- Neighborhood Solar Program: SVP customers have the option to pay into a special fund to support the installation of solar electric systems at non-profit community buildings. The second installation at Valley Village Retirement Center was completed in April 2007. Industrial customers provided $10,000 of the funding for this installation. The next installation is scheduled for FY08/09 and will be installed on the Bill Wilson Center.
- SVP Plug-ins Catalog: Energy-efficient product catalogs are delivered four times per year to residents. Monthly promotions are available to customers who order on the web. The printing of catalogs and fulfillment of customer orders is done by Energy Federation, Inc.

- Rate Assistance Program: Qualified low-income customers receive a discount on their electric bill (low-income program).
- Low-Income Refrigerator Replacements: Replaces old, energy-wasting refrigerators for eligible low-income residents with new, energy-saving appliances.
- Refrigerator & Room Air Conditioner Recycling: Rebate for recycling old refrigerators and room air conditioners.

Current Community Programs:

- Solar Electric Project: A capital project to install a 100 kilowatt PV carport at a city facility is underway (renewable program).
- Public Facilities' Energy Efficiency Program: SVP provides technical assistance and financial incentives for the expansion, remodel, and new construction of City of Santa Clara buildings. Included in this program are higher levels of rebates for qualifying equipment, energy management assistance, and a small budget for retro commissioning.

Time Period for Reporting Data: Fiscal Year ending 6/30/07.

Proposed Energy Efficiency Programs and Services: **(2007-08)**
(Continuation of Existing Programs):

Commercial Customer Program:
- "Optimal Power Use Service[sm]" (OPUS)
- Business Audits
- Business Energy Information
- Business Rebates
- Energy Innovation Program
- LEED Rebate for Energy Efficient Building Design

Residential Customer Programs:
- Residential In-Home Energy Audits, Education, and Hot Line
- Residential Appliance Rebates
- Residential Insulation Rebates
- Neighborhood Solar Program
- SVP Plug-ins Catalog
- Rate Assistance Program
- Low-Income Refrigerator Replacements
- Refrigerator & Room Air Conditioner Recycling

Community Programs
- Public Facilities' Energy Efficiency Program

(Modifications to Existing Energy Efficiency Programs and New Programs)
Business Customer Programs:
- Business Solar Photovoltaic Rebate*:* Provides financial incentives for the installation of solar systems at business sites. Businesses can now receive rebates starting at $3.00 per output watt up to a total of $300,000 per customer for systems up to 100 kilowatts. The former rebate was $2.50 per watt for a maximum of $125,000 or a 50 kilowatt system. Businesses installing systems between 100 kilowatt and one megawatt are eligible for a Performance

Based Incentive of $0.40 per kilowatt-hour. Businesses are required to complete an energy audit in order to receive a rebate, as is the case with the statewide California Solar Initiative.

- Compressed Air Management Program (CAMP): Provides assistance to large commercial and industrial facilities to assist them in upgrading poorly functioning and inefficient compressed air systems. This program was introduced to customers as a new offering in April 2007.
- Retrocommissioning (RCx): Provides commissioning and retro commissioning services to data centers, commercial buildings, educational facilities, and hotels. This program was introduced to customers in April 2007.
- "Keep Your Cool" Program: Provides service through a third party to repair or replace broken refrigeration door gaskets and to install new strip curtains for businesses in Santa Clara.

Residential Customer Programs*:*

- Residential Solar Photovoltaic Rebate*:* Provides significant financial incentive to residential customers for installation of solar systems. Customers receiving the rebate are required to also complete an energy audit, as is the case with the statewide California Solar Initiative. The rebate was increased from $3.00 to $4.50 per watt, up to a maximum system size of 10 kilowatts. The prior maximum system size was 3 kilowatts.

Demand Reduction:

In 2006, SVP had a load factor of 67.6 percent, primarily due to a large percentage of sales to large high-tech firms that operate three shifts daily, 365 days per year. Because of the relatively mild climate, residential customers often do not have air conditioning, and do not have the peak in energy usage that occurs in other parts of the state.

Due to this very high load factor, SVP's demand response program is a voluntary load-shedding program called the "Power Reduction Pool." Through a voluntary arrangement, participating customers reduce their load by at least 200 kilowatts during system emergencies. The communication network of customers and SVP staff for these shutdowns is tested at least once per year. In addition, one industrial customer is on an interruptible rate. This customer is interrupted for both economic and system emergency conditions

SILICON VALLEY POWER

Time Period for Reporting Data: Fiscal Year ending 6/30/07

Silicon Valley Power		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers			348	3,480	2	$ 1,500		$ 6	$ 1,506
HVAC	Res Cooling	5		2,897	32,076	18	$ 1,331	$ 1,459	$ 22,718	$ 25,507
Appliances	Res Dishwashers			51	666		$ 100		$ 1	$ 101
Consumer Electronics	Res Electronics	1	1	5,186	20,744	11	$ 2,960		$ 386	$ 3,346
HVAC	Res Heating									
Lighting	Res Lighting	366	81	284,303	2,531,140	1,350	$ 3,116	$ 18,938	$ 122,461	$ 144,515
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration	108	108	697,418	12,553,517	6,810	$ 24,860	$ 41,800	$ 77,222	$ 143,882
HVAC	Res Shell	7	7	4,342	86,832	49	$ 11,725		$ 19,480	$ 31,205
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking			1,825	21,898	12	$ 300		$ 267	$ 567
HVAC	Non-Res Cooling	140	87	2,381,757	47,218,939	26,275	$ 561,808		$ 342,988	$ 904,797
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting	553	504	3,204,154	38,521,338	21,305	$ 404,135	$ 3,198	$ 473,734	$ 881,067
Process	Non-Res Motors			1,505,384	22,592,332	12,014	$ 195,683		$ 281,578	$ 477,261
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration	2	1	443,368	8,674,565	4,575	$ 56,619		$ 112,786	$ 169,405
HVAC	Non-Res Shell									
Process	Non Res Process			2,034,439	32,551,024	17,310	$ 330,144		$ 180,549	$ 510,692
Comprehensive	Non Res Comprehensive			258,803	5,176,060	2,880	$ 110,250		$ 78,726	$ 188,976
Other	Other			64,954	194,861	108		$ 61,498	$ 57,771	$ 119,269
SubTotal		1,182	791	10,889,227	170,179,470	92,720	$ 1,704,530	$ 126,893	$ 1,770,674	$ 3,602,097
T&D	T&D									
Total		1,182	791	10,889,227	170,179,470	92,720	$ 1,704,530	$ 126,893	$ 1,770,674	$ 3,602,097

EE Program Portfolio TRC Test	2.07

Excluding T&D

Time Period for Forecast Data: Fiscal Year ending 6/30/08

Silicon Valley Power		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers			348	3,480	2	$ 1,500		$ 3	$ 1,503
HVAC	Res Cooling	5		2,897	32,076	18	$ 1,331	$ 1,459	$ 22,687	$ 25,477
Appliances	Res Dishwashers			51	666		$ 100		$ 0	$ 100
Consumer Electronics	Res Electronics	1	1	5,186	20,744	11	$ 2,960		$ 367	$ 3,327
HVAC	Res Heating									
Lighting	Res Lighting	447	102	349,096	3,114,282	1,662	$ 3,116	$ 24,000	$ 120,766	$ 147,882
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration	109	109	699,088	12,583,584	6,826	$ 24,860	$ 55,000	$ 65,934	$ 145,794
HVAC	Res Shell	7	7	4,342	86,832	49	$ 11,725		$ 19,393	$ 31,118
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking			1,825	21,898	12	$ 300		$ 144	$ 444
HVAC	Non-Res Cooling	271	174	7,059,985	140,377,545	78,113	$ 1,516,184		$ 389,829	$ 1,906,013
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting	766	708	4,801,255	60,580,866	33,509	$ 587,611	$ 3,198	$ 410,393	$ 1,001,201
Process	Non-Res Motors			2,937,505	44,097,300	23,451	$ 382,348		$ 297,763	$ 680,112
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration	2	1	628,574	11,448,979	6,038	$ 76,488		$ 80,485	$ 156,973
HVAC	Non-Res Shell									
Process	Non Res Process			6,103,317	97,653,072	51,931	$ 990,431		$ 201,412	$ 1,191,843
Comprehensive	Non Res Comprehensive			517,606	10,352,120	5,760	$ 220,500		$ 103,506	$ 324,006
Other	Other			64,954	194,861	108		$ 61,498	$ 57,589	$ 119,087
SubTotal		1,608	1,101	23,176,028	380,568,304	207,490	$ 3,819,454	$ 145,155	$ 1,770,270	$ 5,734,878
T&D	T&D									
Total		1,608	1,101	23,176,028	380,568,304	207,490	$ 3,819,454	$ 145,155	$ 1,770,270	$ 5,734,878

EE Program Portfolio TRC Test	2.02

Excluding T&D

TRINITY PUBLIC UTILITY DISTRICT

- Created in 1982 as a result of the Trinity River Division Act of 1955, in which Congress provided mitigation for the economic devastation to the local economy resulting from the Act.
- The Congressional mitigation provides the TPUD enough low cost and clean hydroelectric power to meet all of its load for the next several decades, but forbids the TPUD from selling any of the energy it does not need to meet load.
- Serves small economically depressed area in northern California consisting of 7,000 meters in mountainous terrain covering an area the size of Vermont.
- TPUD is comprised of nine small substations serving 560 miles of distribution line.
- TPUD has a peak coincident demand of less than 20 megawatts, may occur in winter or summer.
- More than 60 percent of TPUD's load is residential and only two customers have a peak demand of more than 150 kilowatts.

