Energy Efficiency in California's Public Power Sector

A Status Report

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CALIFORNIA MUNICIPAL UTILITIES ASSOCIATION

NCPA 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 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, including 26 that have previously not been required to formally file energy efficiency program information with the California Energy Commission (CEC).

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

- POUs have a 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 are served.

- During Fiscal Year 05/06, POUs spent $54 million on energy efficiency programs, reducing peak demand by 53 megawatts, and in excess of 169 million kilowatt-hours on an annual basis. POU energy efficiency expenditures for FY06/07 are expected to increase to $77 million during FY06/07, reducing demand by 69 megawatts during the summer peak, and 338 million kilowatt-hours over the course of the year.

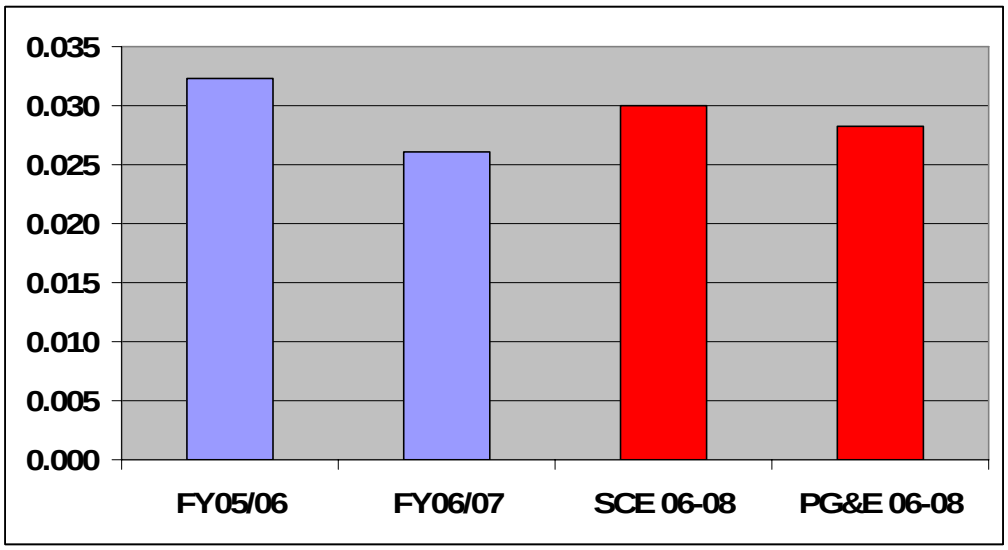
- The levelized cost for POUs to deliver all energy efficiency programs in the aggregate is projected to fall from $0.032 per lifecycle kilowatt-hour in FY05/06 to $0.026 per lifecycle kilowatt-hour in FY06/07. Residential and non-residential lighting programs, residential cooling programs, and non-residential process programs are generally the most cost effective programs offered by POUs.

- For many of the smaller utilities, the cost 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.

- POU programs compare well to programs being offered by the investor-owned utilities. Contrasting estimates of program cost-effectiveness, public power programs are expected to be even more cost effective in FY06/07 than what is estimated to be the case for the

IOUs in 2006-08. This conclusion is in stark contradiction to *statements* made one year ago by various interest groups suggesting that POUs are lagging way behind their IOU counterparts.

Figure ES-1
Comparison of POU and IOU
Levelized Program Costs ($/Kwh)



Sources: SCE - Application for Approval of 2006-08 Energy Efficiency Program Plans, filed June 1, 2005. PG&E - 2006-08 Energy Efficiency Program Portfolio, Volume 1, Prepared Testimony Table 3-2, pg, 3-44.

The signing of AB2021 into law requires energy efficiency targets to be established by each POU in California, and some minor enhancements to the data that will be reported in subsequent reports in compliance with SB1037. CMUA, NCPA, and SCPPA are reviewing various approaches for accomplishing these requirements, and are working closely with the CEC to ensure that the agency has a complete set of data from the public power community as it moves forward with its 2007 Integrated Energy Policy Report analysis.

CMUA, NCPA, and SCPPA look forward to a continued dialogue on energy efficiency issues, and our collective desire to balance statewide energy policy direction with the needs and diverse interests of local communities.

I. Introduction

On September 29, 2005, Governor Schwarzenegger signed Senate Bill 1037 (Kehoe) into law, establishing 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 complies with Section 6 of Senate Bill 1037, which requires 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. Such an action is unprecedented in California, as Title 20 of the California Code of Regulations has traditionally only required utilities with peak energy demand of at least 200 megawatts to regularly report energy data to the California Energy Commission (CEC) as part of the CEC's Integrated Energy Policy Report (IEPR) process. Senate Bill 1037 eliminates the 200 megawatt threshold in the area of energy efficiency, which results in 26 POUs submitting energy efficiency data to the CEC for the first time.

The California Municipal Utilities Association (CMUA), in partnership with the Northern California Power Agency (NCPA) and the Southern California Public Power Authority (SCPPA), recognized the wide range of utility sizes, staffing, and a lack of familiarity with CEC processes. The three organizations began a collaborative effort in October 2005 and invested approximately $150,000 to develop an Excel-based evaluation tool that can be used with limited utility staff to measure energy efficiency program effectiveness and for all utilities to report program savings in a consistent and comprehensive manner. The tool was completed last August and serves as the key driver for the results contained in this analysis.

The following report contains five additional sections. Section II provides a public power perspective regarding energy efficiency. As will be discussed in the section, POU commitment to energy efficiency is critical to its resource planning efforts, not only in assisting customers with incentives to reduce customer load, but also from improving the operational efficiency of public power supply-side infrastructure. Section III addresses the collaborative process used by CMUA, NCPA, and SCPPA to develop the evaluation tool, as well as a general description of the model's capabilities and assumptions. Section IV provides the results of the energy efficiency assessment, 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. The last section offers principal conclusions, but also offers some insights about the direction of future reports. It

will also consider approaches for accommodating new reporting requirements adopted via the passage of Assembly Bill 2021 (Levine) in September 2006.

II. Overview of Energy Efficiency: A Public Power Perspective

POUs long-standing commitment to energy efficiency is an extension of fundamental principles dedicated to social and environmental responsibility, ensuring reliability, and keeping rates low for the communities we serve. Energy efficiency is of the utmost importance to municipal utilities. Energy efficiency is a critical element of the resource planning process, generation, transmission, distribution, and demand. Public power commitments to energy efficiency are guided by four important concepts:

- **Social and Environmental Responsibility.** POUs place a high priority on energy efficiency, investments in renewable power supplies, low-income programs, and economic development. Local elected officials govern and regulate public power to ensure direct accountability on these important issues to customers.
- **Operational Energy Efficiency.** Public power has important energy efficiency programs that optimize power generation, transmission, and ensure more optimal operation of the grid.
- **Demand-side Energy Efficiency.** This is a major focus of POUs. It includes, but is not limited to: appliances, air-conditioners, building codes and standards, education, electricity management, and weatherization, all coordinated with customer-specific programs.
- **Cost-effective Energy Efficiency.** Cost-effective energy efficiency lowers the cost of providing electricity to our communities. POU customers are "shareholders" and benefits related to energy efficiency are realized by **all** customer-owners.

Public Power's Commitment to Customer-Side Energy Efficiency

Public power commitments to energy efficiency programs are extensive and comprehensive. More than $77 million in energy efficiency programs are budgeted for the current fiscal year. POUs expect these programs to reduce peak demand by 69 megawatts and nearly 326 million kilowatt-hours of energy consumption on an annual basis. A more detailed discussion of these results will be addressed in Section IV of this report.

Residential programs focus on energy audits, Energy Star® appliance rebates and replacements, lighting improvements, attic insulation, as well as incentives to install highly-efficient heating, ventilation and air conditioning (HVAC). Commercial and industrial programs target lighting, HVAC, and manufacturing/food processing equipment. POUs also partner with schools and public institutions to educate residents and implement a variety of beneficial programs.

Municipal utilities maximize the success of energy efficiency programs and services because of their unique relationships with customers and their ability to specifically tailor programs to meet the needs of their communities. POUs are responsive to local concerns, allowing them to maximize the value of all energy efficiency programs.

Municipal utilities are diverse, and that diversity is reflected in differing programs tailored to the needs of local constituents, taking into consideration the climate zones and other factors. Common to all however, is the desire to spend energy efficiency dollars wisely and utilize the benefits of local decision-making to create programs that are effective, innovative and forward-thinking.

CMUA, the American Public Power Association (APPA), and other agencies have formally recognized some of the most effective and innovative energy efficiency programs offered by the public power community. Each spring, CMUA presents as many as six Community Service/Resource Efficiency Awards to a mixture of smaller and larger water, gas, and electric utilities. The following are examples of award-winning POU energy efficiency programs.

Alameda Power & Telecom

- **Efficient Schools Program** - Alameda won a CMUA award in 2005 for its program focused on improving energy efficiency throughout the Alameda Unified School District. Since the program's inception, Alameda is helping the school district complete energy efficiency retrofits to facilities by reviewing proposals, performing pre-and post-installation inspections, and providing rebates to the schools in excess of $130,000. The retrofits thus far have focused on lighting and HVAC measures, saving the school district more than $236,000 per year, and reducing Alameda's annual electric demand more than one megawatt.

City of Glendale

- **Smart Home Peak Hogs** - Glendale's 2006 CMUA award-winning program 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 1,297 tons of energy inefficient Peak Hogs in Glendale apartments at a total investment of $804,969. Cumulative annual demand and energy savings for these replacements are estimated at 366 kilowatts and 808 megawatt-hours.

- **Smart Business Energy Saving Upgrades** - Glendale's 2005 CMUA award-winning program provides small business customers with comprehensive no-cost energy surveys, customized written reports, energy education, directly installs as much as $1,000 worth of cost-effective energy conservation measures. Over 1,800 energy audits and over 1,360 retrofits have been completed since July 2001 at a total investment of $2,705,571. Cumulative annual demand and energy savings from the installed measures are expected reach 687 kilowatts and 3,251 megawatt-hours.

LADWP

- **Chiller Efficiency Program** - LADWP was awarded a National Best Practice award in 2004 for its simple, menu-driven approach to providing incentives for replacing older electric chillers with new, high-efficiency units to provide for space conditioning for larger buildings. Qualifying chillers are eligible to receive cash rebates, enhanced in 2006 to pay up to the full incremental cost for the most efficient units. The program has reduced 50 megawatts of peak electrical demand since 2001, and played an especially important role in mitigating the need for electricity during the California energy crisis of 2001.

- **The Trees for a Green LA (TFGLA) Program -** LADWP's CMUA award-winning tree planting program has been offered to LADWP customers since 2002. Approximately 70,000 trees have been distributed and planted during that period of time. The shade from these trees successfully mitigates the urban heat island effect while dramatically reducing the demand for air conditioning. At maturation, it is estimated that these trees will help to save more than 5,000,000 kilowatt-hours annually. TFGLA offers trees to residential and non-residential customers and also builds awareness by participating in community and school beautification projects. This invaluable program firmly supports the *Million Trees LA* program as a means of greening Los Angeles and replenishing its urban forest.

Pasadena Water and Power (PWP)

- **Residential** Energy Star® P**rogram -** PWP earned the CMUA 2002 Community Service Resource Efficiency Award for its popular Energy Star® Efficient Appliance Program. The Energy Star® rebates are available to residential electric customers on refrigerators, ceiling fans and light fixtures. Rebates are also available for Energy Star® qualifying room air conditioners, doors and windows.

Redding Electric Utility

- **Running with the Bulbs -** REU earned CMUA accolades in 2001 for its compact fluorescent lamp (CFL) giveaway. Funded through a CEC Senate Bill 5X Grant, REU, in partnership with local area high school students, delivered nearly 35,000 CFLs to REU customers on a cool spring morning. The CFLs, 23-watt spiral lamps, were intended to replace 60-100 watt incandescent light bulbs throughout REU's service territory.

SMUD

- **Residential Energy Star® Lighting Program** - SMUD received a CMUA award in 2006 for a program promoting energy-efficient lighting products through participating Sacramento retailers. Products must qualify for, and carry the label of, the federal Energy Star® program. SMUD partners with lighting-product manufacturers and retailers to encourage participation in the program-manufacturing, delivering, stocking, displaying, and marketing Energy Star® CFLs according to an agreed-upon schedule.

- **Pool Efficiency Program** – SMUD received another award from CMUA in 2006 for a program designed to help customers use their pool/spa filtration equipment more efficiently. In essence, the program encourages customers to operate the equipment during off-peak hours, and to purchase the most efficient pool pump and motor when replacing equipment.

Silicon Valley Power

- **OPUS(SM) or Optimal Power Use Service Program -** a 2001 APPA award recipient from which provides owner agency services to assist small businesses in implementing energy efficiency projects. Utility staff and contractor work closely with the owner through all steps of the review process, beginning with the initial energy audit, ending with the actual installation of new equipment (typically lighting). The goal of the OPUS Program is to assist SVP small commercial customers in reducing their business costs and saving energy by implementing cost-effective, energy efficient projects. This program effectively uses the contact made at the energy audit to steer small and medium commercial customers through energy efficiency installs and rebates.

Innovation and effective programs do not always result in public accolades. As such, this report provides a few additional examples of forward-thinking and effective programs found in the public power community.

Burbank Water and Power (BWP)

Since 1998, BWP has offered cash rebates to Burbank residents purchasing high-efficiency appliances. Energy Star® appliances offer significant and durable energy savings. For the better part of a decade, BWP has been consistently reminding customers of the cost and environmental value of purchasing Energy Star® equipment and rewarding them for that behavior.

During the past fiscal year, over 2,200 Burbank residents took advantage of BWP's "Home Rewards" program, receiving $404,000 in financial support for their wise energy decisions. BWP is very proud of this program for the following achievements:

- 1-in-20 households received a rebate from BWP last fiscal year
- Peak energy demand was reduced by 201 kilowatts
- Annual energy savings of 359,000 kilowatt-hours, enough to fully power over 700 Burbank homes for a year
- Lifetime energy savings of nearly 6 million kilowatt-hours.

Lodi Electric Utility

- **Lodi HVAC System Performance Test -** Lodi utilizes state-of-the-art computer diagnostics equipment to analyze a home's heating/air conditioning system and the home's air duct system. The program goes far beyond the old duct leakage testing, by evaluating the air flow, air return and air balance of the home's air delivery system. The

testing in this program is designed to ensure that the air ducts (delivery system) are properly engineered, designed and installed.

Pasadena Water and Power (PWP)

- **High Performance Building Program and Leadership in Energy and Environmental Design (LEED) Certification Demonstration Program -** Green buildings average 30 percent energy savings (compared to conventional buildings using Title 24 standard or equivalent) and average 40 percent water savings. Water savings have an energy component and also contribute to PWP's conservation goals. One of the buildings recently completed under the new Pasadena Green Building Practices ordinance is the Northwest Innovation Center. Built in the 1960s, the 29,000-square-foot light industrial building was completely overhauled and transformed into an energy and water efficient facility using green building practices. The building is 37 percent more energy efficient than Title 24, lowering demand by 100 kilowatts and saving 760,361 kilowatt-hours annually. Energy efficiency measures incorporated in the building include extra insulation to the building envelope, high-efficiency air conditioning systems, Energy Star® roof, day lighting, and high-efficient lighting fixtures. The building also features a 32,000 watt solar electric system. The building has applied for LEED (Leadership in Energy and Environmental Design) Gold certification by the United States Green Building Council. PWP provided a rebate under the High-Performance Building Program and will provide another rebate for certification under the LEED Certification Demonstration Program.