TPUD Energy Efficiency Program Highlights

Since FY 2000, TPUD public benefits expenditures on energy efficiency total approximately $229,600 and have resulted in kilowatt-hours savings of more than 133,000 kilowatt-hours.

Current TPUD Energy Efficiency Programs:

- Weatherization Program: Provides incentives for installation of cost-effective weatherization measures including insulation and energy efficient windows in electrically heated homes for all new buildings and major remodels, about 30 per year..

Proposed TPUD Energy Efficiency Programs and Services: **(for 2007-08)**

- Maintain existing programs at current levels.

TPUD Demand Reduction Programs:

TPUD does not have much of an air conditioning load and measures the demand of only one of its customers, none of the TPUD's power costs is dependent on demand, and therefore the TPUD has no plans to implement a demand reduction program.

TRINITY PUBLIC UTILITY DISTRICT

Time Period for Reporting Data: Fiscal year ending 6/30/2007

Trinity PUD		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers									
HVAC	Res Cooling									
Appliances	Res Dishwashers									
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting									
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration									
HVAC	Res Shell			18,850	245,050	149	$ 37,976			$ 37,976
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling									
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting									
Process	Non-Res Motors									
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other									
SubTotal				18,850	245,050	149	$ 37,976			$ 37,976
T&D	T&D									
Total				18,850	245,050	149	$ 37,976			$ 37,976

EE Program Portfolio TRC Test	0.03

Excluding T&D

Time Period for Forecast Data: Calendar year ending 6/30/2008

Trinity PUD		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers									
HVAC	Res Cooling									
Appliances	Res Dishwashers									
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting									
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration									
HVAC	Res Shell			22,850	297,050	180	$ 45,000			$ 45,000
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling									
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting									
Process	Non-Res Motors									
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other									
SubTotal				22,850	297,050	180	$ 45,000			$ 45,000
T&D	T&D									
Total				22,850	297,050	180	$ 45,000			$ 45,000

EE Program Portfolio TRC Test	0.03

Excluding T&D

TRUCKEE DONNER PUBLIC UTILITY DISTRICT

- Established in 1927
- 13,370 customers, 86 percent are residential
- TDPUD projects an average growth rate of 1-3 percent per year, for the next 10 years
- 2007 Peak demand – 36.0 megawatts (winter peaking)
- 2007 Energy Use - 147.1 gigawatt-hours

TDPUD Energy Efficiency Program Highlights

Commercial Customer Programs

- Commercial Energy Audits: TDPUD offers free on-site energy audits conducted by a TDPUD Energy Specialist for commercial customers that provide specific recommendations on cost-effective energy improvements to manage and reduce energy use and load.
- Commercial Energy Conservation Rebate Program: TDPUD provides a comprehensive commercial energy efficiency incentive program; focusing on peak load reduction and energy savings. Generous rebates and technical support are available to commercial customers to promote the installation of energy efficiency measures. This includes an appliance efficiency program for clothes washers, dishwashers and refrigerators; a building efficiency program that includes building envelope and forced-air distribution system leak testing and mitigation; a lighting efficiency program that includes any and all high efficiency lighting measures; space heating system efficiency program including ground source heat pumps and a water heating efficiency program including the purchase of energy efficient electric water heaters and solar water heater tanks. The District plans on offering rebates for high efficiency office electronic equipment sometime in 2008.
- Commercial Water Conservation Rebate Program**:** TDPUD offers rebates to commercial customers for the installation of water-saving measures including water-efficient clothes washers. Additional water-efficient investments including low-flush toilets; waterless urinals and other water saving devices may soon be eligible for this rebate.
- Solar PV Program: TDPUD beginning 2008 will offer financial incentives to commercial customers who incorporate solar PV technologies into their businesses (SB-1).

Residential Customer Programs

- Residential Energy Audits: TDPUD offers free on-site energy audits conducted by a TDPUD Energy Specialist for commercial customers that provide specific recommendations on cost-effective energy improvements to manage and reduce energy load and provided savings.

- Residential Energy Conservation Rebate Program: TDPUD provides a comprehensive residential energy efficiency incentive program, focusing on peak load reduction and energy savings. Generous rebates and technical support are available to residential customers to promote the installation of energy efficiency measures. This includes an appliance efficiency program for clothes washers, dishwashers and refrigerators; building efficiency program includes building envelope and forced-air distribution system leak testing and mitigation; residential compact fluorescent lighting (CFL) efficiency program including a multi-family unit CFL light bulb give away; space heating system efficiency program includes ground source heat pumps and the water heating efficiency program includes the purchase of energy efficient electric water heaters and solar water heater tanks. The District plans on offering rebates for high efficiency home electronic equipment sometime in 2008.
- Residential Water Conservation Rebate Program: TDPUD offers financial rebates to residential customers for the installation of water-saving measures including water-efficient clothes washers. Additional water-efficient investments including low-flush toilets; waterless urinals and other water saving devices will soon be eligible for this rebate.
- Low-Income Weatherization: TDPUD plans to provide home energy weatherization services to low-income residential customers.
- Solar PV Program: TDPUD beginning 2008 will offer financial incentives to residential customers who incorporate solar PV technologies into their homes (SB-1).

Community Programs

- Green Building Education/Installer**:** TDPUD has partnered with the local Sierra Green Building Association and the Town of Truckee Green Building Committee to design and implement green building education and training programs for the Truckee-Tahoe communities**.**
- Green Buildings Tour: TDPUD works with the Sierra Green Building Association, the Town of Truckee and local groups to provide tours of buildings in the community that incorporate green building design features**.**
- Energy Conservation & Efficiency Workshops***:*** TDPUD staff will be offering energy conservation and efficiency seminars and workshops in 2008.
- Landscape Water Conservation Workshops: TDPUD has partnered with local nurseries to conduct landscape water conservation workshops for the community.
- Million CFL Program***:*** The Million CFL program is a 10-year program starting in 2008 designed to provide incentives and CFL give-a-ways that will result in significant lighting efficiency savings.
- LED Light Swap Program: The District began an LED (light emitting diode) Christmas tree light swap program in 2007. The program involves giving District customers up to three strands of LED Christmas lights in exchange for their old inefficient Christmas lighting.

Education Programs - Public Schools:

- Energy Education: TDPUD personnel gives presentations on energy issues to local schools each year.

- "Living Wise" Resource Efficiency Program: TDPUD collaborates with the 6th grade staff at the local middle school to provide the curriculum and resources for the "Living Wise" Resource Efficiency program.
- Climate Change Symposium: TDPUD assists the Tahoe-Truckee Regional Education Coalition with Education Symposiums every year.

Community Education Programs:

- Green Building Symposium: TDPUD helps organize and conducts a presentation at the Truckee Home Show's Green Building Symposium.
- Regional Sustainability Assessment/Education: TDPUD collaborated with the Northern Nevada AIA on Regional Sustainability Assessment Education.
- Green Schools Education Program: The District plans on expanding its school education programs in 2008 to include the new community college.

Business Partnership Programs

- Retail: TDPUD will work with and encourage local hardware and grocery stores to market, sell and install energy-efficient products and services.
- Restaurant: Encourage restaurants to install energy-efficient lighting, cooking, dishwashing, and heating, ventilation and air conditioning equipment.
- Hospitality: Encourage hotels, motels, and resorts to implement LEED design principles and energy-efficient lighting, controls, HVAC, water heating, pool/spa, restaurant, renewable energy and green building technologies.

TDPUD Website

TDPUD is going to upgrade its website in 2008 with a Power of Conservation focus. There will be many new enhancements added to the website that will go a long way in promoting energy, water conservation and renewable energy.

TDPUD Demand Reduction Programs

The TDPUD does not currently have any demand reduction programs in place since there is very little air conditioning load and the TDPUD high demand time is winter.

Wires-to-Water Efficiency Program

In 1998, TDPUD staff started a review and testing program for all of the wells and pumping facilities in the district. It was determined that all of the water pumping and well facilities were not energy efficient. After the initial evaluation, an efficiency standard was developed to provide guidance in meeting the long term goal of energy efficient delivery of water.

From 2001 to the present, existing facilities were rebuilt with higher efficiency pumping systems. This is an ongoing project. measured energy savings for this program are based on the following:

- 2001: Baseline annual energy use - 5,586 kilowatt-hours per MG
- 2006: Improvements reduced usage to – 4,688 kilowatt-hours per MG (2,370 MG total)
- 2007: Improvements reduced usage to – 4,612 kilowatt-hours per MG (2,433 MG total)

TRUCKEE DONNER PUBLIC UTILITY DISTRICT

Time Period for Reporting Data: Calendar year ending 12/31/2006

Truckee Donner		Resource Savings Summary					2006 Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Saved	Net Annual kWh Saved	Net Life-cycle kWh Saved	Net Lifecycle GHG Reductions (Tons)	Utility Incen-tives ($)	Utility Direct Install ($)	Utility Mktg, EM&V, Admin ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	2	2	5,720	57,200	32	$ 1,250		$ 77,853	$ 79,103
HVAC	Res Cooling									
Appliances	Res Dishwashers									
Cons Elect's	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting									
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration			1,375	24,754	13	$ 950		$ 33,094	$ 34,044
HVAC	Res Shell			173	2,342	1	$ 300		$ 3,363	$ 3,663
Water Heating	Res Water Heating			573	8,592	5	$ 400		$ 10,690	$ 11,090
Comprehen	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling									
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting									
Process	Non-Res Motors									
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehen	Non Res Comprehensive									
Other	Other									
SubTotal		3	3	7,841	92,888	51	$ 2,900		$ 125,000	$ 127,900
T&D	T&D									
Total		3	3	7,841	92,888	51	$ 2,900		$ 125,000	$ 127,900

EE Program Portfolio TRC Test	0.07

Excluding T&D

Note: Wires to Water Energy Savings not included in table.

Time Period for Reporting Data: Calendar year ending 12/31/2007

Truckee Donner		Resource Savings Summary					Cost Summary		
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Saved	Net Annual kWh Saved	Net Life-cycle kWh Saved	Net Lifecycle GHG Reductions (Tons)	Utility Incen-tives ($)	Utility Mktg, EM&V, Admin ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	3	3	8,316	83,160	46	$ 6,600	$ 1,340	$ 7,940
HVAC	Res Cooling								
Appliances	Res Dishwashers		1	1,389	18,054	10	$ 3,300	$ 293	$ 3,593
Cons Elect's	Res Electronics								
HVAC	Res Heating								
Lighting	Res Lighting	302	22	149,689	1,215,839	646	$ 11,742	$ 17,575	$ 29,317
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration	1	1	4,935	88,834	48	$ 6,800	$ 1,406	$ 8,206
HVAC	Res Shell	1	1	691	9,370	5	$ 2,400	$ 159	$ 2,559
Water Heating	Res Water Heating			1,432	21,480	11	$ 1,250	$ 316	$ 1,566
Comprehen	Res Comprehensive								
Process	Non-Res Cooking								
HVAC	Non-Res Cooling								
HVAC	Non-Res Heating								
Lighting	Non-Res Lighting	74	74	252,213	3,530,982	1,957	$ 29,559	$ 58,433	$ 87,992
Process	Non-Res Motors								
Process	Non-Res Pumps			184,946	2,774,190	1,544	$ 183,150	$ 45,478	$ 228,628
Refrigeration	Non-Res Refrigeration								
HVAC	Non-Res Shell								
Process	Non Res Process								
Comprehen	Non Res Comprehensive								
Other	Other								
SubTotal		382	102	603,611	7,741,909	4,267	$ 244,801	$ 125,000	$ 369,801
T&D	T&D								
Total		382	102	603,611	7,741,909	4,267	$ 244,801	$ 125,000	$ 369,801

EE Program Portfolio TRC Test	2.37

Excluding T&D

Time Period for Forecast Data: Calendar year ending 12/31/2008

Truckee Donner		Resource Savings Summary					2008 Forecast			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Saved	Net Annual kWh Saved	Net Life- cycle kWh Saved	Net Lifecycle GHG Reductions (Tons)	Utility Incen- tives ($)	Utility Direct Install ($)	Utility Mktg, EM&V, Admin ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	5	5	11,440	114,400	63	$ 5,000		$ 730	$ 5,730
HVAC	Res Cooling	56		7,752	193,800	98			$ 1,101	$ 1,101
Appliances	Res Dishwashers	1	1	2,880	37,440	21	$ 5,000		$ 239	$ 5,239
Cons Elect's	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting	1,961	231	1,490,480	11,581,200	6,146	$ 80,056		$ 66,142	$ 146,197
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration	2	2	10,880	195,840	106	$ 15,000		$ 1,219	$ 16,219
HVAC	Res Shell	5	5	2,496	37,248	21	$ 8,000		$ 251	$ 8,251
Water Heating	Res Water Heating	1	1	5,728	85,920	46	$ 5,000		$ 499	$ 5,499
Comprehen	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling									
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting	176	176	600,000	8,400,000	4,655	$ 50,000		$ 54,820	$ 104,820
Process	Non-Res Motors									
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehen	Non Res Comprehensive									
Other	Other									
SubTotal		2,206	420	2,131,656	20,645,848	11,156	$ 168,056		$ 125,000	$ 293,056
T&D	T&D									
Total		2,206	420	2,131,656	20,645,848	11,156	$ 168,056		$ 125,000	$ 293,056

EE Program Portfolio TRC Test	**2.63**

Excluding T&D

TURLOCK IRRIGATION DISTRICT

In 1887, TID became the first publicly-owned irrigation district in the state of California. TID provides irrigation water to more than 5,800 growers in a 307-square-mile service area that incorporates 149,500 acres of fertile irrigable Central Valley farmland. Since 1923, TID has also been providing safe, reasonably priced and reliable electricity to a growing retail customer base in an electric service area that encompasses 662 square miles in portions of Stanislaus, Merced, Tuolumne and Mariposa counties.

TID SYSTEM OVERVIEW:

- 98,423 customers
- 72% are residential
- Peak demand (2007) 516 MW (Summer Peak)
- 2007 energy use: 1,981 gigawatt-hours

TID Energy Efficiency Program Highlights

For more than a decade, TID has offered rebates along with energy audits to educate customers about energy efficiency measures and help them reduce energy consumption. Existing successful programs will be continued and new and innovative programs will be added.

Current Energy Efficiency Programs

Commercial, Industrial and Agricultural Customer Programs

- Automated Energy - TID has implemented an on-line energy management tool for business customers who can log onto a website to monitor their energy usage and utilize that information to more efficiently manage their energy consumption.
- Energy Audits - TID offers free on-site energy audits to commercial, industrial and agricultural customers who have concerns, questions or an interest in implementing measures to manage their energy usage and reduce consumption.
- Commercial, Industrial, Agricultural Energy Efficiency Rebates - TID offers rebates along with comprehensive technical support for all commercial, industrial and agricultural customers to promote the purchase and installation of commercial equipment and systems that support and enhance load reduction.

Residential Customer Programs

- Residential Energy Audits - TID provides free in-home energy audits to customers who would like to learn how to reduce their energy use.
- Residential Rebate Programs - TID offers customers rebates for purchasing and installing:
    - Energy Star Refrigerator

    - Energy Star Room AC
    - Energy Star Clothes Washer
    - Whole House Fan
    - Shade Screens
- Shade Tree Rebate - TID provides rebates for up to three trees per year that are planted to provide shade.
- CFL Rebate Program - TID provides a rebate for the purchase and installation of CFLs.
- New Construction Rebate - TID offers a rebate to home builders for exceeding Title 24 energy standards.
- "Energy Wise" Education Program - Provides energy saving education and kits to 6th grade students in the TID service territory.
- Education Specialist - Outreach education provided to schools and community groups.

Time Period for Reporting Data: Calendar Year ending 12/31/07

Proposed New Energy Efficiency Programs (2008)

- TID intends to continue to expand its rebate programs to ensure that all cost-effective energy efficiency is achieved. TID is evaluating and expanding program offerings until all cost-effective energy efficiency is achieved in our service territory.

Modifications to Existing Energy Efficiency Programs (2008)

- All programs are evaluated annually to ensure they meet program objectives.

TID Demand Response Programs

While TID does not have a formal program in place, a communication structure exists with large customers to meet demand reduction needs as necessary.