- **Energy Partnering Program -** This program pays the equivalent of the first year's energy savings as a result of an energy efficiency project or 25 percent of project cost, whichever is less. Energy efficiency measures are selected by commercial and business customers, while measurement and valuation (M&V) services are provided by the utility after projects are complete. This has been an extremely popular program with larger customers and has provided the most value to the utility for reducing peak load. The 13 customers who installed lighting, HVAC, motors, cool roofs and energy management system (EMS) retrofits in FY05/06 are expected to reduce peak load by 1.3 megawatts, saving over 4,000 megawatt-hours in one year. Program savings from the 192 customers who participated in the Energy Partnering Program from FY99/00 - FY05/06 total a 6.8 megawatt reduction and 35,000 megawatt-hour energy savings.

- **Residential Green Power Customer Incentive Bonus -** Residential customers who contribute towards PWP's Green Power Program earn an additional cash rebate when they purchase eligible energy efficient products. Bonus incentives average 15 percent of the normal PWP product incentive. Green Power Bonus incentives help offset the voluntary contributions these customers make for supporting green power, as well as encourage energy efficiency and load reduction. Non-Green Power Program residential customers also earn higher rebates if they purchase eligible products from local Pasadena retailers and contractors.

Redding Electric Utility

- **Earth Advantage Program -** In July 2005, REU's Earth Advantage Program was featured in the *NWPPA Bulletin*, a Northwest Public Power Association (NWPPA) magazine distributed to members. NWPPA was most interested in the innovative use of REU's Public Benefits Program funds to encourage green building in Redding. The Earth Advantage Program recognizes residential home builders that achieve higher standards for indoor air quality, environmental and resource responsibility and those homes built 20 percent more energy efficient than Title 24 building standards.

Public Power's Commitment to Operational Energy 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. Municipal utilities continually conduct energy efficiency audits of generation and transmission facilities. Here are some examples:

Efficiency Enhancements at the Geysers Geothermal Facility

NCPA operates two of the 21 generating plants in the Geysers, located in Sonoma and Lake County, providing 120 megawatts at its peak. NCPA is committed to improving the performance and stopping the decline in the generating capacity at these Geysers. In 2005, NCPA completed a second horizontal injection well that enhanced the underground distribution of water and increase the amount of injection-derived steam. **These efforts will increase generating capacity by five megawatts, about four percent of current generation capacity at the facilities.**

In 2006, NCPA deepened one its horizontal injection wells, overhauled one of its main turbine generators, replaced three old air compressors, and is in the process of cleaning out two steam production wells. **Work conducted during the past year will result in an additional 2.5 megawatts of power, reduced the amount of energy used to operate the facilities and increased the reliability of the system.**

Collierville Hydroelectric Efficiency Enhancements

NCPA has two hydroelectric units at Collierville Powerhouse, located in Calaveras County. There have been numerous efficiency enhancements over the past 15 years. NCPA continues its commitment to energy efficiency and is pursuing additional energy efficiency modifications. During the past year, NCPA has begun operating the units at a higher level, replaced the Unit #1 runner with a reconditioned spare, with additional plans to improve operational efficiency by replacing the runners at some point during the next two years. **NCPA estimates those modifications will result in increased output of six megawatts, representing an efficiency improvement of 1.8 percent.**

Energy Conservation Activities at Lodi Natural Gas Generating Facility

NCPA has one steam-injected combustion turbine (STIG) located in the City of Lodi. At the STIG facility there was a comprehensive energy audit to find ways to improve efficiency. This review indicated that a replacement of the air compressors would reduce energy use. Last year, NCPA replaced a 75-horsepower air compressor with a more advanced 25-horsepower compressor that includes an integrated air dryer -- reducing fuel consumption at the facility by nearly $60,000 per year. Additionally, NCPA members will avoid the generation of 15,000 kilowatt-hours per month by implementing recommendations regarding lighting changes.

In summary, public power has been dedicated to energy efficiency at the utility level and for its customers for years. It is a critical element of our resource planning process.

III. SB1037: Public Power Roles and Responsibilities

Over the past year, POU staffs throughout California have taken efforts to develop a unified reporting methodology and format that would best respond to the requirements contained in SB1037. Key to this effort has been the development of an Energy Efficiency (EE) Reporting Tool.

The 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 investor-owned utilities (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. This section describes the inputs and methodology used in the EE Reporting Tool.

Background

The genesis of the tool actually began before the passage of SB1037. As early as May 2005, NCPA members and its Public Benefits Committee sought to develop a consistent approach for reporting energy efficiency program information to the Western Area Power Administration (Western) as part of an annual Integrated Resource Planning report. Western requires the report to be filed annually each March.

NCPA first contracted with KEMA Incorporated (KEMA) in May 2005, to develop and measure information for all POU energy efficiency projects in support of this ongoing effort. Using existing resources as much as possible, KEMA created summaries for all of the measures on a list of NCPA utility energy efficiency projects.

With the passage of SB1037, NCPA, SCPPA, and CMUA investigated approaches to expand the efforts begun by KEMA to allow all POUs in California to report on their respective energy efficiency programs. NCPA contracted with Energy & Environmental Economics (E3) to develop a cost-effectiveness model for the member utilities to use. This model was adapted and simplified from a similar one developed by E3 for the IOUs in their program cost-effectiveness

analysis. Results from the model are the principal tool for the data contained in this report. KEMA was retained for a second time in December 2005 and then again in June 2006 to standardize a series of cost and savings estimates for specific end-use measures across all climate zones across California. These estimates serve as a key input to the various costs and savings contained in the E3 tool.

Existing reports were leveraged and summarized in a simplified manner more usable for NCPA and SCPPA members than the complex reporting mechanisms used by the IOUs. The primary resources were the statewide Database for Energy Efficient Resources (DEER) and Pacific Gas and Electric Company's (PG&E) workpapers. In addition to these sources, KEMA used several other resources to assist with the project. NCPA utilities also worked to upgrade the residential air conditioning information from what was in DEER based on engineering analyses and actual installations at utilities in California.

DEER is a CEC and California Public Utilities Commission (CPUC) sponsored database with support and input from the IOUs and other interested stakeholders. The DEER database includes detailed information on many energy efficiency measures, such as the demand and energy savings, incremental cost of measures, and the efficient equipment's useful life. The data in DEER is based upon engineering calculations, building simulations, measurement studies and surveys, econometric regressions, or a combination of approaches. The objectives and focus of the DEER data is to serve as a centralized source of information for planning and forecasting issues for the energy efficiency programs that are provided to customers across the state. DEER has been designated by the CPUC as its cost source for energy efficiency program planning.[1]

The PG&E workpapers are the documents that PG&E has prepared to keep a record of all measure savings calculations related to its energy efficiency programs. The workpapers are a huge set of details that PG&E uses to defend its energy savings assumptions, and are filed on a regular basis with the CPUC. The KEMA report uses the 2005 version of the PG&E workpapers. The workpapers typically include measures not in the DEER database or new to the utility's programs.[2]

The KEMA report provides prescriptive savings for most of the measures. Some measures are considered custom, and those savings are calculated individually for each unique project. When a particular utility has used a custom savings approach, its staff has carefully and thoroughly documented that savings analysis methodology.

Energy Efficiency Tools and Reporting Requirements

The EE Reporting Tool is an Excel Spreadsheet developed by E3[3]. It contains a database of energy efficiency measures developed by KEMA. Utilities select the measures that best

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1 The DEER Database can be found at http://eega.cpuc.ca.gov/deer/.

2 PG&E's workpapers are included in an Appendix to the KEMA report.

3 E3 was the lead contractor in developing the "E3 Calculator" for reporting to the CPUC on PG&E, SCE, SoCal Gas, and SDG&E energy efficiency programs.

represent the programs they have implemented and enter the relevant data. E3 designed the EE Reporting Tool to minimize the data input required by the utilities. 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.

Default Energy Efficiency Measures

The EE Reporting Tool contains a condensed list of approximately 5,000 energy efficiency measures developed by KEMA. This condensed list is a summary of existing databases such as California's DEER database and the IOU Energy Efficiency Workpapers, which provide an extensive database of measures with detailed information. For many municipal utilities with limited staff or expertise, these databases are overly complex and difficult to utilize effectively. KEMA summarized information from these and other sources, using representative scenarios and average values to develop a smaller list of measures accessible to a wider range of utilities.

Each measure includes the following fields:

Table 1: Measure Data Field Descriptions

Field	Description
Measure	Measure Name
Climate Zone	California Title 24 Climate Zones 1-16
Gross Cost ($/Unit)	Measure installation cost
Measure Cost Type	Whether cost is Full or Incremental
Savings Units	Units in which savings are expressed (i.e., per fixture, 1,000 sq. ft., tons cooling)
Cost Units	Units in which costs are expressed
Demand Savings (kW)	Average demand savings per savings unit
Coincident Peak Savings (kW)	Coincident peak demand savings per savings unit
Annual kWh Savings (kWh)	Annual energy savings per savings unit
Measure Life	Useful life of installed measure
Net to Gross Ratio	Ratio to translate savings to savings attributed to program. (Default is 0.8)
Category	Measure category (i.e. residential cooling)
Sub-Category	Measure sub-category (i.e. attic fans)
CPUC Sector	Sector used for CPUC and CEC reporting (i.e. HVAC)
CPUC Detailed End Use	Detailed end use used for CPUC and CEC reporting (i.e. space cooling)
Building Type	Measure building type (i.e. single family)
Unit Volume Multiplier	Ratio of cost units per savings units
Source	Source of data (i.e. DEER, IOU Workpapers)

The measure database contains three general categories of measures: natural replacement, early replacement and alternative air conditioning measures.

Natural replacement assumes that the customer is replacing a fixture that has failed or burned out. The associated energy savings are calculated as difference in the energy required by an efficient fixture vs. a standard fixture that meets minimum building code requirements (often referred to as "above code" energy savings). The measure cost is the incremental cost of an energy efficient fixture over and above that of a standard fixture that meets the minimum code.

Early replacement recognizes that the customer is replacing a functional existing fixture with a new efficient one due to an incentive program. Energy savings calculated above baseline energy use for the existing fixture (often referred to as "above vintage baseline" energy savings). Vintage baseline energy use is generally higher than minimum building code requirements. In addition, the measure cost is the full, rather than incremental, cost of the new fixture. This assumes that the customer's existing fixture is still working and that, absent the utility's program, the customer would not be replacing it with a new one. Thus, generally speaking, the early replacement measures have both higher costs and higher savings than the natural replacement measures.

Alternative Air Conditioning measures were included as an alternative to the measures provided by DEER. Several utilities felt the DEER measures upon which the KEMA measures are based under-represented energy savings from air conditioning measures for their service territories. Therefore, an alternative set of measures was developed using calculations based on Energy Efficiency Ratios (EER) and estimated hours of operations for each climate zone.

Energy and Demand Savings

Each measure includes data on three types of impacts: demand savings, coincident peak demand savings and annual energy savings.

- **Demand Savings -** represents the difference in the instantaneous energy use of the efficient and standard fixture, in kilowatts.

- **Coincident Peak Demand Savings -** those demand savings that occur, in most cases, coincident with California's statewide peak, also in kilowatts. For appliances with an even level of use throughout the day (refrigerators, clothes washers), the coincident peak savings are equal to the demand savings. Appliances that are either used less often during peak hours (lighting) have coincident peak savings that are less than the demand savings.

- **Annual Energy Savings -** the total savings for one year, in kilowatt-hours.

Non-default Energy Efficiency Measures

Although fairly comprehensive, the approximately 5,000 measures in the summarized list of measures do not always reflect all of a utility's programs. Therefore, the EE Reporting Tool

allows the utility analyst to enter additional measures that do not match the defaults. In these cases, all of the inputs described in the previous two sections can be customized. As mentioned earlier, when a particular utility has used a custom savings approach, its staff has carefully and thoroughly documented that savings analysis methodology.

Utility Program Data

Utilities select from the list of measures included in the EE Reporting Tool and enter the appropriate data for their energy efficiency programs. The program inputs include:

- **Number of Installations -** the number of installations for each measure.

- **Utility Incentive Costs -** costs paid by the utility to the customer (i.e. clothes washer rebates). Incentive costs offset the cost incurred by the customer to implement the measure (Gross Cost).

- **Utility Direct Install Costs -** costs paid by the utility that are over and above the gross cost of the measure contained in the database (i.e. costs paid to a sub-contractor for direct installation or removal of old equipment).

- **Net-To-Gross Ratio -** converts the gross savings calculated using the measure data to net energy savings, which is attributed to the program and reported by the utility. The net-to-gross ratio is used to account for free-ridership and equipment that is removed or not installed by the customer. The model applies a default net-to-gross ratio of 0.8 that may be modified by the user.

- **Overhead Costs -** In addition to costs entered for each measure, utilities may enter overhead costs, including marketing, administrative, evaluation, verification and measurement (EM&V) costs. The utilities may allocate overhead costs to each program type, or allow the EE Reporting Tool to allocate total overhead costs based on lifecycle savings.

Load Shapes

Each measure is assigned a load shape, allocating savings to each of six Time-of-Use (TOU) periods. Default load shapes based on PG&E, Southern California Edison (SCE) and San Diego Gas and Electric Company (SDG&E) filings in the CPUC's avoided cost proceeding (R.04-04-025) are included in the EE Reporting Tool. As an example, the Summer On-Peak allocation of annual energy savings is 40 percent for air conditioning measures. Most appliances, such as refrigerators and clothes washers, have a relatively flat load shape, with only 12 percent or so of the annual energy savings occurring in the Summer On-Peak period. Each utility also has the option to define customized load shapes and TOU periods in lieu of those provided by default.

Avoided Costs

The spreadsheet contains CPUC adopted avoided costs developed by E3 for each IOU (updated in 2006, CPUC Decision 06-06-063) forecasted out to 2030. The avoided costs represent the value to each utility of the energy saved due to implementing energy efficiency measures. The avoided costs included in the EE Reporting Tool include the generation and environmental

components, but not the transmission and distribution components for each IOU. Again, utilities have the option of entering their own avoided costs rather than use those provided by default.

Benefit-Cost Tests

Although they are not included in the summary reports provided here, the EE Reporting Tool performs a number of calculations to assist utilities in evaluating program effectiveness. Lifecycle avoided costs are determined by applying the energy savings in each TOU period, as allocated by the load shapes, to the corresponding avoided costs and calculating the net present value savings over the life of each measure. Each utility also has the option to enter average retail rates by customer class, which allows the EE Reporting Tool to also calculate lifecycle bill reductions for each measure. Finally, four standard energy efficiency program cost tests are also performed in accordance with the California Standard Practice Manual: the Program Administrator Cost Test, Total Resource Cost Test, Participant Cost Test, and Ratepayer Impact Measure.

Summary Report

The EE Reporting Tool provides summary reports by program category. The summary table reports the number of installations, the net annual energy savings and the utility program costs. The EE Reporting Tool also fills out the CEC Energy Efficiency Program Forms 3.1a and 3.2 required for utilities larger than 200 megawatts. The summary report presents results by program category (see Table 2).