TURLOCK IRRIGATION DISTRICT

WATER & POWER
Serving Central California since 1887

Time Period for Reporting Data: Calendar Year ending 12/31/2006

Turlock ID		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	9	9	20,764	207,640	115	$ 41,035		$ 408	$ 41,443
HVAC	Res Cooling	147	147	132,990	1,486,974	951	$ 112,780		$ 4,126	$ 116,906
Appliances	Res Dishwashers									
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting	66	66	51,200	460,800	246			$ 800	$ 800
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration	11	11	64,042	1,152,749	625	$ 60,320		$ 2,285	$ 62,605
HVAC	Res Shell									
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling	55	55	75,150	1,148,764	639	$ 4,733		$ 2,349	$ 7,082
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting	79	79	286,762	4,588,192	2,543	$ 15,623		$ 9,594	$ 25,217
Process	Non-Res Motors	94	94	544,794	8,171,910	4,494	$ 28,419		$ 16,238	$ 44,657
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration	1,559	1,559	7,780,955	116,714,325	61,533	$ 416,965		$ 213,856	$ 630,821
HVAC	Non-Res Shell									
Process	Non Res Process	525	525	1,896,384	28,445,760	15,127	$ 93,739		$ 52,458	$ 146,197
Comprehensive	Non Res Comprehensive									
Other	Other									
SubTotal		2,544	2,544	10,853,041	162,377,113	86,273	$ 773,614		$ 302,114	$ 1,075,728
T&D	T&D									
Total		2,544	2,544	10,853,041	162,377,113	86,273	$ 773,614		$ 302,114	$ 1,075,728

EE Program Portfolio TRC Test	**3.88**

Excluding T&D

Time Period for Reporting Data: Calendar Year ending 12/31/2007

Turlock ID		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	5	5	11,252	112,520	62	$ 16,975		$ 541	$ 17,516
HVAC	Res Cooling	58	58	48,413	542,062	347	$ 23,906		$ 3,720	$ 27,626
Appliances	Res Dishwashers									
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting	213	213	427,775	3,849,975	2,055			$ 16,290	$ 16,290
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration	6	6	38,573	694,310	377	$ 20,090		$ 3,774	$ 23,864
HVAC	Res Shell									
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking	21	21	136,503	2,047,545	1,121	$ 6,825		$ 10,157	$ 16,982
HVAC	Non-Res Cooling	40	40	136,332	2,044,980	1,138	$ 6,817		$ 10,321	$ 17,138
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting	570	570	3,830,494	42,135,434	23,351	$ 150,344		$ 207,297	$ 357,641
Process	Non-Res Motors	908	908	4,469,005	67,035,075	35,649	$ 223,233		$ 305,752	$ 528,985
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration	66	66	107,937	1,619,055	854	$ 7,618		$ 7,338	$ 14,956
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other									
SubTotal		1,887	1,887	9,206,284	120,080,956	64,953	$ 455,808		$ 565,190	$ 1,020,998
T&D	T&D									
Total		1,887	1,887	9,206,284	120,080,956	64,953	$ 455,808		$ 565,190	$ 1,020,998

EE Program Portfolio TRC Test	**4.30**

Excluding T&D

Time Period for Forecast Data: Calendar Year ending 12/31/2008

Turlock ID		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	5	5	11,453	114,533		$ 37,462		$ 1,195	$ 38,657
HVAC	Res Cooling	59	59	49,279	551,760		$ 52,758		$ 8,209	$ 60,968
Appliances	Res Dishwashers									
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting	217	217	435,429	3,918,858				$ 35,949	$ 35,949
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration	7	7	39,263	706,733		$ 44,337		$ 8,330	$ 52,666
HVAC	Res Shell									
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking	21	21	138,945	2,084,179		$ 15,062		$ 22,415	$ 37,477
HVAC	Non-Res Cooling	41	41	138,771	2,081,568		$ 15,044		$ 22,776	$ 37,821
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting	580	580	3,899,028	42,889,308		$ 331,793		$ 457,482	$ 789,275
Process	Non-Res Motors	924	924	4,548,963	68,234,446		$ 492,652		$ 674,764	$ 1,167,415
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration	67	67	109,868	1,648,023		$ 16,812		$ 16,195	$ 33,007
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other									
SubTotal		1,921	1,921	9,371,000	122,229,408		$ 1,005,921		$ 1,247,315	$ 2,253,236
T&D	T&D									
Total		1,921	1,921	9,371,000	122,229,408		$ 1,005,921		$ 1,247,315	$ 2,253,236

EE Program Portfolio TRC Test	-

Excluding T&D

UKIAH PUBLIC UTILITY

- Ukiah Public Utilities (UPU) is Mendocino County's only customer-owned utility.
- UPU supplies electricity, water and wastewater treatment to Ukiah's 15,000 plus residents and businesses.
- Peak demand: 36 megawatts – July 2006
- Annual energy use: 122,870 megawatt-hours
- Power content (2nd quarter 2008): Geothermal 44 percent, small hydro 10 percent, large hydro 26 percent, Natural gas 11 percent, Nuclear <1 percent, Coal 9 percent. [54 percent eligible renewable]
- Renewable generation and hydropower provide over 81 percent of Ukiah's power needs

UPU Energy Efficiency Program Highlights

Ukiah's first energy efficiency programs were implemented in January of 2003. In 2007, UPU underwent an extensive redesign/upgrade of their energy efficiency and renewable energy (PV) program. Current programs being offered include:

Current Energy Efficiency Programs and Services:

- Customer-Centered Programs: UPU manages a comprehensive energy efficiency incentive program for residential & commercial customers focusing on peak load reduction and energy conservation. For residential customers, generous rebates are offered for the installation of various energy efficiency weatherization measures including, but not limited to, awnings, shade screens, compact fluorescent lamps, insulation, and double paned windows, as well as the purchase of higher-efficiency HVAC systems, electric clothes washers, refrigerators, and dishwashers. For commercial customers, rebates are available for upgraded lighting, HVAC equipment and, in cases where an analysis is performed; rebates can be offered for additional equipment that reduced energy use and/or demand.
- **"**PV Buy Down" Program: UPU's Photovoltaic (PV) Buy Down Program is a rebate program available to residential & commercial customers to help offset the investment in a PV system, enabling the customer to use a renewable source of energy. The rebates reduce the initial system cost for the customer and facilitate purchase and installation of Photovoltaic (Solar Panel) systems. Customers who install PV systems offset their electrical energy use with their self-generated solar power.
- Municipal Facilities: The City of Ukiah has a PV system installed on one of the City facilities, and hybrid vehicles are used by City employees.

- Low Income: Ukiah C.A.R.E.S. is the financial assistance program for low-income eligible households. It provides temporary emergency assistance, senior citizen monthly discounts and non-senior household monthly discounts.

Proposed Ukiah Energy Efficiency Programs and Services: (for 2008-2009)

- Maintain existing programs
- Ensure that all new electric loads are efficient
- Evaluate the appropriateness of any new energy efficiency technologies
- Ensure that energy efficiency is part of integrated resource planning by determining and implementing the most cost-effective, reliable, and feasible energy efficiency measures
- Measure and evaluate the impact of energy efficiency programs

Ukiah Demand Reduction Programs:

Ukiah has implemented new energy efficiency programs that include consideration and evaluation of their impact on demand reduction.

UKIAH PUBLIC UTILITY

Time Period for Reporting Data: Fiscal Year ending 6/30/2007

Ukiah		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	2	2	4,363	43,632	24	$ 3,294		$ 863	$ 4,157
HVAC	Res Cooling	31	22	10,687	176,568	111	$ 19,448		$ 4,916	$ 24,364
Appliances	Res Dishwashers			1,114	14,477	8	$ 2,788		$ 288	$ 3,076
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting			154	1,382	1	$ 15		$ 24	$ 39
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration	1	1	4,642	83,563	45	$ 4,389		$ 1,622	$ 6,011
HVAC	Res Shell	11	11	8,277	161,003	91	$ 41,570		$ 3,478	$ 45,047
Water Heating	Res Water Heating			490	7,356	4	$ 574		$ 136	$ 710
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling									
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting									
Process	Non-Res Motors									
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other									
SubTotal		45	36	29,728	487,981	284	$ 72,078		$ 11,327	$ 83,405
T&D	T&D									
Total		45	36	29,728	487,981	284	$ 72,078		$ 11,327	$ 83,405

EE Program Portfolio TRC Test	0.45

Excluding T&D

Time Period for Forecast Data: Fiscal Year ending 6/30/2008

Ukiah		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	12	12	27,781	277,808	154	$ 21,045		$ 906	$ 21,951
HVAC	Res Cooling	184	133	64,124	1,059,407	668	$ 116,688		$ 4,867	$ 121,555
Appliances	Res Dishwashers	2	2	6,682	86,861	48	$ 16,728		$ 285	$ 17,013
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting	1		922	8,294	4	$ 90		$ 24	$ 114
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration	5	5	27,854	501,379	272	$ 26,334		$ 1,606	$ 27,940
HVAC	Res Shell	69	69	50,534	983,472	555	$ 252,798		$ 3,505	$ 256,303
Water Heating	Res Water Heating	1	1	2,942	44,136	24	$ 3,444		$ 135	$ 3,579
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling									
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting									
Process	Non-Res Motors									
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other									
SubTotal		273	220	180,839	2,961,358	1,724	$ 437,127		$ 11,327	$ 448,454
T&D	T&D									
Total		273	220	180,839	2,961,358	1,724	$ 437,127		$ 11,327	$ 448,454

EE Program Portfolio TRC Test	0.48

Excluding T&D

CITY OF VERNON LIGHT & POWER

- The City of Vernon began serving industrial customers in 1933. In 2005, the City celebrated its 100th anniversary.
- Vernon is part of the California Independent System Operator Control Area and is a Participating Transmission Owner.
- Vernon's customer base is comprised primarily of industrial and commercial interests.
- During the fiscal year ending 2007, the electric system served approximately 1,254,690 megawatts, and had a peak demand of 206.3 megawatts.