Table 2: Program Categories

Non-Res Cooking	Res Cooling
Non-Res Cooling	Res Clothes Washers
Non-Res Heating	Res Heating
Non-Res Lighting	Res Dishwashers
Non-Res Motors	Res Electronics
Non-Res Pumps	Res Lighting
Non-Res Refrigeration	Res Pool Pump
Non-Res Shell	Res Refrigeration
Other	Res Shell
	Res Solar
	Res Water Heating

The results included in the summary reports are:

Units Installed: Total number of fixtures or appliances installed.

Net Demand Savings: The total demand savings (kilowatts) attributed to the program. (Units Installed * Demand Savings * Net-to-Gross Ratio).

Net Coincident Peak Demand Savings: The total coincident peak demand savings (kilowatts) attributed to the program. (Units Installed * Coincident Peak Demand Savings * Net-to-Gross Ratio).

Net Annual Energy Savings: The annual energy savings (kilowatt-hours) attributed to the program. (Units Installed * Annual Energy Savings * Net-to-Gross Ratio).

Net Lifecycle Energy Savings: The annual energy savings (kilowatt-hours) attributed to the program. (Units Installed * Annual Energy Savings * Measure Life * Net-to-Gross Ratio).

Utility Incentive Costs: Total incentive costs paid by the utility to participating customers. (Units Installed * Utility Incentive Costs).

Utility Direct Install Costs: Total direct install costs paid by the utility to participating customers. (Units Installed * Utility Direct Install Costs).

Utility Overhead Costs: Total marketing, administrative and EM&V costs allocated to each program type (either by the user or by the EE Reporting Tool, based on net lifecycle savings).

Total Utility Costs: Total incentive, direct install and overhead costs for each program type.

Balancing Consistent Utility Application of the EE Reporting Tool and the Diversity of Assumptions

While the intent of the EE Reporting Tool is to ensure a consistent review of programs across the entire range of POUs, there is still some discretion afforded to each utility in terms of how the model is applied. Changes to certain assumptions may improve or decrease the effectiveness of certain programs that are included in the analysis.

For example, consider the use of measures that are considered "natural replacement" and "early replacement," as described above. The application of one measure compared to another for a given appliance can have a significant impact on the amount of lifecycle kilowatt-hour savings that are applicable to a particular efficiency measure. Importantly, either measure does not impact peak load estimates, an important component to policymakers concerned about how much energy is reduced when resources are most utilized throughout the state.

Regarding net-to-gross ratios, some utilities have chosen to make some adjustments to their individual data sets. As discussed previously, the EE Reporting Tool includes a default value of 0.8 for each measure in the model, meaning that any potential energy efficiency measure only achieves 80 percent of what it is capable of realizing. In this analysis, a handful of the 39 utilities participating in this analysis assume that 100 percent of the savings is realized, thereby applying a value of 1.0 in the model. In these instances, the utility's conclusions are based on individual customer relationships and as such the utility is often able to verify installation and measure the actual savings once the units are installed.

Other variations on assumptions within the utility analyses include but are not limited to the following:

- Solar Projects - The EE Reporting Tool includes a component for utilities to include the energy savings to the system from the installation of residential solar projects into the analysis.
- Application of Administrative Costs - Due to accounting variations at each utility, some differences are applied in how administrative costs are reported. Due to the small size of most POUs and the low staffing levels, in many cases, one employee administers and delivers service in a variety of program areas. Some utilities charge all administrative costs of public benefit programs to one area and may divide costs to programs on a percentage basis. Other utilities allocate a percentage of individual employee time and expense to different programs, as they occur. Some utilities allocate program delivery costs (such as energy auditors or educational flyers) to individual program areas.

IV. Energy Efficiency 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 3 summarizes POU energy efficiency program savings and cost information for fiscal years 2005 (FY05/06) and 2006 (FY06/07)[4]. During FY05/06, POUs spent approximately $54 million on energy efficiency programs, reducing peak demand more than 50 megawatts and in excess of 165 million kilowatt-hours on an annual basis. POU energy efficiency expenditures for FY06/07 are expected to increase 41 percent to over $77 million, resulting in 69 megawatts of savings during the summer peak and 338 million kilowatt-hours during the entire year.

[4] 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 FY05/06 is actually calendar year 2005, and data for FY06/07 is actually for calendar year 2006. CMUA, NCPA, SCPPA, and Energy Commission staff recognize this data nuance.

Table 3
POU Program Information Summary

Year	Net Peak KW Savings	Net Annual Kwh Savings	Net Lifecycle Mwh savings	Net Demand Savings (KW)	Total Utility Cost ($)
FY05/06	52,552	169,302,601	2,249,214	63,987	$54,412,728
FY06/07	68,898	326,077,007	3,788,265	178,877	$77,028,227

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 60 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 increases to roughly three-fourths of the total for FY06/07.

Table 4 takes a second look at public power's efficiency programs, removing LADWP and SMUD from the total. During FY05/06, the remaining utilities spent over $21 million on energy efficiency programs, reducing load by 19.3 megawatts at the peak and over 67 million kilowatt-hours during the year. These same utilities are expected to increase program expenditures by over 18 percent to $26 million, resulting in 18 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 21 megawatts.

Table 4
POU Program Information Summary
(Without LADWP and SMUD)

Year	Net Peak KW Savings	Net Annual Kwh Savings	Net Lifecycle Mwh savings	Net Demand Savings (KW)	Total Utility Cost ($)
2005-06	19,292	67,766,218	953,628	26,024	$21,921,485
2006-07	21,638	85,905,676	1,1782,269	29,964	$26,008,868

Looking at it another way, 12 utilities provide 94 percent of the net peak savings and net annual kilowatt-hour savings for the group as a whole. Table 5 provides the data for FY05/06 for the 12 utilities. Data for FY06/07 shows a similar influence, but is not repeated here.

Table 5
Utilities Most Heavily Influencing Energy Efficiency and Demand Savings
(Using FY05/06 Data)

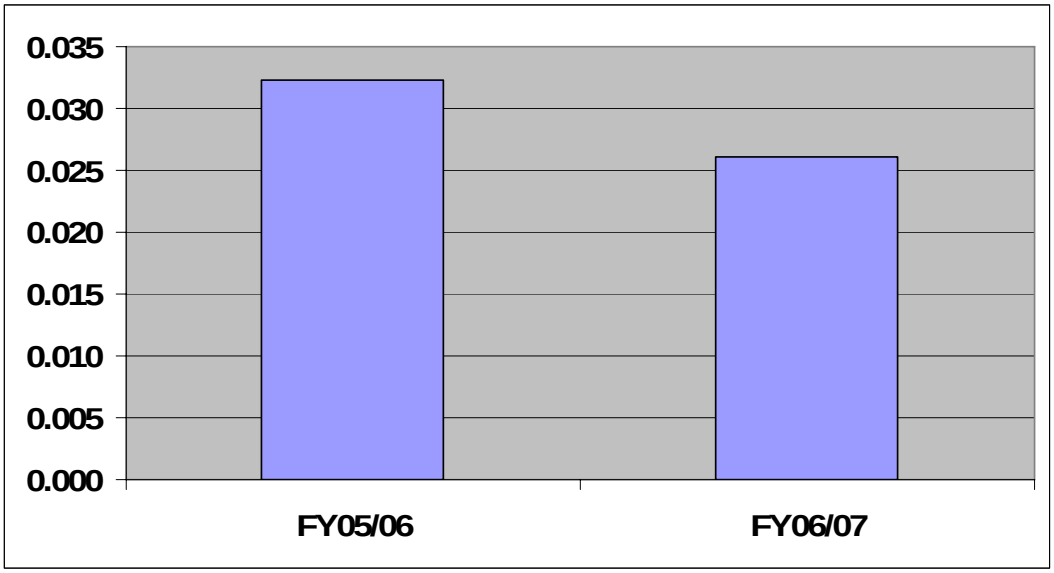
Utility	Net Peak KW Savings	Net Annual Kwh Savings	Net Demand Savings (KW)
Riverside	717	3,117,466	693
Modesto	1,327	3,222,034	1,601
Redding	1,728	3,964,502	2,050
Pasadena	1,379	4,501,422	1,623
Roseville	1,977	4,569,417	2,234
SVP	751	4,687,070	984
Burbank	992	5,574,127	1,057
TID	3,149	6,882,551	3,463
Glendale	1,500	8,463,099	2,282
Anaheim	3,047	12,765,922	3,502
LADWP	11,712	16,560,942	16,414
SMUD	21,544	84,963,287	21,544
Subtotal	49,823	159,271,839	57,447
All Others	2,725	10,018,607	6,536
Total	51,547	169,290,447	63,982

Measuring Program Cost-Effectiveness

Energy efficiency experts apply several methods for calculating program cost effectiveness. For the California IOUs, the avoided cost of generation is used as the general criterion for this evaluation. For the public power community, this approach becomes much more complex, given that there are 39 different sets of applicable avoided costs. In that case, this report relies on an evaluation of program cost effectiveness which compares total energy efficiency investments to kilowatt-hour savings expected over the life of the measure.

As Figure 1 indicates, the levelized cost to deliver all energy efficiency programs for CMUA members in the aggregate is projected to fall from $0.032 per lifecycle kilowatt-hour in FY05/06 to $0.026 per lifecycle kilowatt-hour in FY06/07. This is the case for most utilities; however, there are some very small utilities in the state with very limited numbers of customers and programs, where delivery is very "lumpy" based on actual customer needs. These utilities do not have enough customers to be able to reach a certain percentage per year and keep cost and efficiency savings on a fairly even trend line. Their costs to deliver energy savings vary dramatically from year-to-year.

Figure 1
Levelized POU Program Costs ($/Kwh)



There are several POUs that are challenged to keep costs and efficiency savings on a fairly even trend line, including:

- Vernon and SVP, which have a large industrial base and a very small residential base, where projects tend to happen in large clusters.
- City of Biggs, which has only one industrial customer.
- Port of Oakland and the City of Industry, which have only a handful of customers.
- Lassen MUD, Plumas-Sierra, Trinity PUD, and Truckee Donner PUD, which serve small populations and have higher than normal distribution line miles per customer.
- Alameda and Lompoc, which serve little HVAC load and have a winter peak.

A second look at aggregate measure of cost effectiveness by the nine largest energy efficiency categories provides some additional insight about public power programs. Relying on a review of Table 6, consider the following conclusions about program cost effectiveness:

- Residential and non-residential lighting programs, residential cooling programs, and non-residential process programs are more cost effective than the average.
- Although they are less cost effective than the average, residential pool pump programs save significant peak kilowatts.
- Residential cooling and shell programs are less cost effective than the average because the high initial first costs of the programs require significant incentives.
- Programs in the "Other" category tend to be less cost effective than average on a first look, because this category includes such programs as energy audits, education, and programs with high initial first costs. While energy audits may not appear to be cost

effective at first glance, it is important to keep in mind that for most utilities, the energy audit is the customer's entry into the energy efficiency program at the utility. A resident or business will get accurate information on all the rebates available, financial paybacks from the replacement, and other assistance. This assistance and information helps many customers break the hurdles associated with investment in energy efficiency and actually implement the replacements or upgrades.

Table 6
Top Net Peak and Life Cycle Energy Savings by Program Category
FY05/06

Program Category	Net Peak KW Savings	Lifecycle Energy Savings (Gwh)	Total Utility Cost ($)	Levelized Utility Program Cost ($/Kwh)
Non Residential Lighting	10,889	678	$11,763,351	$0.0227
Other	10,613	169	$ 9,019,927	$0.0646
Residential Cooling	10,673	364	$13,427,408	$0.0614
Residential Lighting	6,362	398	$ 4,536,798	$0.0139
Non Residential Cooling	5,055	283	$ 5,169,858	$0.0266
Residential Shell	3,992	80	$ 3,427,484	$0.0598
Misc. Non Residential	1,805	50	$ 703,818	$0.0193
Residential Refrigeration	1,391	160	$ 3,196,099	$0.0293
Residential Pool Pump	907	16	$ 618,304	$0.0501
Total	52,552	2,249	$54,412,728	$0.0322

Table 7 provides similar information for the FY06/07 reporting year. Several points are evident from comparing Tables 6 and 7:

- The cost effectiveness of programs has improved over the previous year.
- There are more programs targeting the non residential sectors compared to the previous year.
- Despite these improvements, residential programs, other than lighting, continue to be less cost effective than the average.

Table 7
Top Net Peak and Life Cycle Energy Savings by Program Category
Fiscal Year 06/07

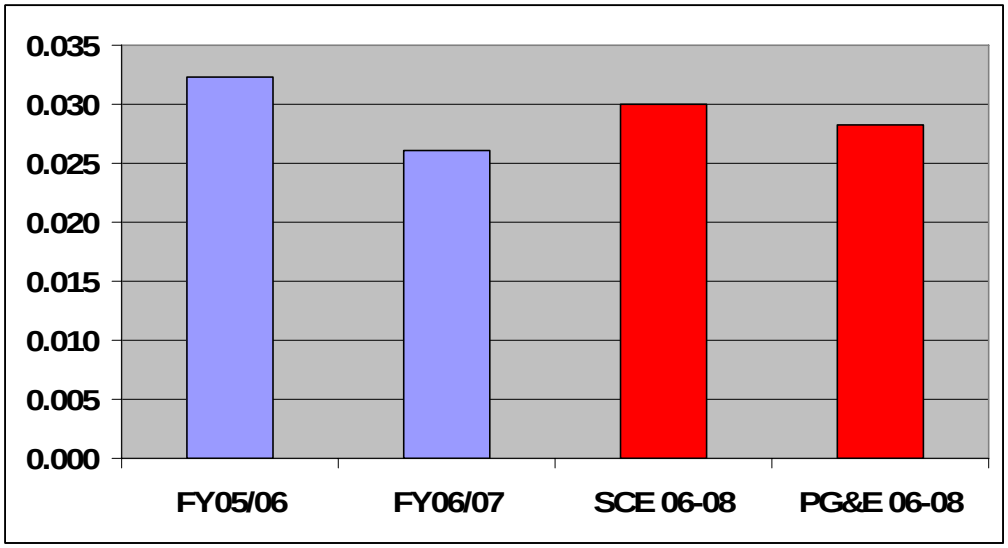
Program Category	Net Peak KW Savings	Lifecycle Energy Savings (Gwh)	Total Utility Cost ($)	Levelized Utility Program Cost ($/Kwh)
Residential Lighting	21,673	1,132	$13,744,191	$0.0146
Non Residential Lighting	13,285	807	$15,157,105	$0.0242
Residential Cooling	8,984	333	$11,276,499	$0.0562
Other	7,332	608	$11,799,078	$0.0250
Non Residential Cooling	6,994	358	$ 8,180,951	$0.0335
Residential Refrigeration	3,356	275	$ 8,450,547	$0.0402
Residential Shell	3,242	65	$ 2,285,995	$0.0477
Misc. Non Residential	1,595	71	$ 1,334,483	$0.0259
Res Pool Pump	738	10	$ 376,619	$0.0475
Total	68,898	3,788	$77,028,077	$0.0261

Comparison of Public Power and Investor-Owned Utility Efficiency Programs

This section presents a high level comparison of the size of the POU energy efficiency programs with the size of the CPUC energy efficiency program administered by the California IOUs. Overall, the relative size of the aggregated POU energy efficiency programs is smaller than that of the IOUs, particularly after the increase in IOU program size beginning in 2006. However, aggregating all of the programs together and comparing based on size obscures the local decision-making and resource planning that each individual utility does to best meet the needs of its local community.

Figure 2 provides a superior measure of comparison, an evaluation of POU and IOU program cost effectiveness. Comparing the results from Figure 1 and contrasting them to results expected from PG&E and SCE programs for 2006-08, public power programs fare quite well. During FY06/07, public power programs are expected to be even more cost effective than what is estimated to be the case for the IOUs in 2006-08. This conclusion is in stark contradiction to statements made one year ago by various interest groups suggesting that POUs are lagging way behind their IOU counterparts. This is not the case here.

Figure 2
Comparison of POU and IOU
Levelized Program Costs ($/Kwh)



Sources: SCE - Application for Approval of 2006-08 Energy Efficiency Program Plans, filed June 1, 2005. PG&E - 2006-08 Energy Efficiency Program Portfolio, Volume 1, Prepared Testimony Table 3-2, pg, 3-44.

Additional insight suggesting that this conclusion is on the mark was provided during a September 2006 Energy Action Plan meeting, in which the CPUC's Energy Division Director stated that the IOUs were not realizing the efficiency savings they had anticipated and that it might be worth revisiting the targets the CPUC established for the IOUs. Regular efficiency program updates available from PG&E and SCE on their respective websites continue to confirm that IOU savings targets are not being met. While California IOUs now have CPUC-mandated targets for expenditures and savings, they have not spent that money nor accomplished those savings. In fact, recent CEC reports indicate that in no year has any IOU ever spent its budgeted amount. The report further states that, in all years since 2000, the IOUs have never spent all of their budgeted energy efficiency funds; spending as little as 64 percent.[5] No such concern is evident in the public power community.

Every POU makes its own decision on how best to balance expenditures on energy efficiency, renewable energy, and other resources with the needs, desires, and characteristics of its local community. Some utilities choose to emphasize energy efficiency in their resource plans, others focus on renewable energy, and others choose programs that best serve their customers. This process results in high-quality, energy efficiency programs that are tailored to the needs of the local community, but not necessarily large programs. As evidenced by the report's conclusions,

[5] See CEC, *Funding and Energy Savings from Investor-owned Utility Energy Efficiency Programs in California for Program Years 2000-2004*, Publication CEC-400-2005-042-REV2, August 2005.

"large" programs are not necessarily "good" programs, or appropriate for a particular utility's mix of available energy resources, local interest, and community characteristics.

As with any estimate or forecast of energy efficiency savings, there is some level of uncertainty around the results. The major drivers of uncertainty that could impact the results reported in this report include estimates in the assumption of net-to-gross ratio, adoption rates, and measure impacts. The primary sources of uncertainty in the reported energy efficiency program results are described below.

Net-to-Gross Ratio

The CPUC Energy Efficiency Policy Manual recommends specific net-to-gross ratios for several types of measures, with a default ratio of 0.8 for those types of measure not listed. All measures in the EE Reporting Tool have a default net-to-gross ratio of 0.8. The tool was designed to allow the user to modify the net to gross ratio. Increased EM&V efforts and program design on the part of the POUs are expected to provide improved net-to-gross ratios for different types of measures, which may be used to improve future analysis.

Adoption Rate

Each utility made assumptions regarding customer adoption of new and existing energy efficiency programs to estimate the number of installations for 2006. Adoption rates are one of the hardest factors to predict, particularly for new programs, and can significantly impact the program's ultimate results.

Measure Impact

Many of the assumptions relating to measure impact including hours of use, the type and vintage of devices being replaced, and baseline energy consumption have some measure of uncertainty. In addition, as explained above, KEMA made several simplifying assumptions in developing a condensed list of standard measures for use by a wide range of public utilities. This introduces additional uncertainty over and above that already embedded in the measure databases KEMA relied upon in developing simplified measures for this tool.

Summary of Results by Public Power Utility

Tables 8 and 9 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 only two municipalities (LADWP and SMUD) have peak savings that exceed five megawatts. Another seven utilities (Anaheim, Glendale, Modesto, Pasadena, Redding, Roseville, and Turlock) have peak savings that fall between one and five megawatts. In contrast, 21 of public power's smaller utilities had peak savings well below 100 kilowatts.

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
POU Energy Efficiency Program Savings
FY05/06

	Resource Savings Summary				Cost Summary			
	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Alameda	48	279,141	2,768,867	98	$ 58,260	$ -	$ 39,185	$ 97,445
Anaheim	3,047	12,765,922	178,014,260	3,502	953,220		195,069	$ 1,148,289
Azusa	425	1,897,328	23,410,542	430	397,943		105,236	503,180
Banning	22	95,699	1,782,083	23	34,962	-	79,838	114,800
Biggs	11	34,767	311,867	19	5,899	9,125	3,600	18,624
Burbank	992	5,574,127	70,153,566	1,057	1,382,983	13,459	470,551	1,866,994
Colton	173	943,313	8,661,780	652	296,033	-	-	296,033
Corona	4	12,839	112,010	5	42,240	-	8,000	50,240
Glendale	1,500	8,463,099	102,794,384	2,282	2,675,710		227,450	2,903,160
Gridley	10	9,654	165,284	7	9,927	-	33,945	43,872
Healdsburg	1	4,704	141,120	1	8,001	-	-	8,001
Hercules	0	46	464	0	150			150
IID *	1,026	2,092,625	25,124,216	836	861,279	-	-	861,279
Industry	-	-	-	-	-	-	-	-
Island Energy	-	-	-	-	-	-	-	-
Lassen	28	77,466	914,419	28	69,481			69,481
Lodi	384	889,238	8,967,138	387	225,187	27,940	221,776	474,903
Lompoc	70	138,058	2,155,892	70	37,988	5,767	320	44,075
LADWP	11,712	16,560,942	190,536,856	16,414	3,957,313	832,455	6,118,132	10,907,900
Merced *	22	141,991	1,819,516	37	261,015		40,000	301,015
Modesto *	1,327	3,222,034	33,977,609	1,601	613,390	67,400	1,257,392	1,938,182
Moreno Valley	71	244,665	3,200,428	75	60,555		4,615	65,170
Needles	13	17,776	319,968	12	22,000	-	-	22,000
Palo Alto	158	1,876,727	16,727,428	3,368	371,031	30,596	433,000	834,627
Pasadena	1,379	4,501,422	77,542,684	1,623	1,099,787		158,455	1,258,241
Plumas-Sierra *	12	90,128	1,487,157	224	84,411	3,400	204,000	291,811
Port of Oakland	98	879,170	14,066,720	98	43,959	-	-	43,959
Rancho Cucamonga	93	133,955	401,866	93	20,093			20,093
Redding	1,728	3,964,502	64,240,773	2,050	1,435,485	-	182,585	1,618,070
Riverside	717	3,117,466	87,442,475	693	677,903	2,464	132,044	812,411
Roseville	1,977	4,569,417	74,057,333	2,234	1,056,722	113,813	653,761	1,824,296
Shasta Lake	24	37,064	551,649	17	20,527	-	45,080	65,607
Silicon Valley Power	751	4,687,070	49,433,156	984	510,780	1,003,069	957,616	2,471,464
SMUD *	21,544	84,963,287	1,104,928,081	21,544	10,426,448	-	11,205,201	21,631,649
TID *	3,149	6,882,551	101,478,850	3,463	1,319,773	-	224,705	1,544,478
Trinity PUD	-	22,107	442,144	-	57,640	-	-	57,640
Truckee Donner *	7	46,865	374,454	28	17,450	21,000	51,900	90,350
Ukiah	18	21,511	400,331	23	86,615	-	17,216	103,831
Vernon	12	43,922	307,454	12	9,410	-	-	9,410
Summary	52,552	169,302,601	2,249,214,827	63,987	$ 29,211,568	$ 2,130,488	$ 23,070,672	$ 54,412,728

Note: Utilities with an asterisk next to name have fiscal years that are on a calendar year basis (1/1 to 12/31)

Table 9
POU Energy Efficiency Program Savings
FY06/07

	Resource Savings Summary				Cost Summary			
	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Alameda	102	610,764	7,125,017	167	$ 69,832	$ -	$ 48,398	$ 118,230
Anaheim	3,312	13,849,264	193,196,343	3,783	1,078,325		195,069	$ 1,273,394
Azusa	425	1,897,328	23,410,542	430	397,943		105,236	$ 503,180
Banning	82	253,462	5,151,361	83	107,400	-	79,838	187,238
Biggs	8	131,260	1,675,630	8	43,100	1,200	6,809	51,109
Burbank	1,112	5,778,121	80,525,026	1,177	1,691,628	13,459	485,000	2,190,087
Colton	696	3,715,660	37,832,940	2,053	620,250	-	-	620,250
Corona	7	37,729	336,426	6	47,775		8,000	55,775
Glendale	1,500	8,463,099	102,794,384	2,282	2,675,710		227,450	2,903,160
Gridley	41	80,329	1,144,449	60	68,644	-	34,000	102,644
Healdsburg	31	113,892	1,471,205	65	85,500	-	45,000	130,500
Hercules	0	150	2,234	0	225			225
IID *	954	2,065,474	24,161,290	763	884,538		88,454	972,992
Industry	-	-	-	-	-	-	-	-
Island Energy	-	-	-	-	-	-	-	-
Lassen	80	307,050	4,277,680	481	188,615	-	124,150	312,765
Lodi	252	1,316,302	12,190,693	303	285,016	20,000	213,806	518,822
Lompoc	81	163,705	2,472,469	82	40,800	6,155	320	47,275
LADWP	27,109	153,074,867	1,625,558,769	129,183	17,011,193	2,802,625	9,607,000	29,420,818
Merced *	61	282,614	3,184,105	78	131,830	-	40,000	171,830
Modesto *	995	3,457,664	37,385,093	1,203	362,215	85,750	1,260,000	1,707,965
Moreno Valley	17	44,165	593,575	18	10,930		3,807	14,737
Needles	26	44,176	1,111,968	24	49,500	-		49,500
Palo Alto	228	2,129,416	20,582,728	3,440	440,213	30,596	330,000	800,809
Pasadena	2,010	5,244,214	99,246,251	2,228	1,038,652	-	163,455	1,202,107
Plumas-Sierra	12	171,167	1,550,600	219	107,688	14,000	217,000	338,688
Port of Oakland	-	10,507	31,522	-	150,000	-	-	150,000
Rancho Cucamonga		101,888	305,664			120,000		120,000
Redding	2,095	7,208,744	105,456,179	2,530	1,349,975	-	190,000	1,539,975
Riverside	795	3,059,978	85,260,676	785	758,359	1,825	319,091	1,079,275
Roseville	2,758	6,523,647	90,268,656	2,821	1,769,400	101,188	890,412	2,761,000
Shasta Lake	25	63,998	790,618	52	32,400	-	45,080	77,480
Silicon Valley Power	1,697	12,242,574	130,866,950	2,513	1,293,354	1,321,160	1,150,000	3,764,515
SMUD *	20,151	87,096,464	990,437,524	19,731	10,340,514	-	11,258,027	21,598,541
TID *	2,077	6,121,775	93,985,668	2,077	1,450,000	-	455,161	1,905,161
Trinity PUD	-	13,517	270,336	-	33,803	-	-	33,803
Truckee Donner *	7	46,865	374,454	28	17,450	21,000	51,900	90,350
Ukiah	53	122,358	1,606,379	104	$ 139,422	$ -	$ 45,000	184,422
Vernon	101	232,821	1,629,747	101	$ 79,533	$ -	$ -	79,533
Summary	68,898	326,077,007	3,788,265,149	178,877	$ 44,851,731	$ 4,538,959	$ 27,687,463	$ 77,078,152

Note: Utilities with an asterisk next to name have fiscal years that are on a calendar year basis (1/1 to 12/31)

V. Demand Reduction Program Results

Since the California energy crisis, California has spent considerable effort toward the development of demand reduction programs. By definition, demand reduction programs seek to reduce load during critical peak time periods, often the hottest handful of hours during the course of a year. In this regard, customers are asked to participate in some level of load shedding or load shifting plan that allows grid operators to retain reliability and possibly prevent rolling blackouts in key areas of congestion.

Much of the attention toward demand reduction programs have focused on California's IOUs. With the recent adoption of the California Independent System Operator (CAISO) market redesign proposal and the confirmation of Federal Energy Regulatory Commission Commissioner Wellinghoff, demand response is getting a much closer look at the national level. For POUs, the use of demand response programs remains closely tied to the size of the utility. In general, large utilities have such programs while smaller utilities do not. At present, 12 POUs have some form of demand response program with one about to implement new programs and two others considering but not yet committed to future program development.

Table 10
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
Port of Oakland
Plumas-Sierra
Riverside Public Utilities
Sacramento Municipal Utility District
Silicon Valley Power

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 with the various service territories. That being said, POU programs 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.

The following represents a snapshot of some of the load shedding programs being offered by the POUs. 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

Anaheim has five programs. One is the 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.

The Load Curtailment Exemption Program is 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.

The 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 4 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.

The "10 in Time" Program encourages commercial customers to voluntarily reduce energy usage by at least 10 percent or more, 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.

The 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.

LADWP

LADWP offers three programs. The Small Business Rate Intervention Program provides on-site energy surveys to small business customers with an emphasis in helping them reduce demand through operational changes and suggesting lighting/HVAC retrofits with a goal of reducing demand below 30 kilowatts.

The Rate Structure for Customer Generation (CG) enables customers to avoid all energy charges and a portion of the demand charge. The rate provides electric bill savings of typically 5-18 cents per kilowatt-hour for energy generated by customer's generator. The amount of savings is dependent primarily on whether the generator is base-loaded or used for peak shaving.

The Customer Generation Rebate Program offers a cash rebate to a buyer of a qualifying Distributed Generation system. The system must be a fuel cell or renewable technology (other than PV) permanently installed on the premise and must meet all national, state and local standards, including an interconnection agreement.

Palo Alto

Palo Alto is conducting a demonstration program called the Advanced Metering Program. In the program, 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.[6]

SMUD

SMUD offers three programs. It has a voluntary Peak Corp 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.

The Demand Bid Program pays participants to reduce at least 75 kilowatts of non-critical load for blocks of at least two hours, 2 pm to 6 pm, weekdays, June through 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.

The 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.

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 one megawatt during system emergencies.[7]

VI. Conclusions and Next Steps

CMUA is pleased to provide this report to the CEC, the first complete assessment of public power energy efficiency programs in California. From the analysis, it is clear that public power utilities are firmly committed to energy efficiency, consistent with state energy policy that places energy efficiency at the top of the state's Loading Order. In FY05/06, public power's $52 million investment in energy efficiency reduced peak load by more than 50 megawatts and 167 million kilowatts. Consistent with the increased statewide commitment to energy efficiency, public power investment for this year increased significantly, reducing peak demand by another 73 megawatts and shaving 340 million kilowatt-hours over the course of the year.

As local entities, public power utilities and districts think about their citizens and services in an integrated manner that best serves the needs of their customers and communities. Energy

[6] Lodi, SVP, Redding all have similar metering technologies available for customers to manage their overall consumption.

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

efficiency is a critical element of the resource planning process, and its use applies to generation, transmission, and distribution services, as well as programs focused directly on customers.

Next Steps

CMUA anticipates that this report will be incorporated into the 2007 Integrated Energy Policy Report process, as the CEC undertakes its energy supply/demand assessment during the coming months. Beyond the current assessment, however, there are several factors that will impact the timing and look of future energy efficiency reports.