Vernon's Energy Efficiency Program Highlights

Program Objectives

- To provide a host of programs that will enable business customers to conserve energy and utilize energy efficiently.
- To inform Vernon electric utility customers of the Public Benefit Programs and the associated benefits of participating in these programs.
- To monitor and evaluate the effectiveness of the programs.

Public Facilities Programs: [Total Cost: $9,410; Resulting in: Net annual kilowatt-hours savings: 43,922; Net peak kilowatts savings: 12]

- LED Traffic Signal Retrofits

Current Commercial Customer Programs: [Total Cost/Results: N/A for FY 05/06]

- Customer Incentive Program: Fund the exploration and implementation of energy efficient technologies and equipment, such as lighting technologies, variable speed drives, air compressors, motors, refrigeration, and air conditioning. Provide cash incentives to businesses that install energy efficient technologies.
- Customer-Directed Program: Fund customized projects demonstrating energy and cost savings and/or commercial market potential in the area of energy efficiency. Customers must fund at least 25 percent of total project cost. Projects are only eligible if they do not qualify for any of the other programs.
- Energy Education & Demonstration Workshops: Provide customers with an array of information resources to encourage energy efficiency measures through energy efficiency workshops and other forms of customer outreach.
- Energy Audit Program: Provide on-site audits for commercial/industrial businesses. A comprehensive audit includes an analysis of energy usage and costs, identification of energy conservation measures, and recommended actions.

Proposed City of Vernon Energy Efficiency Programs and Services: (2007-08)

- Maintain existing programs.
- Ensure that all new electric load is efficient.
- Evaluate the appropriateness of any new energy efficiency technologies.
- Ensure that energy efficiency is part of integrated resource planning by determining and implementing the most cost-effective, reliable, and feasible energy efficiency measures.
- Measure and evaluate the impact of energy efficiency programs.

Investment in Renewable Energy:
Vernon plans to examine options for future investment in renewable energy.

Transmission and Distribution Energy Efficiency Efforts:
Vernon has taken measures to reduce system energy losses through: 7 kilowatts distribution system and 7 kilowatts system capacity reductions; 16 kilowatts distribution system and 16 kilowatts system capacity expansions; and distribution system voltage and power factor control through capacitor bank management. Significant system energy savings will be achieved through these efforts.

Vernon Demand Reduction Programs:
The City of Vernon does not currently have any demand reduction programs in place.

CITY OF VERNON LIGHT & POWER

Time Period for Reporting Data: Fiscal Year ending 6/30/2007

Vernon		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers									
HVAC	Res Cooling									
Appliances	Res Dishwashers									
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting									
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration									
HVAC	Res Shell									
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling	1	1	1,860	31,547	17	$ 64,667			$ 64,667
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting	46	41	228,557	3,656,909	2,032	$ 27,622			$ 27,622
Process	Non-Res Motors									
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other									
SubTotal		47	42	230,417	3,688,455	2,050	$ 92,289			$ 92,289
T&D	T&D									
Total		47	42	230,417	3,688,455	2,050	$ 92,289			$ 92,289

EE Program Portfolio TRC Test	4.29

Excluding T&D

Time Period for Forecast Data: Fiscal Year ending 6/30/2008

Vernon		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers									
HVAC	Res Cooling									
Appliances	Res Dishwashers									
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting									
Pool Pump	Res Pool Pump									
Refrigeration	Res Refrigeration									
HVAC	Res Shell									
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling									
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting	36	32	178,560	2,856,960	1,588	$ 35,000			$ 35,000
Process	Non-Res Motors	8	6	30,711	460,667	243	$ 24,306			$ 24,306
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration									
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other									
SubTotal		43	38	209,271	3,317,627	1,830	$ 59,306			$ 59,306
T&D	T&D									
Total		43	38	209,271	3,317,627	1,830	$ 59,306			$ 59,306

EE Program Portfolio TRC Test	5.17

Excluding T&D

Appendix B: References to Documents Supporting Report

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CHAPTER 4 - CONSERVATION AND DEMAND-SIDE MANAGEMENT

Introduction

An important portion of RPU's resource strategy is expanded conservation and demand-side management (DSM) programs.

Conservation programs are intended to reduce the total amount of energy used by customers. Examples of conservation programs include replacement of incandescent light bulbs with compact fluorescent bulbs, as well as replacement of air conditioner and refrigerator units with more energy efficient models. In this case, the customer uses less energy at all times of the day. Another conservation example is encouraging industrial customers to use more efficient motors to reduce total energy use.

DSM programs, in contrast to strict conservation measures, do not necessarily reduce the total amount of energy used by customers but instead change the timing of energy usage, moving energy use from high production cost periods to low production cost periods. Examples of DSM programs include pool pump programs that encourage customers to operate their pool pumps during off-peak periods or thermal energy storage systems that shift air conditioning loads to off-peak periods.

Conservation programs tend to save customers money by reducing the total amount of energy purchase, while DSM programs tend to reduce overall utility costs, hence allowing rate stability or reduction, by reducing the amount of capacity required to meet customer needs.

Evaluating Conservation and DSM Programs

Three high level perspectives can be used to evaluate the cost-effectiveness of a conservation or DSM program. These are:

- Effect on the customer
- Effect on the utility
- Effect on society

By examining the financial impacts on each of these groups, RPU can identify the mix of conservation/DSM programs that maximizes the benefits to each customer class and minimizes the financial impacts on RPU and non-participating customers.

Each type of conservation/DSM program affects the participating customer, non-participating customers and the utility. Generally, a customer that participates in one or more of these programs reduces their costs and their payments to the utility. At the same time, the utility can reduce power supply costs. However, if the utility's reduction in power supply costs is less than the customer's reduction in costs, the utility must raise rates to other, non-participating customers. That is, even though the utility's costs decline as a result of a conservation/DSM program, the utility's revenues decline more and the utility must raise rates to non-participating customers.

Many conservation programs raise costs to non-participating customers. DSM programs generally do not have the same negative impact on non-participating customers, instead reducing utility costs more than the decline in utility revenue, allowing the utility to reduce costs for all customers.

RPU Avoided Costs

The underlying premise of DSM programs is that they encourage customers to switch energy use from a higher cost period (1 pm to 8 pm) to a lower cost period (11 pm to 7 am, or weekends). As a result, RPU's total cost of meeting customer requirements will decline.

The cost of producing energy to meet customer requirements varies during the day. During the low load hours, energy from RPU's inexpensive generation resources is used to meet customer demands. But as load increases, more expensive generation resources are used to meet the increase in customer demand.

To the extent customers can reduce their energy consumption during the high cost periods and use as much or more energy during the low cost periods, the utility's total costs (and rates) decline.

Measuring the Effect of a Conservation/DSM Program on a Participating Customer

If a customer chooses to participate in a conservation/DSM program, their financial savings in each year are equal to:

*Savings = ((kWh saved) * (retail rate)) + ((Demand Reduction) * (Demand Rate)) + ((Utility Incentives) – (Program Costs))*

If the energy savings, plus any utility incentives, are greater than program participation costs, the customer should participate in the DSM/conservation program.

For most non-demand metered customers, primarily those in the residential and small commercial classes, the financial success of a program is primarily due to reducing total energy use. Hence, programs that are most attractive to residential customers are those that are targeted at high energy use applications, such as lighting, refrigeration and air conditioning (and electric heating).

For demand metered customers, the program benefits are often dominated by demand charge savings.

Measuring the Effect of a Conservation/DSM Program on the Utility

The impact of a new DSM/conservation program on the utility is the utility's reduction in power supply costs, less its costs that include any rebates or incentives paid to participating customers and the future reduction in retail revenues.

For most programs, the greatest cost to the utility is the future reduction in revenues from the retail customer, although the size of any program rebates will affect the overall program benefits.