- To be consistent with Section 1311 of the CEC's proposed data collection regulations, CMUA and its public power partners will request that the next submittal of this report be made in March 2008 rather than December 2007.[8] The March filing date synchronizes well with the CEC's analytical work it conducts as part of its Integrated Energy Policy Report process and reduces the amount of reports that are actually filed. Initial responses from CEC staff and Commissioners have been positive, and this shift would actually improve the timing for filings the CEC needs to complete its demand assessment.

- The signing of AB2021 into law requires energy efficiency targets to be established by each POU in California and some minor enhancements to the data that will be reported in subsequent reports in compliance with SB1037. CMUA, NCPA, and SCPPA are reviewing various approaches for accomplishing these requirements, and are working closely with the CEC to ensure that the agency has a complete set of data from the public power community as it moves forward with its 2007 Integrated Energy Policy Report analysis.

- POUs are actively evaluating the best ways to comply with the need for an independent evaluation of POU energy efficiency programs. As a first order, the data contained in the EE Reporting Tool, as described in Section III of this report, suggests that much of the energy savings reported by each utility relies on standardized data for the assessment. While many of the larger POU retain EM&V services to evaluate their programs, the smaller utilities often do not have the resources or the funding to do such work.

- One approach being undertaken by NCPA for its members is a Request for Qualifications from contractors who provide EM&V services for utility energy efficiency and demand reduction programs. The POUs intend to use the EM&V services to not only help determine the target, but also to continually provide advances in the state of the art of EM&V, because it is not a mature industry. The POUs plan to document EM&V programs that result in improvements in energy efficiency and demand reduction programs in one or more of five major areas: 1) increased certainty, reliability, and level of savings; 2) reduced transaction costs; 3) reduced financing costs; 4) improved methods of demonstrating emission reduction

[8] For additional information about the CEC's data collection regulations, please visit the CEC's website at the following location: http://www.energy.ca.gov/data_collection/index.html.

and delivering enhanced environmental quality; and 5) improved methods for negotiating contractual terms to ensure that an energy efficiency project achieves or exceeds its goals.[9]

CMUA, NCPA, and SCPPA look forward to a continued dialogue on energy efficiency issues, and its desire to balance statewide energy policy direction with the needs and diverse interests of local communities.

[9] NCPA's solicitation can be found at: http://www.ncpa.com/current-issues/16.html.

Appendix A: Description of Utility Programs

ALAMEDA POWER & TELECOM (ALAMEDA P&T)

- Established in 1887, the oldest municipal electric utility in the west
- Of approximately 33,000 customers, 85 percent are residential units that do not have air conditioning
- Peak demand: 68 megawatts, occurs in the early evening in the winter
- Alameda P&T load does not have large demand spikes like those experienced by most of California's electric utilities
- Annual energy use is 390 gigawatt-hours
- 131 employees

Alameda Energy Efficiency Program Highlights

From FY1999 through FY2006, required public benefits expenditures totaled $9,047,230; however, actual expenditures were $12,428,727. Alameda P&T's high investments in renewable energy resources explain why expenditures of $3,381,497 in excess of the public benefits requirements have been made.

Overview of Alameda P&T's Energy Efficiency Programs

Since 1991, Alameda P&T has spent $1.9 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 engineering estimates and measurements that have been field-verified.

Current Commercial Customer Programs:

- Commercial Retrofit Program: Retrofit existing buildings with high efficiency lights and air conditioning equipment.
- Commercial Loan Program: Low interest loans for the installation of efficient equipment.
- Key Account Grant Program: Grants provided for energy saving projects such as building design and building commissioning.
- Free Energy Audits

Current Residential Customer Programs:

- EnergyStar® Refrigerator Program: Rebates offered for the purchase of an EnergyStar® refrigerator and the recycling of the old unit.

- Weatherization Cash Grant Program: Installation of cost-effective weatherization measures in electrically heated homes.
- Meter Lending Program: Meters used to measure the cost to operate any 120-volt appliances**.**
- Compact Fluorescent Program: Coupons for the purchase of compact fluorescent light bulbs.
- Free Energy Audits
- Low-Income Program: Alameda P&T provides free energy audits, installs compact fluorescents, replaces inefficient refrigerators at no cost, and replaces halogen torchieres with compact fluorescent torchieres. After the energy audit and the efficiency measures have been completed, program participants receive a 25 percent electric bill discount.

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 $1,000,000.

City Schools:
Alameda P&T rebates of $126,000 since program inception have 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 $2 million since the 1994 retrofit.

Proposed Alameda P&T Energy Efficiency Programs and Services: **(for 2006-2007)**
- 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

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

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 geothermal reservoir was declining in 1994, measures were implemented to increase the efficiency and output of the geothermal resources including:

- Treated wastewater from surrounding areas was piped into the geysers extending the life of this resource by more than 10 years.
- The steam turbines were rebladed to accommodate lower pressure steam.

- The new near-horizontal injection well resulted in an increase of steam and the capacity for injected water.

Proposed Alameda P&T Renewable Investment Program: **(for 2006-2007)**

- Continue the geyser effluent pipeline project and expand the near-horizontal injection well project at a total cost of close to $1 million.
- Continue to evaluate landfill gas projects and other renewable power supplies in close proximity to Alameda P&T.

Alameda P&T Demand Reduction Programs:

Alameda P&T does not have a summer peak demand reduction program because peak demand occurs in the winter. There is no residential air conditioning and very limited industrial load to provide opportunities for demand reduction.

ALAMEDA POWER & TELECOM SUMMARY DATA

Time Period for Reporting Data: Fiscal Year ending 6/30/2006

Alameda - 0506 (v14)						Cost Summary		
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling	1	26,309	78,926	1	$ 5,394		$ 1,031	$ 6,425
HVAC	Non-Res Heating								
HVAC	Non-Res Shell	0	1,344	13,440	0	$ 189		$ 412	$ 601
Lighting	Non-Res Lighting	30	113,722	1,232,626	37	$ 4,854		$ 3,092	$ 7,946
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration	0	2,185	34,953	0	$ 705		$ 618	$ 1,323
Appliances	Res Clothes Washers								
Appliances	Res Dishwashers								
Consumer Electronics	Res Electronics								
HVAC	Res Cooling								
HVAC	Res Heating								
HVAC	Res Shell								
Lighting	Res Lighting	6	37,150	334,346	43	$ 5,296		$ 6,419	$ 11,715
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration	3	21,744	391,392	3	$ 25,698		$ 16,573	$ 42,271
Other	Res Solar								
Water Heating	Res Water Heating								
Other	Other	6	76,688	683,184	12	$ 16,124		$ 11,040	$ 27,164
Total		48	279,141	2,768,867	98	$ 58,260		$ 39,185	$ 97,445

Alameda - 0607 (V14)						Cost Summary		
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling								
HVAC	Non-Res Heating								
HVAC	Non-Res Shell	0	2,880	28,800	0	$ 405		$ 824	$ 1,229
Lighting	Non-Res Lighting	82	351,606	3,868,390	103	$ 14,019		$ 6,184	$ 20,203
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration	0	2,185	34,953	0	$ 705		$ 618	$ 1,323
Appliances	Res Clothes Washers								
Appliances	Res Dishwashers								
Consumer Electronics	Res Electronics								
HVAC	Res Cooling								
HVAC	Res Heating								
HVAC	Res Shell								
Lighting	Res Lighting	6	34,464	310,176	44	$ 4,760		$ 6,419	$ 11,179
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration	4	24,835	447,034	4	$ 29,378		$ 22,871	$ 52,249
Other	Res Solar								
Water Heating	Res Water Heating								
Other	Other	10	194,794	2,435,664	15	$ 20,565		$ 11,482	$ 32,047
Total		102	610,764	7,125,017	167	$ 69,832		$ 48,398	$ 118,230

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 are residential, 14 percent are commercial and 1 percent are miscellaneous
- Peak demand: 534 megawatts, occurs in the early afternoon in the summer
- Average annual energy use is 3,284 gigawatt-hours
- 330 employees

Overview of Public Benefits Program

From 1/1/1998 through 6/30/2006, public benefits expenditures totaled $55,899,324. Anaheim Public Utilities' expenditures have been 58 percent for Energy Efficiency, 19 percent for RD&D, 17 percent for renewable energy resources and 6 percent income qualified. Participation by income qualified is higher since all the residential energy efficiency programs are offered to all customers and low-income customer participate, but are not tracked.

Energy Efficiency Program Highlights

Conservation of electricity and water should be part of Anaheim's daily routine. In the long-term, customer 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: $694,680. Resulting in: 2,464 kilowatts demand reduction, 9,828,252 kilowatt-hours reduction]:

- Comprehensive Energy Audits: Customized on-site audits and recommendations designed to improve operating efficiency and help customers reduce costs.
- Water Use Surveys: Expert analysis of your facility's water use, specific water saving recommendations, and how our incentives may help fund your improvements.
- Dusk to Dawn Lighting**:** Free outdoor energy efficient lights with photocells help improve security, save energy, and help hold down costs.
- Commercial Water Incentive**:** Up to $25,000 to help pay for pre-approved water efficiency measures resulting in verifiable water savings.

- Economic Development/Business Retention Rate: Provides qualifying businesses with rate discounts with an efficiency measures installation component.
- Energy Efficiency: 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 Photovoltaic Incentive: Encourages customers to install modular rooftop solar systems that use sunlight to generate electricity.
- LED Exit Sign Program: Financial incentives for up to 50 percent of the cost to retrofit incandescent bulbs or fluorescent lamps in exit signs with LED lights.
- Lighting Incentives: Lighting level and energy use analysis, plus recommendations and financial incentives to improve efficiency.
- 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: Rebates for energy efficiency measures and equipment beyond minimum requirements for new construction and facility expansions.
- Water Efficiency Incentives: Rebates for replacing old hardware with new water efficient devices.
- Water Process Changes: Encourages businesses that use extensive process water to adopt more efficient options.

Current Residential Customer Programs: [Total annual Program Costs $258,540. Resulting in: 583 kilowatts demand reduction; 2,937,670 kilowatt-hours 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 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.
- Heat Pump Incentives: Assist replacement or installation of efficient heat pumps compared to older gas or electric heating/cooling systems.
- Air Duct Efficiency: Tests efficiency of heating and cooling distribution systems and provides funding to help pay for repairing and sealing leaks.
- Home Incentives: Rebates for purchase and installation of high efficiency Energy Star® rated appliances and high efficiency conservation measures.
- Solar 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: Loans for energy efficient improvements during rehabilitation of existing single-family homes. Grants are offered to customers meeting income-qualified guidelines.

- Toilet Replacement Programs: Rebates and scheduled free distributions of ultra-low-flush 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 Program:

- Lighting Retrofits: Energy efficient lighting retrofits have been completed for all City facilities; and all traffic lights have been retrofitted with LEDs.

City Schools Program:

- Anaheim Public Utilities rebates of $1,330,125 helped support the retrofit of the 18 public schools with energy efficient lighting and heating/cooling equipment.

Proposed Energy Efficiency Programs and Services: for 2006-2007

- Introduced new Green Building Program, offering expedited plan review process, waiver of plan check fees, incentives, technical assistant, and discount rate.
- Introduced 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.

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 our community. A small financial commitment, which appears as a line item on our customer's regular utility bill, provides customers the opportunity to direct funding into one or both of these green resource programs. Up to $3 million of public benefit funds have been designated for the purchase of renewable power. During FY 05/06, Anaheim purchased 97,366 megawatt-hours at a public benefit "incremental" cost of $1,414,686.

Proposed Renewable Investment Program: for 2006-2007

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

Anaheim Demand 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 2006, no transmission emergencies or energy shortages occurred. Anaheim's Load Reduction Programs, however, were ready and available. Load Curtailment Agreements with three customers are in place until year-end 2006. At that time, these Agreements will be extended another two years 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 megawatts of curtailable load.

ANAHEIM PUBLIC UTILITIES

ANAHEIM PUBLIC UTILITIES
www.anaheim.net

Time Period for Reporting Data: Fiscal Year ending 6/30/2006

Anaheim - 0506 (v14)

CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Cost Summary: Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling	99	129,442	1,721,692	99	$ 14,100		$ 1,000	$ 15,100
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting	916	4,200,337	46,308,013	916	$ 235,997		$ 24,603	$ 260,601
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers	19	43,533	435,328	19	$ 37,850		$ 15,000	$ 52,850
Appliances	Res Dishwashers	9	32,762	425,902	10	$ 37,300		$ 15,000	$ 52,300
Consumer Electronics	Res Electronics								
HVAC	Res Cooling	432	961,208	26,677,309	590	$ 123,742		$ 75,000	$ 198,742
HVAC	Res Heating								
HVAC	Res Shell	285	375,652	7,379,790	285	$ 105,000		$ 20,000	$ 125,000
Lighting	Res Lighting	39	215,890	1,943,013	304			$ 20,000	$ 20,000
Pool Pump	Res Pool Pump	26	81,795	817,950	56	$ 8,400		$ 1,000	$ 9,400
Refrigeration	Res Refrigeration	79	528,137	9,506,471	79	$ 57,200		$ 15,000	$ 72,200
Other	Res Solar	2	3,410	102,300	2	$ 7,000		$ 840	$ 7,840
Water Heating	Res Water Heating								
Other	Other	1,142	6,193,756	82,696,491	1,142	$ 326,631		$ 7,625	$ 334,256
Total		3,047	12,765,922	178,014,260	3,502	$ 953,220		$ 195,069	$ 1,148,289

Anaheim - 0607 (v14)

CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Cost Summary: Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling	105	137,618	1,836,742	104	$ 15,000		$ 1,000	$ 16,000
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting	1,008	4,623,246	50,977,405	1,008	$ 259,837		$ 24,603	$ 284,441
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers	19	45,600	456,000	19	$ 39,000		$ 15,000	$ 54,000
Appliances	Res Dishwashers	9	33,554	436,202	11	$ 38,000		$ 15,000	$ 53,000
Consumer Electronics	Res Electronics								
HVAC	Res Cooling	457	992,714	27,477,579	623	$ 132,717		$ 75,000	$ 207,717
HVAC	Res Heating								
HVAC	Res Shell	290	381,171	7,482,475	290	$ 107,000		$ 20,000	$ 127,000
Lighting	Res Lighting	39	216,743	1,950,683	306			$ 20,000	$ 20,000
Pool Pump	Res Pool Pump	31	97,375	973,750	67	$ 10,000		$ 1,000	$ 11,000
Refrigeration	Res Refrigeration	83	559,256	10,066,599	83	$ 60,000		$ 15,000	$ 75,000
Other	Res Solar	4	6,820	204,600	4	$ 14,000		$ 840	$ 14,840
Water Heating	Res Water Heating								
Other	Other	1,267	6,755,168	91,334,309	1,267	$ 402,771		$ 7,625	$ 410,396
Total		3,312	13,849,264	193,196,343	3,783	$ 1,078,325		$ 195,069	$ 1,273,394

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 6th grade conservation education program to all 6th grade classes within the City of Azusa, both private and public.

Proposed Azusa Energy Efficiency Programs and Services: (for 2006-2007)

- 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 6/30/2006

Azusa 0506 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking	0	5,364	80,460	0	$ 1,485		$ 362	$ 1,847
HVAC	Non-Res Cooling	68	215,481	3,878,658	68	$ 64,093		$ 17,436	$ 81,529
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting	215	973,568	10,709,248	215	$ 200,607		$ 48,141	$ 248,747
Process	Non-Res Motors	15	30,317	454,755	15	$ 10,000		$ 2,044	$ 12,044
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration	5	14,817	266,706	5	$ 14,800		$ 1,199	$ 15,999
Appliances	Res Clothes Washers								
Appliances	Res Dishwashers								
Consumer Electronics	Res Electronics								
HVAC	Res Cooling	44	103,718	2,897,861	49	$ 44,009		$ 13,027	$ 57,036
HVAC	Res Heating								
HVAC	Res Shell	2	1,510	30,208	2	$ 5,454		$ 136	$ 5,589
Lighting	Res Lighting								
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration	1	7,997	143,942	1	$ 11,900		$ 647	$ 12,547
Other	Res Solar								
Water Heating	Res Water Heating								
Other	Other	75	544,556	4,948,704	75	$ 45,596		$ 22,246	$ 67,842
Total		425	1,897,328	23,410,542	430	$ 397,943		$ 105,236	$ 503,180

Azusa - 0607 (v14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking	0	5,364	80,460	0	$ 1,485		$ 362	$ 1,847
HVAC	Non-Res Cooling	68	215,481	3,878,658	68	$ 64,093		$ 17,436	$ 81,529
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting	215	973,568	10,709,248	215	$ 200,607		$ 48,141	$ 248,747
Process	Non-Res Motors	15	30,317	454,755	15	$ 10,000		$ 2,044	$ 12,044
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration	5	14,817	266,706	5	$ 14,800		$ 1,199	$ 15,999
Appliances	Res Clothes Washers								
Appliances	Res Dishwashers								
Consumer Electronics	Res Electronics								
HVAC	Res Cooling	44	103,718	2,897,861	49	$ 44,009		$ 13,027	$ 57,036
HVAC	Res Heating								
HVAC	Res Shell	2	1,510	30,208	2	$ 5,454		$ 136	$ 5,589
Lighting	Res Lighting								
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration	1	7,997	143,942	1	$ 11,900		$ 647	$ 12,547
Other	Res Solar								
Water Heating	Res Water Heating								
Other	Other	75	544,556	4,948,704	75	$ 45,596		$ 22,246	$ 67,842
Total		425	1,897,328	23,410,542	430	$ 397,943		$ 105,236	$ 503,180

CITY OF BANNING ELECTRIC UTILITY

- Established in 1922
- Of the 12,200 customers, 90 percent are residential
- Peak demand: 48 megawatts, which is primarily air conditioning load during the summer
- 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
- Retail energy sales in FY05/06 were 147,199,420 kilowatt-hours
- Projected retail energy sales for FY06/07 are 150,585,000 kilowatt-hours

Overview of Banning Energy Efficiency Programs

During FY 05/06, Banning spent $41,301 in energy efficiency rebates, which have 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: (2006-07)

- 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 program 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 20 percent renewables by 2017.

- 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 6/30/2006.

Banning - 0506 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling								
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting								
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers	0	534	5,336	0	$ 3,600		$ 239	$ 3,839
Appliances	Res Dishwashers	0	870	11,315	0	$ 2,375		$ 507	$ 2,882
Consumer Electronics	Res Electronics	0	138	1,238	0	$ 552		$ 55	$ 607
HVAC	Res Cooling	16	57,763	1,109,095	17	$ 14,800		$ 49,688	$ 64,488
HVAC	Res Heating								
HVAC	Res Shell								
Lighting	Res Lighting								
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration	6	36,394	655,099	6	$ 13,635		$ 29,349	$ 42,984
Other	Res Solar								
Water Heating	Res Water Heating								
Other	Other								
Total		22	95,699	1,782,083	23	$ 34,962		$ 79,838	$ 114,800

Banning - 0607 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling								
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting								
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers	1	1,740	17,400	1	$ 7,500		$ 270	$ 7,770
Appliances	Res Dishwashers	1	2,560	33,280	1	$ 5,000		$ 516	$ 5,516
Consumer Electronics	Res Electronics	0	688	6,192	0	$ 2,000		$ 96	$ 2,096
HVAC	Res Cooling	27	109,893	2,340,098	29	$ 29,720		$ 36,268	$ 65,988
HVAC	Res Heating								
HVAC	Res Shell	39	72,368	1,447,360	39	$ 210		$ 22,432	$ 22,642
Lighting	Res Lighting								
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration	9	56,613	1,019,030	9	$ 14,970		$ 15,793	$ 30,763
Other	Res Solar	4	9,600	288,000	4	$ 48,000		$ 4,464	$ 52,464
Water Heating	Res Water Heating								
Other	Other								
Total		82	253,462	5,151,361	83	$ 107,400		$ 79,838	$ 187,238

CITY OF BIGGS

- Established in 1903
- 600 customers are residential
- The City of Biggs projects a growth rate of 10 percent over the next 3 years
- Peak demand – in July 2006 was 4.2 megawatts
- Annual energy use: 16.4 gigawatt-hours, but is projected to be 18.7 gigawatt-hours for 2006.
- City of Biggs employs 10 people

Biggs Energy Efficiency Program Highlights

The City of Biggs implemented residential energy efficiency programs in 1997 and revised all of the programs in 2005. The energy efficiency programs being implemented for 2006-2007 have been expanded and will include commercial audits and educational programs.

Current Residential Customer Programs:

- Residential Energy Audits: The City of Biggs offers 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.
- Fluorescent Light Program: Customers who sign up for home energy audits or weatherization audits are provided with free fluorescent light bulbs, installed by a technician.
- 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, programmable thermostats and the purchase of energy efficient clothes washers, clothes dryers and refrigerators.

Proposed Biggs Energy Efficiency Programs and Services: (for 2006-2007)

- Maintain Existing Programs at current levels.

Modifications to Existing Programs:

- Residential Energy Rebate Program: The residential rebate program has been changes to add rebates for solar and electric attic fans. The rebates for programmable thermostats have been eliminated.

New Energy Efficiency Programs

Commercial Customer Programs: (2006-2007)

- Commercial Energy Audits: The City of Biggs offers 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.
- 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.

New School Programs:

- Investment Grade Audit Program: The City of Biggs offers free 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 the existing "3-12 Solar Schoolhouse Program" by funding teacher participation in the "Summer Institute for Educators" and by supplying Solar Schoolhouse Educational Tools for classroom use.

Biggs Demand Reduction Programs:

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

CITY OF BIGGS

Time Period for Reporting Data: Fiscal Year ending 6/30/2006.

Biggs - 0506 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling								
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting	1	2,922	46,746	1		$ 825	$ 540	$ 1,365
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers	0	229	2,288	0	$ 75		$ 26	$ 101
Appliances	Res Dishwashers	0	173	2,246	0	$ 225		$ 26	$ 251
Consumer Electronics	Res Electronics								
HVAC	Res Cooling	0	(113)	1,650	(1)	$ 1,149		$ 19	$ 1,168
HVAC	Res Heating								
HVAC	Res Shell	8	6,137	95,774	8	$ 3,699	$ 5,075	$ 1,106	$ 9,880
Lighting	Res Lighting	1	6,708	60,372	9		$ 3,225	$ 697	$ 3,922
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration	1	3,110	55,987	1	$ 750		$ 646	$ 1,396
Other	Res Solar								
Water Heating	Res Water Heating								
Other	Other		15,602	46,805				$ 540	$ 540
Total		11	34,767	311,867	19	$ 5,899	$ 9,125	$ 3,600	$ 18,624

Biggs - 0607 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling		40,000	720,000		$ 10,000		$ 2,926	$ 12,926
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting		64,800	712,800		$ 16,200		$ 2,896	$ 19,096
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers	0	512	5,120	0	$ 150		$ 21	$ 171
Appliances	Res Dishwashers	0	149	1,934	0	$ 150		$ 8	$ 158
Consumer Electronics	Res Electronics								
HVAC	Res Cooling	3	2,459	42,169	3	$ 2,400		$ 171	$ 2,571
HVAC	Res Heating								
HVAC	Res Shell	4	4,148	82,175	4	$ 5,800	$ 1,200	$ 334	$ 7,334
Lighting	Res Lighting								
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration	1	3,590	64,627	1	$ 2,400		$ 263	$ 2,663
Other	Res Solar								
Water Heating	Res Water Heating								
Other	Other		15,602	46,805		$ 6,000		$ 190	$ 6,190
Total		8	131,260	1,675,630	8	$ 43,100	$ 1,200	$ 6,809	$ 51,109

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 294 megawatts in July 2006
- Annual energy use is approximately 1,093 gigawatt-hours
- Burbank Water and Power employs approximately 300 employees

BWP's Energy Efficiency Program Highlights

During FY05/06, BWP spent a total of $1,618,588 for energy efficiency programs. These programs resulted in peak demand savings of 1,064 kilowatts, annual energy savings of approximately 5,400,000 kilowatt-hours, and an estimated lifetime energy savings of over 69,000,000 kilowatt-hours.

Current Commercial Customer Programs:
During FY05/06, Burbank Water and Power invested $1,139,526 on the following energy-efficient commercial programs resulting in peak reductions of 750 kilowatts, annual energy savings 4,652,115 kilowatt-hours, and lifetime energy savings of 52,989,071 kilowatt-hours:

- 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. Burbank Water and Power's certified installers will conduct that work and will pay up to $1,000 for selected retrofits.
- 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.

Current Residential Customer Programs:
During FY05/06, BWP invested $479,062 in the following energy efficient residential programs resulting in peak reductions of 314 kilowatts, annual energy savings 754,559 kilowatt-hours, and lifetime energy savings of 16,196,717 kilowatt-hours:

- Home Rewards Residential Rebate Program: Cash rebates offered to Burbank residents purchasing EnergyStar® appliances.
- Home Energy Analyzer: This free online service allows residents to input their household characteristics and energy use to discover ways to save energy.
- Made in the Shade: Up to 3 free shade trees are provided to interested Burbank homeowners. Shade trees are 'nature's air conditioners'; mature trees properly sited can significantly reduce air conditioning use.

Proposed BWP Energy Efficiency Programs: for 2006-2007
In addition to maintaining the existing programs for both residents and businesses, BWP will be implementing the following new energy efficiency programs during FY06/07:

New Commercial Customer Programs:

- 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.

New Residential Customer Programs:

- Low-Income Refrigerator Replacement Program: Remove old refrigerators and replace with EnergyStar® refrigerators in 400 low-income households.

- Refrigerator Round Up Program: Remove 500 secondary refrigerators from Burbank homes saving 1,000,000 kilowatt-hours annually.

New Community/Development Programs:

- Leadership in Energy and Environmental Design (LEED) Certification Incentive Program: Incentive program to encourage the construction of environmentally preferred buildings in Burbank.

- Thermal Energy Storage System at the Disney Cancer Center: Funds the incremental cost for the purchase and installation of a thermal energy storage system at the Disney Cancer Center to showcase responsible energy stewardship in Burbank.

New Educational Programs:

- Outsourced Educational Coordinator: Provides in-class instruction on energy conservation to Burbank's 4th grade students.

- "LivingWise" Educational Program: Provides energy-saving education and kits to 6th grade students.

- Energy and Water Conservation Education: Provides educational materials on the wise use of energy to Burbank 3rd graders as a companion piece to BWP's online Energy Efficiency World information.

- Business Energy Education Program: Provides free educational workshops on energy efficiency topics to Burbank businesses.

Renewable Energy Development Plans:
BWP is striving to achieve 20 percent of its load from renewable resources by 2017 per its Renewable Portfolio Standard. Currently, staff is seeking renewable projects.

BWP Demand Reduction Programs:
BWP does not have a summer peak demand reduction program.

BURBANK WATER & POWER (BWP)

Time Period for Reporting Data: Fiscal Year ending 6/30/2006.

Burbank - 0506 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling	58	1,663,607	20,781,869	58	$ 305,713	$ 13,459	$ 139,393	$ 458,565
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting	445	2,639,554	29,035,094	445	$ 185,973		$ 194,751	$ 380,724
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers	7	15,590	155,904	7	$ 113,475		$ 1,046	$ 114,521
Appliances	Res Dishwashers	4	11,185	145,402	4	$ 30,400		$ 975	$ 31,375
Consumer Electronics	Res Electronics								
HVAC	Res Cooling	152	293,275	6,944,971	212	$ 118,291		$ 46,583	$ 164,874
HVAC	Res Heating								
HVAC	Res Shell	31	41,222	824,448	31	$ 93,950		$ 5,530	$ 99,480
Lighting	Res Lighting								
Pool Pump	Res Pool Pump	4	13,325	133,250	9	$ 750		$ 894	$ 1,644
Refrigeration	Res Refrigeration	24	142,832	4,284,960	24	$ 95,299		$ 28,741	$ 124,040
Other	Res Solar	6	12,291	368,730	6	$ 11,676		$ 2,473	$ 14,149
Water Heating	Res Water Heating								
Other	Other	261	741,246	7,478,938	262	$ 427,458		$ 50,165	$ 477,622
Total		992	5,574,127	70,153,566	1,057	$ 1,382,983	$ 13,459	$ 470,551	$ 1,866,994

Burbank - 0607 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling	58	826,161	12,407,409	58	$ 293,857	$ 13,459	$ 74,729	$ 382,046
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting	445	2,639,554	29,035,094	445	$ 185,973		$ 174,878	$ 360,850
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers	7	15,590	155,904	7	$ 113,475		$ 939	$ 114,414
Appliances	Res Dishwashers	4	11,185	145,402	4	$ 30,400		$ 876	$ 31,276
Consumer Electronics	Res Electronics								
HVAC	Res Cooling	152	293,275	6,944,971	212	$ 118,291		$ 41,829	$ 160,120
HVAC	Res Heating								
HVAC	Res Shell	31	41,222	824,448	31	$ 93,950		$ 4,966	$ 98,915
Lighting	Res Lighting								
Pool Pump	Res Pool Pump	4	13,325	133,250	9	$ 750		$ 803	$ 1,553
Refrigeration	Res Refrigeration	144	1,184,272	23,030,880	144	$ 415,799		$ 138,714	$ 554,513
Other	Res Solar	6	12,291	368,730	6	$ 11,676		$ 2,221	$ 13,897
Water Heating	Res Water Heating								
Other	Other	261	741,246	7,478,938	262	$ 427,458		$ 45,045	$ 472,503
Total		1,112	5,778,121	80,525,026	1,177	$ 1,691,628	$ 13,459	$ 485,000	$ 2,190,087

COLTON ELECTRIC UTILITY (CEU)

- Colton Electric Utility was established in 1895 by the City of Colton
- CEU has three substations and owns a 43 megawatts gas combustion turbine generator
- CEU has 18,126 electric meters, with Residential making up 28 percent, Commercial 27 percent, Industrial 42 percent and 3 percent Municipal of total sales
- Peak demand for 2006 was 86 megawatts on August 22 at 4:00 p.m.
- In fiscal year 2005-2006 Colton Electric Utility sold 342,569,090 kilowatt-hours
- CEU has 40 employees

CEU Energy Efficiency Program Highlights

From FY 1999 through FY 2006, 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 FY05/06 was $808,002. The budget for FY 06/07 is $935,580.

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 kilowatts 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.