The reduction in power supply costs is more difficult to measure. If a program reduces on-peak costs, then the savings could be substantial. But, a program that reduces energy costs (and thus customer energy use) during low load periods might have detrimental cost impacts if the utility must sell the newly-created surplus energy at a loss.

The utility generally maximizes power supply cost savings by reducing its purchase of high cost, on-peak energy during the highest load periods of the day.

One of the more important parts of the analysis is recognizing that if the financial impact on the utility is negative, non-participating customers will be required to subsidize the participating customers through increased rates.

Measuring the Effect of a Conservation/DSM Program on Society

The impact of a program on society is actually very difficult to quantify due to the large number of externalities that can be considered. How can the reduction in greenhouse gas emissions be quantified and included in the analysis? What other externalities should be included in the analysis and how should they be priced?

From a societal viewpoint, if any externalities are included in the analysis, the benefits of conservation/DSM programs are almost always positive. The biggest issue is then determining how the program costs and benefits will be divided between the utility, participating and non-participating customers.

Existing RPU Programs

RPU currently has a wide mix of conservation/DSM programs aimed at all segments of its customer base, as shown in Table 4.1 below.

The above programs result in annual energy savings to RPU of [7,311 MWh (0.3 percent of 2007 customer energy requirements)] and demand savings of [1.71 MW (0.2 percent of customer 2007 peak demand)].

Additionally, GHG emissions are reduced by 76,541 tons annually, equating to 0.01 percent of Riverside's total 2005 GHG emissions.[12]

[12] 2005 GHG emissions were quantified and audited through RPU's membership and participation in the California Climate Action Registry.

Future Conservation/DSM Programs

As energy prices continue to rise, the value of new conservation/DSM programs will continue to increase. RPU is evaluating the cost-effectiveness of a variety of new programs with the intent of expanding as many programs as financially viable.

[This table needs to be made legible or converted to an embedded Excel spreadsheet]

Table 4.1: RPU's Current Conservation and DSM Programs and Results

Measure Name	Units Installed	Coincident Peak Savings (kW)	Annual Energy Savings (kWh)	Lifecycle Energy Savings (kWh)	Incentive Provided by Utility ($)	Measure Cost (per Cost Unit)	Coincident Peak Savings (kW)	Demand Savings (kW)	Annual Energy Savings (kWh)	Lifecycle Energy Savings (kWh)	GHG Reductions (Tons)
TOTAL							**1,708**	**1,693**	**7,311,434**	**155,396,295**	**76,541**
14 SEER (11.99 EER)-Split System	800	0.04	29	522	$100	$93	34	53	23,200	417,600	213
15 SEER (12.72 EER) - Split System	260	0.09	70	1,260	$100	$185	23	32	18,200	327,600	167
Clothes Washer: Gas Water Heating	736	0.01	29	290	$75	$181	9	9	21,344	213,440	98
Dishwasher: Single-family – Gas Water Heating	598	0.01	32	416	$50	$134	8	6	19,136	248,768	105
Refrigerator: Side Mount Freezer	600	0.02	98	1,764	$100	$97	10	10	58,800	1,058,400	450
Refrigerator: Top Mount Freezer	783	0.02	87	1,566	$100	$161	12	12	68,121	1,226,178	522
Room Air Conditioner (10.8 EER)	113		106	1,272	$50	$30	19	12	11,978	143,736	73
Totally Enclosed, Fan Cooled 500HP-1800 RPM Motor	2	5	43,678	655,170	$10,000	$9,683	11	14	87,356	1,310,340	552
Wall Blown-in R0 to R13 Insulation-Batts	42		97	1,940	$100	$1,322	6	6	4,074	81,480	38
Pool Pump: Two Speed	51	1	1,400	14,000	$125	$182	28	49	71,400	714,000	336
Programmable Thermostat	165		(192)	(2,112)	$25	$17		(60)	(31,680)	(348,480)	(141)
Weatherization for Air Conditioned Residence	54		4	49	$250	$270	1	1	205	2,668	1
Whole House Fan with Air Conditioning	40		(3)	(45)	$75	$695		()	(120)	(1,800)	(1)
Window Replacement: Clear Windows	4,112		9	180	$12	$340	90	90	37,008	740,160	341
>=300 tons VSD on Centrifugal Water Cooled Chiller Early Replacement	1		458	9,160	$25,000	$373			458	9,160	4
Packaged terminal heat pump (7-15k) Early Replacement	5		501	7,515	$1,100	$1,535	1	2	2,505	37,575	16
Shade Trees	9,183		419	12,569	$25	$40	533	533	3,847,449	115,423,470	58,744
T-12 to T-8: 4 foot lamp	1,200	.02	60.0	660	$42	$12.70	24	24	72,000	792,000	352
HID (400w) to T-8	3,000	.30	1,000.0	11,000	$75	$12.70	900	900	3,000,000	33,000,000	14,672

Programs that reduce summer peak demand requirements tend to have the greatest value to RPU, although not necessarily to participating customers without time-of-use billing. From RPU's viewpoint, the most economic programs would include expansion of thermal energy storage and air conditioner replacement programs. These programs tend to shift energy use to low cost periods with no significant impact on the total energy requirement. Residential and non-demand metered commercial customers prefer programs that reduce the total amount of energy they use, such as lighting upgrades and refrigerator/freezer replacement programs.

RPU can identify the avoided capacity costs due to installation of DSM programs by its customers. To encourage DSM programs, RPU can offer incentives based upon its avoided capacity costs. DSM programs should be developed to reduce on-peak energy use, especially during the summer months, and to increase the use of RPU's current and forecasted surplus of off-peak generation.

City of Riverside
Public Utilities Department - Resources Division

2008 Power Supply
Integrated Resource Plan

Appendix E

Existing and Planned Conservation and DSM Programs

Table A: DSM Programs

Demand Side Resource Program	Customer Class Residential – R Commercial – C Industrial – I	Load Change Objective	Program Duration
Off-Peak Swimming Pool Filter Pump Use (Pool Saver Program)	R	Load Shifting	Feb 79 - present
Residential Weatherization for Seniors And Disabled (WeCare Program)	R	Strategic Conservation	Mar 83 – present
Thermal Energy Storage Incentives for Cooling Equipment Replacement (TES Program)	C / I	Load Shifting	Jan 88 – present
Non Residential Air Conditioning Replacement/New Incentive	C	Peak Clipping, Strategic Conservation	Jan 92 – present
Energy Management Technical Assistance Program	C / I	Strategic Conservation	Jul 92 – Jun 93 Dec 98 – present
Energy Management Control System	C	Strategic Conservation	Sep 99 - present
Efficient Refrigerator Incentives (Cool Rewards/ Energy Star)	R / C	Strategic Conservation	Jan 92 – Jun 94 Dec 98 – Jun 02
Residential/Commercial Air Conditioner Replacement Incentive (Cool Cash)	R / C	Peak Clipping	Jan 88 - Jun 96 Dec 98 – present
Low Income Weatherization program For Electrically Heated Dwellings	R	Strategic Conservation	Jul 96 – Jun 02

(Mandated by CA SB 1601)			
Energy Efficient Lighting	C / I	Strategic Conservation	Dec 98 – present
Outdoor Security Lighting	C / I	Strategic Conservation	Dec 98 – 02
Energy Efficiency for Motors Program	C / I	Strategic Conservation	Dec 98 – present
Efficient Cooling Equipment Replacement & Variable Speed / Frequency Motor Drives	C / I	Strategic Conservation	Dec 98 – Jun 04 Feb 00 – Jun 04 Dec 99 – Jun 04
Energy Star Rebate Program	R / C	Strategic Conservation	Aug 00 - present
Refrigerator Recycling Program	R	Strategic Conservation	Apr 00 – present

Table B: Conservation Programs

TIME PERIOD FY	PROJECTED CUMULATIVE KW REDUCTION	PROJECTED CUMULATIVE KWh REDUCTION
1999-2000	13,126	15,750,028
2000-2001	15,458	16,251,065
2001-2002	19,709	30,323,821
2002-2003	20,774	31,195,162
2003-2004	23,760	33,485,807
2004- 2005	25,662	48,809,205
2005- 2006	26,593	47,075,837
2006- 2007	29,479	53,193,606
2007-2008	31,542 ·	58,512,966
2008-2009	33,750 ·	64,364,262
2009-2010	36,113 ·	70,800,688
2010-2011	38,640 ·	77,880,756
2011-2012	41,345 ·	85,668,831

1. Off-Peak Swimming Pool Filter Pump Use (Pool Saver Program)

This program offers residential customers a $5.00 per month credit on their statement when they shift their swimming pool filter pump usage to the off-peak period. This program has an annual budget of $225, 000.