Current Residential Customer Programs:

- All 16,000 residential customers have been provided with a free compact fluorescent lamp that uses 15 watts to provide the light of a 60 watt incandescent lamp. This $63,626 program reduced peak demand by 77 kilowatts and overall demand by 525 kilowatts saving 409,000 kilowatt-hours per year. The total lifecycle saving is calculated to be 3,686,400 kilowatt-hours.
- Home energy audits are available to customers with high energy bills.
- Online energy audits and information is available through Apogee Interactive.
- CEU's air conditioning rebate program has had 45 participants. The program replaced 237 tons of air conditioning for $24,700 in rebates, leveraging total customer investment of $359,664.

Low Income Customer Programs:

- The most successful low income program so far has been a $10,000 energy audit and portable cooler program for customers with the highest energy use. The program saved the average customer 26 percent on their electric bills and reduced summer energy use by 74,900 kilowatt-hours and peak demand by an estimated 100 kilowatts.

City Facilities:

- 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 2006-2007

Residential:

- The CFL mailing program will be sending all residential customers a package with 2 CFL lamps and energy saving information. The program is expected to cost $320,000 and should save 153 peak kilowatts, 1050 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.
- Low-income residential refrigerator replacement will spend $320 per customer. Expected $32,000 annual will reduce peak demand by 24 kilowatts, save 155,680 kilowatt-hours annually, and 2,802,240 kilowatt-hours over the life of the refrigerator.

- Low-income customers with high air conditioning costs may be 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 kilowatts commercial system that received $50,000 from Colton Electric.
- During 2006, several solar systems are in the planning process with $200,000 budgeted for residential and commercial customers.
- Other renewable energy expenditures in 2005 were $185,000 for landfill gas electric and wind energy. Colton 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 TOU rates are available for customers with more than 200 kilowatts demand. 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 6/30/2006.

Colton - 0506 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling								
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting	87	518,845	4,726,495	114	$ 205,314			$ 205,314
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers								
Appliances	Res Dishwashers								
Consumer Electronics	Res Electronics								
HVAC	Res Cooling	8	5,498	98,971	13	$ 24,648			$ 24,648
HVAC	Res Heating								
HVAC	Res Shell								
Lighting	Res Lighting	78	418,970	3,836,314	526	$ 66,071			$ 66,071
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration								
Other	Res Solar								
Water Heating	Res Water Heating								
Other	Other								
Total		173	943,313	8,661,780	652	$ 296,033			$ 296,033

Colton - 0607 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling								
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting	60	343,440	2,849,040	70	$ 18,250			$ 18,250
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers								
Appliances	Res Dishwashers								
Consumer Electronics	Res Electronics								
HVAC	Res Cooling	174	166,940	1,093,660	177	$ 40,000			$ 40,000
HVAC	Res Heating								
HVAC	Res Shell								
Lighting	Res Lighting	438	3,049,600	31,088,000	1,782	$ 552,000			$ 552,000
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration	24	155,680	2,802,240	24	$ 10,000			$ 10,000
Other	Res Solar								
Water Heating	Res Water Heating								
Other	Other								
Total		696	3,715,660	37,832,940	2,053	$ 620,250			$ 620,250

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 FY05/06, Corona spent more than $42,000 in rebates and incentives to increase energy efficiency for the community. The High Efficiency Washer Rebate program reduced load by 9,830 kilowatt-hours per year through the use of Energy Star® appliances.

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.
- Compact Fluorescent Light Bulb Distribution
- 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: (2006-2007)

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

- 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 6/30/2006.

Corona - 0506 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling								
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting								
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers	4	9,830	98,304	4	$ 42,240		$ 1,000	$ 43,240
Appliances	Res Dishwashers								
Consumer Electronics	Res Electronics								
HVAC	Res Cooling								
HVAC	Res Heating								
HVAC	Res Shell								
Lighting	Res Lighting	0	780	7,020	1			$ 1,000	$ 1,000
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration								
Other	Res Solar								
Water Heating	Res Water Heating								
Other	Other		2,229	6,686				$ 6,000	$ 6,000
Total		4	12,839	112,010	5	$ 42,240		$ 8,000	$ 50,240

Corona - 0607 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling								
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting								
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers	4	10,240	102,400	4	$ 44,000		$ 1,000	$ 45,000
Appliances	Res Dishwashers								
Consumer Electronics	Res Electronics								
HVAC	Res Cooling								
HVAC	Res Heating								
HVAC	Res Shell								
Lighting	Res Lighting	3	25,260	227,340	1	$ 3,775		$ 1,000	$ 4,775
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration								
Other	Res Solar								
Water Heating	Res Water Heating								
Other	Other		2,229	6,686				$ 6,000	$ 6,000
Total		7	37,729	336,426	6	$ 47,775		$ 8,000	$ 55,775

GLENDALE WATER AND POWER (GWP)

- GWP manages a service territory with 83,000 customer meters.
- GWP had 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 megawatts share of the Magnolia Power Plant, a 20 megawatts share of Hoover Dam generation, 39 megawatts of Intermountain Power Project, 10 megawatts of Palo Verde Nuclear Generating Station, 20 megawatts of San Juan Unit 3, and approximately 80 megawatts of other power through power purchase agreements.
- Approximately 14 percent of GWP retail sales come from renewable resources, including wind, geothermal, local landfill, and hydroelectric. GWP's 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

Total DSM Investments:

- $2.9 million in FY05/06, over $20 million since January 2000.

Total Demand and Energy Savings: FY05/06

- Incremental demand reductions: 2,282 kilowatts
- Incremental coincident peak demand reductions: 1,500 kilowatts
- Incremental energy savings: 8,463 megawatt-hours
- Incremental energy savings as a percent of GWP annual load: 0.77 percent
- Cumulative demand reductions since January 2000: 12,300 kilowatts
- Cumulative energy savings since January 2000: 48,800 megawatt-hours

Current Large Business Customer Programs:

- Business Energy Solutions (BES): Provides incentives to complete pre-approved energy audits and retrofit projects. Incentives are limited to the smaller 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-hours saved over the life of the installed measures. Audit incentives are limited to 10 cents per square foot. PBC program investments reached $1.7 million since December 1999. Cumulative demand and energy savings of 3,244 kilowatts and 18,197 megawatt-hours.

Current Small Business Customer Programs:

- Smart Business Energy Saving Upgrades: GWP's CMUA award winning program provides small business customers with comprehensive no-cost energy surveys, customized written reports, and energy education, and directly installs as much as $1,000 worth of cost-effective energy conservation measures. Over 1800 energy audits and over 1,360 retrofits have been completed since July 2001 at a total investment of $2,705,571. Cumulative annual demand and energy savings from the installed measures are expected reach 687 kilowatts and 3,251 megawatt-hours.
- Smart Business Lighting Rebates: Rebates target small and medium sized businesses for energy efficient lighting upgrades by providing cash rebates for installed measures. PBC investments since June 2000 have reached $90,000. These investments are expected to produce cumulative demand and energy savings of 109 kilowatts and 312 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. Just under 1,100 tons of HVAC have been tuned since February 2000 at a total PBC investment of $197,378. This investment is producing estimated cumulative annual demand and energy savings of 689 kilowatts and 782 megawatts.

Current Residential Customer Programs:

- 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 over 6,415 audits and energy education sessions, and installed over 14,667 CFLs, 2,571 water heater blankets, and 2,461 blower door tests at a total investment of $1.7 million. These investments are producing estimated cumulative annual demand and energy savings of 1,397 kilowatts and 4,517 megawatts.
- Smart Home Energy and Water Savings Rebates: Provides rebates to promote the early retirement of approved energy and water saving appliances and devices. Over 19,100 rebates have been processed since July 2001 at a total PBC investment of $2.1 million. These investments are producing estimated cumulative demand and energy savings of 2,331 kilowatts and 4,375 megawatts.
- Smart Home Solar Solutions: Provides a $4.00 per watt incentive up to 50 percent of the installed cost to promote grid-connected solar photovoltaic systems, plus 100 percent of the customer cost for City of Glendale permits. Systems are limited to a maximum 10 kilowatts. This program has helped install 88 kilowatts since September 2000. These installations are generating an estimated 127 megawatts annually in clean, green power at a total PBC investment of $326,668.
- 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 6,800 tons of HVAC have been tuned since February 2000 at a total PBC investment of $340,643. This investment is

producing estimated cumulative annual demand and energy savings of 861 kilowatts and 997 megawatts.

- 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 7,500 students have participated in this program since July 2001 at a total investment of $331,773. Cumulative annual demand and energy savings reaching 393 kilowatts and 2,221 megawatts 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. Close to 700 trees have been planted since July 2004 at a total investment of $84,298. These trees are expected to produce cumulative annual demand and energy savings of 40 kilowatts and 291 megawatts.
- Torchiere Exchange Program: Saves energy and reduces the danger of fire by allowing GWP customers to exchange up to two 300 watt or more halogen torchiere lamps for state-of-the-art 55 watt compact fluorescent models at exchange events. Since July 2003, 3,357 lamps have been exchanged at five local events at total PBC investment of $132,550. These new lamps are expected to produce cumulative annual demand and energy savings of 158 kilowatts and 685 megawatts.

Low-Income/Disabled Customer Programs:

- Cool Care: Provides long-term electric bill discounts for low-income customers encouraging the replacement and recycling of old, energy inefficient refrigerators. Program was on hold during FY 2005-2006. Program replaced and recycled 1,911 refrigerators with new EnergyStar® models at total PBC investment of $1.2 million since July 2003. Cumulative annual demand and energy savings for replacements to date are estimated at 103 kilowatts and 1,322 megawatts.
- 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 1,297 tons of energy inefficient Peak Hogs in Glendale apartments at a total investment of $804,969. Cumulative annual demand and energy savings for these replacements are estimated at 366 kilowatts and 808 megawatts.

Proposed GWP DSM Programs: for FY 2006-2007

- Energy savings equal to 1.0 percent of 5-year moving average retail sales.
- Expenditures at or above 2.85 percent of retail revenues.
- Maximize energy efficiency program results through continued use of the NCPA/SCPPA E3/KEMA evaluation model.

Supply Side Renewable Energy Development Plans: for FY 2006-2007

- Enter into a new long-term contract for 10 megawatts of wind generated electricity from Southwestern Wyoming and begin receiving the energy under the contract.
- Review and evaluate proposals received by SCPPA for renewable energy to obtain an additional 3-10 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.
- Participate in the upgrade of the STS transmission to provide a route to receive additional renewable power.

GWP Demand Reduction Programs:
GWP does not have any specific demand reduction programs. However, it has an E-Meter Manager Program, which supports the development of advanced metering services for government and large business customers. This program installs automated meters and data reading technologies at large business locations, and provides access to state of the art data analysis software with the help of SCPPA and Automated Energy.

GLENDALE WATER AND POWER (GWP)

Time Period for Reporting Data: Fiscal Year ending 6/30/2006.

Glendale - 0506 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling	138	1,175,898	21,166,164	138	$ 109,461		$ 9,324	$ 118,785
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting	668	3,505,479	38,156,821	725	$ 830,635		$ 70,754	$ 901,389
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers	26	60,832	608,320	26	$ 22,574		$ 1,923	$ 24,496
Appliances	Res Dishwashers	6	23,424	304,512	7	$ 39,994		$ 3,407	$ 43,400
Consumer Electronics	Res Electronics								
HVAC	Res Cooling	248	938,935	18,174,752	478	$ 646,574		$ 55,075	$ 701,650
HVAC	Res Heating								
HVAC	Res Shell	264	319,835	5,417,279	264	$ 243,253		$ 20,720	$ 263,973
Lighting	Res Lighting	62	397,353	3,576,177	426	$ 77,406		$ 6,593	$ 83,999
Pool Pump	Res Pool Pump	5	29,250	292,500	20	$ 6,064		$ 517	$ 6,581
Refrigeration	Res Refrigeration	85	498,332	8,969,976	85	$ 232,182		$ 19,777	$ 251,959
Other	Res Solar	30	42,775	1,283,250	30	$ 160,000		$ 13,629	$ 173,629
Water Heating	Res Water Heating	9	33,212	498,180	9	$ 6,507		$ 554	$ 7,061
Other	Other		1,454,292	4,362,876	83	$ 399,601		$ 34,038	$ 433,639
Total		1,540	8,479,618	102,810,807	2,291	$ 2,774,251		$ 236,311	$ 3,010,561

Glendale - 0607 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling	138	1,175,898	21,166,164	138	$ 109,461		$ 9,324	$ 118,785
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting	668	3,505,479	38,156,821	725	$ 830,635		$ 70,754	$ 901,389
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers	26	60,832	608,320	26	$ 22,574		$ 1,923	$ 24,496
Appliances	Res Dishwashers	6	23,424	304,512	7	$ 39,994		$ 3,407	$ 43,400
Consumer Electronics	Res Electronics								
HVAC	Res Cooling	248	938,935	18,174,752	478	$ 646,574		$ 55,075	$ 701,650
HVAC	Res Heating								
HVAC	Res Shell	264	319,835	5,417,279	264	$ 243,253		$ 20,720	$ 263,973
Lighting	Res Lighting	62	397,353	3,576,177	426	$ 77,406		$ 6,593	$ 83,999
Pool Pump	Res Pool Pump	5	29,250	292,500	20	$ 6,064		$ 517	$ 6,581
Refrigeration	Res Refrigeration	85	498,332	8,969,976	85	$ 232,182		$ 19,777	$ 251,959
Other	Res Solar	30	42,775	1,283,250	30	$ 160,000		$ 13,629	$ 173,629
Water Heating	Res Water Heating	9	33,212	498,180	9	$ 6,507		$ 554	$ 7,061
Other	Other		1,454,292	4,362,876	83	$ 399,601		$ 34,038	$ 433,639
Total		1,540	8,479,618	102,810,807	2,291	$ 2,774,251		$ 236,311	$ 3,010,561

GRIDLEY MUNICIPAL UTILITY (GMU)

- The City's electric utility was 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 due to the prevalence of T-12 lighting in businesses throughout the City.

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

- 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.
- Ultra-High Efficiency Cooling Projects: GMU is funding demonstration projects on community facilities to test new cooling technologies and assess their viability for additional applications in Gridley.

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: **(for 2006-2007)**

- 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.

GRIDLEY MUNICIPAL UTILITY (GMU)

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

Gridley - 0506 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling								
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting								
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers	0	229	2,288	0	$ 75		$ 470	$ 545
Appliances	Res Dishwashers								
Consumer Electronics	Res Electronics								
HVAC	Res Cooling	7	5,503	96,839	3	$ 4,235		$ 19,888	$ 24,123
HVAC	Res Heating								
HVAC	Res Shell	3	3,252	54,773	3	$ 5,417		$ 11,249	$ 16,666
Lighting	Res Lighting	0	98	1,074	0	$ 25		$ 220	$ 245
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration	0	573	10,310	0	$ 175		$ 2,117	$ 2,292
Other	Res Solar								
Water Heating	Res Water Heating								
Other	Other								
Total		10	9,654	165,284	7	$ 9,927		$ 33,945	$ 43,872

Gridley - 0607 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling	21	26,928	520,920	20	$ 36,750		$ 15,476	$ 52,226
HVAC	Non-Res Heating								
HVAC	Non-Res Shell	1	1,572	23,580	1	$ 2,000		$ 701	$ 2,701
Lighting	Non-Res Lighting	4	20,760	228,360	4	$ 15,000		$ 6,784	$ 21,784
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers	1	1,373	13,728	1	$ 450		$ 408	$ 858
Appliances	Res Dishwashers	0	346	4,493	0	$ 150		$ 133	$ 283
Consumer Electronics	Res Electronics								
HVAC	Res Cooling	5	5,305	91,582	6	$ 6,180		$ 2,721	$ 8,901
HVAC	Res Heating								
HVAC	Res Shell	6	7,130	105,633	6	$ 6,664		$ 3,138	$ 9,802
Lighting	Res Lighting	3	16,480	148,320	22	$ 1,200		$ 4,406	$ 5,606
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration	0	435	7,834	0	$ 250		$ 233	$ 483
Other	Res Solar								
Water Heating	Res Water Heating								
Other	Other								
Total		41	80,329	1,144,449	60	$ 68,644		$ 34,000	$ 102,644

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 – 19.9 megawatts; *(July 2004)*
- 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. For FY05/06, these programs resulted in peak demand savings of 1 kilowatt, net demand savings of 1 kilowatt and cumulative energy savings of 4,704 kilowatt-hours.