Through fiscal year 2006 - 2007 there was an average of 3,385 customers enrolled in this program. Useful life of the measures installed as part of this program is more than 30 years. Projected cumulative kilowatt capacity reductions are based on 1.13 kilowatts per participant. Kilowatt-hour reductions can be projected based on kW demand times the number of peak hours. Participant growth in this program is projected at less than 1 percent per year and decreasing.

TIME PERIOD FY	PROJECTED CUMULATIVE KW REDUCTION	PROJECTED CUMULATIVE KWh REDUCTION
1999-2000	3,315	33,150
2000-2001	3,348	33,480
2001-2002	5,018	50,180
2002-2003	3,781	37,810
2003-2004	3,805	38,050
2004-2005	3,573	35,730
2005-2006	3,459	34,590
2006-2007	3,320	33,200
2007-2008	3,207	32,070
2008-2009	3,094	30,940
2009-2010	2,981	29,810
2010-2011	2,868	28,680
2011-2012	2,755	27,550

2. **Residential Weatherization for Seniors and Disabled** - (WECARE Program)

This program is offered as a complementary service to encourage senior and disabled residential customers to be more energy efficient. WeCare is an acronym for Wise Energy use Campaign Aid the Retired and Elderly. Senior part-time utility staff visit the home and perform an energy audit, water audit, and install weather stripping and low flow shower heads. If the water heater is electric then a water heater blanket is installed.

This program began in March 1983. From 1983 through fiscal year 2006-2007 there were 15,682 customers who had participated in this program. Useful life of the measures installed as part of this program is more than 15 years. Projected cumulative kilowatt-hour reductions are based on 561 kWh per participant. There are no associated kilowatt reductions with this strategic conservation program. Participant growth in this program is projected at around 1 percent per year with a program budget of $5,000 annually.

TIME PERIOD FY	PROJECTED CUMULATIVE KW REDUCTION	PROJECTED CUMULATIVE KWh REDUCTION
1999-2000	NA	7,993,128
2000-2001	NA	8,073,059
2001-2002	NA	8,207,138
2002-2003	NA	8,306,435
2003- 2004	NA	8,354,681
2004- 2005	NA	8,450,051
2005-2006	NA	8,525,786
2006-2007	NA	8,609,375
2007-2008	NA	8,695,468
2008-2009	NA	8,782,423
2009-2010	NA	8,870,247
2010-2011	NA	8,958,949
2011-2012	NA	9,048,539

3. **Thermal Energy Storage Incentives for Cooling Equipment (TES Program)**

This incentive program assists customers with funds when they consider an Off-Peak Cooling system at their existing facilities. These cooling systems can be for space conditioning as well as for process cooling applications. To help with the cost of a feasibility study the utility will provide a 50 percent match, up to $5,000, toward the cost of a study. If the customer constructs an Off-Peak Cooling system, then the utility has an incentive of $200 per kilowatt of demand shifted from on-peak to off-peak.

Presently, there are seven Off-Peak Cooling systems in the utility service area that were installed to shift existing load from on-peak to off-peak. They are:

- University of California, Riverside campus - 3 systems
- Public Utilities Operations Center - 1 system
- Riverside Unified School District - 1 system
- Riverside City Hall - 1 system
- Riverside County Circle - 1 system

Useful life of the measures installed as part of this program is more than 30 years. Projected cumulative kilowatt reductions are based on 1,000 kW per measure installed. There are no associated kilowatt hour reductions with this load shifting program. There is no participant growth projected in this program due to the associated cost of a TES system. The budget is calculated on per project need.

TIME PERIOD FY	PROJECTED CUMULATIVE KW REDUCTION	PROJECTED CUMULATIVE KWh REDUCTION
1999-2000	1,000	NA
2000-2001	2,000	NA
2001-2002	3,000	NA
2002-2003	3,000	NA
2003-2004	3,000	NA
2004-2005	3,000	NA
2005-2006	3,000	NA
2006-2007	3,000	NA
2007-2008	3,000	NA
2008-2009	3,000	NA
2009-2010	3,000	NA
2010-2011	3,000	NA
2011-2012	3,000	NA

4. Non-Residential Air Conditioner Replacement Incentive

This program offers incentives to commercial customers when they replace older, less efficient central air conditioners with new high efficiency units. Rebates ranged from $70 to $120 per ton based on size and efficiency rating of the new units.

Through fiscal year 2006-2007 there were a total of 88 customers who had participated in this program. Useful life of the measures installed as part of this program is more than 15 years. Projected cumulative kilowatt-hour reductions are based on 1,090 kWh per participant. Projected cumulative kilowatt capacity reductions are based on 1.09 kW per participant. Participant growth in this program is projected at around 1.5 percent per year with an annual budget of $50,000.

TIME PERIOD FY	PROJECTED CUMULATIVE KW REDUCTION	PROJECTED CUMULATIVE KWh REDUCTION
1999-2000	1,090	1,090,000
2000-2001	1,101	1,101,000
2001-2002	1,112	1,139,368
2002-2003	1,150	1,261,448
2003-2004	1,163	1,274,528
2004-2005	1,190	1,301,778
2005-2006	1,192	1,332,298
2006-2007	1,195	1,387,888
2007-2008	1,213	1,408,706
2008-2009	1,232	1,429,836

2009-2010	1,250	1,451,284
2010-2011	1,269	1,473,053
2011-2012	1,288	1,495,149

5. Energy Management Technical Assistance Program

This program offers all commercial / industrial customers a comprehensive energy audit using a software program designed specifically for businesses. Demand rate and Time of Use customers can receive the services of a technical consultant in addition to the audit.

Through fiscal year 2006-2007 there were 31 customers who had participated in this program. Projected cumulative kilowatt reductions are based on 390 kW per participant. Participant growth in this program is projected around 1 percent per year with an annual budget of $100,000.

TIME PERIOD FY	PROJECTED CUMULATIVE KW REDUCTION	PROJECTED CUMULATIVE KWh REDUCTION
1999-2000	6,240	NA
2000-2001	7,410	NA
2001-2002	8,580	NA
2002-2003	10,530	NA
2003-2004	12,870	NA
2004-2005	14,430	NA
2005-2006	15,210	NA
2006-2007	17,940	NA
2007-2008	20,451	NA
2008-2009	23,314	NA
2009-2010	26,579	NA
2010-2011	30,300	NA
2011-2012	34,542	NA

6. Energy Management System Assistance

This program offers all non-residential customers an incentive of 50 percent of the purchase price or $50,000 (whichever is less) for installing an energy management system that will control when the lights, heating and air-conditioning equipment, motors, etc. are turned on and off for optimal energy use.

There were three energy management systems installed during the fiscal year 2001-2002. There was a savings potential of 3,899,668 kWh. There was one additional energy management system

installed in fiscal year 2004-2005. The savings was calculated at 3,900,000 kWh. The annual budget for this program is $50,000.

7. Efficient Refrigerator Incentives (Cool Rewards Program)

Riverside Public Utilities offers a rebate for energy efficient refrigerators purchased for residences when such purchases were made to replace an existing refrigerator. The amount of the financial incentives offered, ranging from $75 to $100, was based on the ENERGY STAR`S rating of at least 20 percent more efficient than a standard refrigerator of comparable size. The Refrigerator Rebate program has since merged with the Energy Star Program. Rebates for refrigerators can be obtained through the Energy Star Program.

The program was approved in December 1998, with active participation beginning in December 1999. Target participation is expected to be approximately 1,000 per year. Useful life of the measures installed as part of this program is more than 15 years. Projected cumulative kilowatt-hour reductions are based on 150 kWh per participant. Projected cumulative kilowatt capacity reductions are based on 0.2 kW per participant. Participant growth in the program is projected at around 5 percent a year. The program was stopped at the end of fiscal year 2001-2002 and merged into the Energy Star Rebate program. There is no associated budget with this program.

TIME PERIOD FY	PROJECTED CUMULATIVE KW REDUCTION	PROJECTED CUMULATIVE KWh REDUCTION
1999-2000	200	150,000
2000-2001	210	300,000
2001-2002	220	490,050
2002-2003	NA	NA

8. Residential Air Conditioner Replacement Incentives (Cool Cash Program)

This program offers incentives to residential customers when they replace older, less efficient central air conditioners with new high efficiency units. Rebates ranged from $50 to $90 per ton based on size and efficiency rating of the new units. This program was discontinued on June 30, 1996, and started again December 1998. Program guidelines were updated to include financial incentives to participants who installed new high efficient central systems or replaced existing inefficient window units with new high efficiency central systems.

Useful life of the measures installed as part of this program is more than 15 years. Projected cumulative kilowatt-hour reductions are based on 1.090 kWh per participant. Projected cumulative kilowatt capacity reductions are based on 1.09 kW per participant. Participant growth in this program is decreasing, while cumulative growth is increasing. The annual budget of this program is $180,000.

TIME PERIOD FY	PROJECTED CUMULATIVE KW REDUCTION	PROJECTED CUMULATIVE KWh REDUCTION
1999-2000	1,090	1,090,000
2000-2001	1,145	1,145,000
2001-2002	1,569	1,569,010
2002-2003	2,096	2,096,570
2003-2004	2,695	2,696,070
2004-2005	3,231	3,232,350
2005-2006	3,490	3,491,770
2006-2007	3,779	3,780,620
2007-2008	4349	4,347,713
2008-2009	5,001	4,999,869
2009-2010	5,751	5,749,850
2010-2011	6,613	6,612,327
2011-2012	7,604	7,604,176

9. Low Income Weatherization Program for Electrically Heated Dwellings - (Mandated by California State Assembly Bill 1601)

The utility offers a free service to low-income customers who heat their dwellings with electricity. Participants receive up to two free water-saving showerheads and a blanket for an electric water heater. It is estimated that 3,500 customers qualify at any one time for this program. This represents approximately 4 percent of the utilities total residential customers.

This program began in fiscal year 1996-1997. It is projected that 350 low-income customers will participate each fiscal year in this program. Useful life of the measures installed as part of this program is more than 15 years. Projected cumulative kilowatt-hour reductions are based on 175 kWh per participant. There are no associated kilowatt reductions with this strategic conservation program. The program was cancelled at the end of fiscal year 2001-2002 and there is no longer a budget for this program.

TIME PERIOD FY	PROJECTED CUMULATIVE KW REDUCTION	PROJECTED CUMULATIVE KWh REDUCTION
1999-2000	NA	57,750
2000-2001	NA	115,500
2001-2002	NA	173,250
2002-2003	NA	NA

10. Energy Efficient Lighting Program

This program offers incentives to commercial / industrial customers when they replace older, less efficient lighting with high efficiency lighting. The incentive is 5 cents per kilowatt-hour of energy savings for one year. This program was approved in December 1998. Through fiscal year 2006-2007 there were a total of 450 customers who had participated in this program.

The energy savings under this program vary because of technology and differences in operating hours. There is a maximum incentive amount of $25,000 per customer account. Cumulative kilowatt-hour reduction in this program is projected at upwards of 17 percent per year with an annual budget of $228,000.

TIME PERIOD FY	PROJECTED CUMULATIVE KW REDUCTION	PROJECTED CUMULATIVE KWh REDUCTION
1999-2000	NA	3,500,000
2000-2001	NA	3,535,000
2001-2002	NA	9,109,758
2002-2003	NA	11,923,336
2003-2004	NA	11,934,550
2004-2005	NA	20,384,769
2005-2006	NA	22,062,365
2006-2007	NA	26,661,555
2007-2008	NA	31,194,019
2008-2009	NA	36,497,002
2009-2010	NA	42,701,492
2010-2011	NA	49,960,745
2011-2012	NA	58,454,071

11. Outdoor Security Lighting Program

This program offers incentives to commercial / industrial customers when they replace older less efficient outdoor security lighting with high efficiency lighting. The incentives range from $10 - $35 per fixture. This program was cancelled at the end of fiscal year 2002-2003 and there is no associated budget with this program.

This program was approved in December 1998. The energy savings vary because of technology and differences in operating hours. The program is based on financial incentives with a goal of $50,000 per year. There is a maximum incentive amount of $500 per account. Projected energy savings can be estimated by program budget amount ($50,000) divided by financial incentive ($35 per 175-watt fixture.)

TIME PERIOD FY	PROJECTED CUMULATIVE KW REDUCTION	PROJECTED CUMULATIVE KWh REDUCTION
1999-2000	1.75	NA
2000-2001	1.87	NA
2001-2002	2.04	NA
2002-2003	NA	NA

12. **Energy Efficiency for Motors Program**

This program is intended to promote market transformation, which means to encourage the widespread use of the most energy efficient motors available. Incentives are offered for replacing older, inefficient motors with equipment that exceeds the federal minimum standards. Rebate amounts range from $35 for a one horsepower motor to $630 for a 200 horsepower motor. The budget is $50,000 annually for this program.

This program was approved in December 1998. The energy savings vary because of technology and differences in operating hours. The program is based on financial incentives with a goal of $75,000 per year. There is a maximum incentive amount of $20,000 per account. Cumulative kilowatt-hour reductions are projected to increase by 10 percent per year.

TIME PERIOD FY	PROJECTED CUMULATIVE KW REDUCTION	PROJECTED CUMULATIVE KWh REDUCTION
1999-2000	NA	
2000-2001	NA	
2001-2002	NA	6,840
2002-2003	NA	13,680
2003- 2004	NA	13,680
2004- 2005	NA	17,100
2005-2006	NA	17,955
2006-2007	NA	21,195
2007-2008	NA	23,314
2008-2009	NA	25,645
2009-2010	NA	28,210
2010-2011	NA	31,031
2011-2012	NA	34,134

13. **Efficient Cooling Equipment Replacement & Variable Speed / Frequency Motor Drives**

This program offers incentives for cooling equipment replacement and variable speed / frequency motor drives. The program is designed to encourage improvements to equipment that

will increase energy efficiency and reduce the energy consumption of existing or new equipment. Cooling equipment incentives are for replacing older, inefficient chillers and refrigeration equipment. This closes the gap in cost between standard equipment and high efficiency equipment. The program target is to issue a minimum of $50,000 in incentives for energy improvements associated with chiller and refrigeration replacements and/or efficiency improvements. Variable speed/frequency motor drive incentives are based on the new unit's electrical energy reduction in relationship to the replaced unit of similar size. This is a downstream incentive program that helps reduce the cost of new equipment. The anticipated program target is to issue a minimum of $50,000 in incentives for energy improvements associated with improvements to variable speed/frequency motor drive efficiency.

This program was approved in December 1998. The energy savings vary because of technology and differences in operating hours. There is a maximum incentive amount of $50,000 per account. Participant growth in this program is projected at 1 percent per year. The program was discontinued at the end of FY 2004-2005 and there is no associated budget.

TIME PERIOD FY	PROJECTED CUMULATIVE KW REDUCTION	PROJECTED CUMULATIVE KWh REDUCTION
1999-2000	NA	
2000-2001	NA	
2001-2002	NA	3,420
2002-2003	NA	10,260
2003- 2004	NA	34,200
2004- 2005	NA	878,954

14. **Energy Star Rebate Program**

This program offers incentives for buying new high efficiency Energy Star rated products that use less electricity than standard units of comparable size. The Energy Star Rebate program has been our most popular program through fiscal year 2006-2007 with 27,917 participants total. The annual budget for this program is $500,000.

There was a total participation of 9,861 customers in 2001-2002 with rebates totaling $3,339,997. The approximate savings based on the program participation was 3,697,875 kWh. Program growth was 197 percent over the estimated participation. There is no way to determine how much of the 3,339,875 kWh is savings as these were not necessarily replacement appliances. Cumulative kilowatt hour reduction is projected to be increased by 18 percent per year starting in Fiscal Year 2007-2008.

TIME PERIOD FY	PROJECTED CUMULATIVE KW REDUCTION	PROJECTED CUMULATIVE KWh REDUCTION
1999-2000	NA	NA
2000-2001	NA	NA
2001-2002	NA	3,697,875
2002-2003	NA	5,559,375
2003- 2004	NA	7,075,500
2004- 2005	NA	8,440,875
2005-2006	NA	9,407,625
2006-2007	NA	10,468,875
2007-2008	NA	12,353,272
2008-2009	NA	14,576,860
2009-2010	NA	17,200,694
2010-2011	NA	20,296,818
2011-2012	NA	23,950,245

15. **Refrigerator / Freezer Recycling Program**

This program offers incentives to residential customers for recycling old operating refrigerators and stand-alone freezers picked up and transported to a recycling facility for dismantling and processing.

This program began in April 2000. Target projections are estimated to be 500 participants annually. The projected kW demand is based on kWh reduction divided by annual operating hours (8,760). Projected cumulative kilowatt-hour reductions are based on 1,656 kWh per participant, based on similar programs. Participant growth in the program is projected at around 3 percent a year with an annual budget of $150,000.

TIME PERIOD (FY)	PROJECTED CUMULATIVE KW REDUCTION	PROJECTED CUMULATIVE KWh REDUCTION
1999-2000	189	1,656,000
2000-2001	198	1,738,800
2001-2002	208	1,977,264
2002-2003	217	1,986,248
2003-2004	227	2,064,548
2004-2005	238	2,167,598
2005-2006	242	2,203,448
2006-2007	245	2,230,898
2007-2008	252	2,297,824
2008-2009	259	2,366,759

2009-2010	266	2,437,762
2010-2011	273	2,510,895
2011-2012	280	2,586,221