Healdsburg has recently undergone an extensive redesign/upgrade of their energy efficiency and anticipates doing the same with their renewable energy (PV) program. 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 our residential and commercial customers, enabling them to reduce their 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 our Hispanic residential customers offering comprehensive energy efficiency information to improve energy efficiency and reduce energy use.
- Customer-Centered Programs: The City of Healdsburg now offers a comprehensive energy efficiency incentive program for residential and commercial customers focusing on peak load reduction and energy conservation. 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.

Proposed Healdsburg Energy Efficiency Programs and Services: (for 2006-2007)

- Redesign/upgrade existing programs and increase 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 now being implemented will include consideration and evaluation of their impact on demand reduction.

CITY OF HEALDSBURG

Time Period for Reporting Data: Fiscal year ending 6/30/06.

Healdsburg - 0506 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling								
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting								
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers								
Appliances	Res Dishwashers								
Consumer Electronics	Res Electronics								
HVAC	Res Cooling								
HVAC	Res Heating								
HVAC	Res Shell								
Lighting	Res Lighting								
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration								
Other	Res Solar	1	4,704	141,120	1	$ 8,001			$ 8,001
Water Heating	Res Water Heating								
Other	Other								
Total		1	4,704	141,120	1	$ 8,001			$ 8,001

Healdsburg - 0607 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling								
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting	11	67,880	746,680	15	$ 38,750		$ 22,839	$ 61,589
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers	1	1,830	18,304	1	$ 600		$ 560	$ 1,160
Appliances	Res Dishwashers	0	288	3,744	0	$ 125		$ 115	$ 240
Consumer Electronics	Res Electronics								
HVAC	Res Cooling	2	2,309	39,733	6	$ 3,325		$ 1,215	$ 4,540
HVAC	Res Heating								
HVAC	Res Shell	7	5,689	68,096	7	$ 1,825		$ 2,083	$ 3,908
Lighting	Res Lighting	4	21,720	195,480	30	$ 1,875		$ 5,979	$ 7,854
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration	0	2,176	39,168	0	$ 1,500		$ 1,198	$ 2,698
Other	Res Solar	6	12,000	360,000	6	$ 37,500		$ 11,011	$ 48,511
Water Heating	Res Water Heating								
Other	Other								
Total		31	113,892	1,471,205	65	$ 85,500		$ 45,000	$ 130,500

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 76 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
- Construction of a substation is planned during the next 2 years
- HMU's purchased power is 100 percent Green Energy from 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 our 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. Our 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: (2006-2007)
No changes to the existing programs are currently being considered and will be maintained at the current level. 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 6/30/06.

Hercules - 0506 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling								
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting								
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers	0	46	464	0	$ 150			$ 150
Appliances	Res Dishwashers								
Consumer Electronics	Res Electronics								
HVAC	Res Cooling								
HVAC	Res Heating								
HVAC	Res Shell								
Lighting	Res Lighting								
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration								
Other	Res Solar								
Water Heating	Res Water Heating								
Other	Other								
Total		0	46	464	0	$ 150			$ 150

Hercules - 0607 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling								
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting								
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers	0	23	232	0	$ 75			$ 75
Appliances	Res Dishwashers	0	58	749	0	$ 50			$ 50
Consumer Electronics	Res Electronics								
HVAC	Res Cooling								
HVAC	Res Heating								
HVAC	Res Shell								
Lighting	Res Lighting								
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration	0	70	1,253	0	$ 100			$ 100
Other	Res Solar								
Water Heating	Res Water Heating								
Other	Other								
Total		0	150	2,234	0	$ 225			$ 225

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 is looking to serve 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.

Proposed Energy Efficiency Projects and Services: (2006-2007)

- No modifications to existing programs are anticipated at this time.

City of Industry Demand Reduction Programs:

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

ISLAND ENERGY

- Island Energy supplies all retail electric and gas services within its service area, the former naval shipyard of Mare Island, in the City of Vallejo.
- 227 residential and 176 commercial customers
- 92 percent of energy use comes from the commercial sector.
- Customers on Mare Island are served through a looped 12-kilovolt underground facilities with a peak demand of 4.5 megawatts.
- Island Energy purchases more than 50 percent of its energy from renewable resources.
- Island Energy is currently budgeting for a major overhaul of its main substation, an upgrade of its backbone feeder system.

Background on Island Energy

The Pittsburg Power Company, a Joint Powers Authority between the City of Pittsburg and the Redevelopment Agency of the City of Pittsburg, has been doing business on Mare Island under the name of Island Energy. Pittsburg Power Company is committed to providing high quality utility services at competitive prices to its customers. In addition to Island Energy, the Pittsburg Power Company has been actively working with private industry to develop power plants and transmission lines.

One of the Pittsburg Power Company's latest ventures is a joint development partnership with Babcock and Brown for the construction and operation of a 57-mile High Voltage Direct Current (HVDC) transmission line from the City of Pittsburg to the City of San Francisco. The project is planned with the objectives of improving the transmission infrastructure into the San Francisco peninsula, lowering transmission loss, alleviating grid congestion and improving regional grid reliability. According to the California Independent System Operator, the Trans Bay Cable Project will save approximately 20 megawatts in system losses.

Island Energy Efficiency Program Highlights

Current Commercial Customer Programs:

- Distribution System Upgrade: Island Energy has invested in upgrading the distribution lines and substation equipments in an effort to reduce system loss and eliminate redundant facilities. Island Energy has worked with a major housing developer on Mare Island, Lennar Mare Island, to replace old circuits with new circuits along parts of its distribution system.

- Energy Efficient Lighting Program: Island Energy has worked closely with the City of Vallejo to promote 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 lighting 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 its customers' 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 for its residential customers.
- Energy Efficient House Program: Island Energy encourages all new houses built in the last few years to use energy-efficient building practices and technologies.
- Consumption Monitoring Program: Island Energy has closely monitored residential consumption patterns and developed a good understanding of residential energy demands. In the past two years, Island Energy has been able to project annual energy demand accurately.

Proposed Energy Efficiency Projects and Services: (2006-2007)

- Provide energy audits for customers on request and post energy saving tips on the Island Energy website.
- Replace old assets with energy-efficient new assets to improve system efficiency and reduce system loss.
- Continue to monitor the development of renewable energy supplies.
- Consider renewable energy options as the opportunities to change the supply portfolio occur.

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. Once load matures (almost all residential customers have spent less than one year with Island Energy), the utility will evaluate demand management through rate design programs.

IMPERIAL IRRIGATION DISTRICT (IID)

- Established in 1936
- IID serves135,000 customers
- Peak demand: 993 megawatts, July 21, 2006
- Annual energy sales are 3,108 gigawatt-hours in 2005

IID's Energy Efficiency Program Highlights

Total program expenditures of $1,592,845 in calendar year 2006 will result in savings of more than 2,092,625 kilowatt-hours annually. These investments in efficiency will also reduce peak purchases by 836 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 all programs are 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: Free 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, dishwashers, clothes washers, 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.
- Commercial Photovoltaic Rebate Program: Rebates are offered to commercial customers installing qualifying photovoltaic generation systems.
- Ag Program: IID Energy implemented an Ag program in 2006. This program targets refrigerated warehouses and irrigation/pumping systems.

Current Residential Customer Programs:

- IID's Energy Conservation Services: Free energy audits, 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 including refrigerators, room air conditioners, dishwashers, clothes washers, lighting products, home/office electronics, and ceiling fans.
- Energy Star® Homes Program: Incentives offered to residential developers that build homes that exceed Title 24 energy specifications by at least 15 percent.
- 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, heat pumps, and evaporative coolers. Program is being promoted in conjunction with Energy Star®, and is available for residential customers, replacement and new construction.
- Residential Photovoltaic Rebate Program: Rebates are offered to residential customers installing qualifying photovoltaic generation systems.
- 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 25 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.

Public Facilities Program:

- Photovoltaic Pilot Program: Funds photovoltaic installations to promote research, development, and demonstration programs for the public interest to advance science or technology, which is not adequately provided by competitive and regulated markets through the funding of projects proposed by schools and cities within IID service territory.

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.

Proposed IID Energy Efficiency Programs and Services: **(2007)**

Existing Programs:

- IID Energy will be analyzing all its programs in 2007 for customer acceptance, cost effectiveness, and ability to achieve goals. This effort will result in some program changes.
- IID Energy has increased its promotional efforts in 2007 to reach more customers and expand its trade ally interaction.
- IID Energy has increased its energy efficiency goals in 2007. Increased results are expected from increased emphasis and modified deliverables for business customers, the introduction and increased emphasis on new construction, and the inclusion of technologies new to the programs.

New Programs:

- IID Energy will develop and implement a small business energy efficiency program in 2007 targeting high density and energy consuming small businesses.

New Renewable Energy Investment:

- IID Energy will introduce a Renewable Energy (PV) program in 2007.

IID Demand Reduction Programs:

IID Energy will introduce a demand response program in 2007.

IMPERIAL IRRIGATION DISTRICT (IID)

Time Period for Reporting Data: Calendar Year ending 12/31/2005.

IID 2005 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling	19	38,052	570,783	6	$ 6,035		$ 604	$ 6,639
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting	2	9,381	103,189	2	$ 572		$ 57	$ 629
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers	5	12,355	123,552	5	$ 2,700		$ 270	$ 2,970
Appliances	Res Dishwashers	1	1,555	20,218	0	$ 1,350		$ 135	$ 1,485
Consumer Electronics	Res Electronics	0	3,371	30,341	0	$ 4,900		$ 490	$ 5,390
HVAC	Res Cooling	289	302,366	5,866,219	112	$ 317,950		$ 31,795	$ 349,745
HVAC	Res Heating								
HVAC	Res Shell	701	1,665,898	17,336,266	701	$ 442,072		$ 44,207	$ 486,279
Lighting	Res Lighting								
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration	10	59,647	1,073,650	10	$ 85,700		$ 8,570	$ 94,270
Other	Res Solar								
Water Heating	Res Water Heating								
Other	Other								
Total		1,026	2,092,625	25,124,216	836	$ 861,279		$ 86,128	$ 947,407

IID 2006 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling	39	80,392	1,205,879	12	$ 12,750		$ 1,275	$ 14,025
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting	10	57,630	633,926	11	$ 7,028		$ 703	$ 7,731
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers	6	13,728	137,280	6	$ 3,000		$ 300	$ 3,300
Appliances	Res Dishwashers	1	2,477	32,198	1	$ 2,150		$ 215	$ 2,365
Consumer Electronics	Res Electronics	0	2,374	21,362	0	$ 3,450		$ 345	$ 3,795
HVAC	Res Cooling	182	159,675	3,293,578	18	$ 287,108		$ 28,711	$ 315,819
HVAC	Res Heating								
HVAC	Res Shell	701	1,666,584	17,349,994	701	$ 450,352		$ 45,035	$ 495,387
Lighting	Res Lighting								
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration	14	82,615	1,487,074	14	$ 118,700		$ 11,870	$ 130,570
Other	Res Solar								
Water Heating	Res Water Heating								
Other	Other								
Total		954	2,065,474	24,161,290	763	$ 884,538		$ 88,454	$ 972,992

LASSEN MUNICIPAL UTILITY DISTRICT (LMUD)

- Lassen Municipal Utility District was established in 1988
- 11,500 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

In FY 05/06, LMUD spent more than $96,000 in rebates and incentives to increase energy efficiency for the community. The LMUD "Residential Rebate" program has resulted in a load reduction of 65,312 kilowatt-hours per year through the use of EnergyStar® appliances and Marathon Water Heaters.

Current Residential Customer Programs:

- Residential Rebate Program": provides rebate credits to customers who purchase and install EnergyStar® appliances and Marathon electric water heaters. In FY 05/06, over 500 customers have participated in the program with Lassen issuing rebate credits to customers totaling over $46,000. A unique aspect of this program is that rebate applicants must purchase qualifying appliances from a local participating vendor. In this way, Lassen can encourage customers to support local merchants, bolstering the local economy.
- 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.
- "Whole House" Efficiency Rebates: LMUD has introduced a "SmartBuilt" home program. This program targets new construction, as well as, remodeled homes to

encourage homeowners and contractors to install energy saving measures such as low-e windows, upgraded insulation, energy efficient appliances and high SEER heating and cooling units. LMUD is also offering rebates to customers who perform and pass the HERS duct test.

- **"**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). Through this program Lassen has contributed over $50,000 in FY 05/06 to local non-profit agencies. The monies went to energy conservation projects, as well as educational programs and solar energy projects.

- 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.

Proposed Energy Efficiency Projects and Services: (2006-2007)

- CFL replacement: LMUD will be providing energy efficient CFL bulbs to residential customers.
- Conservation education for low-income customers: LMUD will be offering energy audits and providing information and specific energy efficiency recommendations to low income residential customers.

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 6/30/2006.

Lassen 0506 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling								
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting	5	12,154	121,536	5	$ 23,306			$ 23,306
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers	18	42,557	425,568	18	$ 13,950			$ 13,950
Appliances	Res Dishwashers	3	6,394	83,117	2	$ 8,325			$ 8,325
Consumer Electronics	Res Electronics								
HVAC	Res Cooling								
HVAC	Res Heating								
HVAC	Res Shell								
Lighting	Res Lighting								
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration	2	12,925	232,646	2	$ 17,900			$ 17,900
Other	Res Solar								
Water Heating	Res Water Heating	1	3,437	51,552	1	$ 6,000			$ 6,000
Other	Other								
Total		28	77,466	914,419	28	$ 69,481			$ 69,481

Lassen 0607 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling								
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting								
Process	Non-Res Motors	8	68,330	1,024,944	11	$ 2,000		$ 29,711	$ 31,711
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers	19	45,760	457,600	19	$ 15,000		$ 13,265	$ 28,265
Appliances	Res Dishwashers	3	6,624	86,112	2	$ 8,625		$ 2,496	$ 11,121
Consumer Electronics	Res Electronics								
HVAC	Res Cooling		38,760	969,000	280	$ 75,000		$ 28,089	$ 103,089
HVAC	Res Heating								
HVAC	Res Shell	27	22,472	442,032	27	$ 49,000		$ 12,813	$ 61,813
Lighting	Res Lighting	19	104,000	936,000	138	$ 5,490		$ 27,132	$ 32,622
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration	3	15,144	272,592	3	$ 21,000		$ 7,902	$ 28,902
Other	Res Solar								
Water Heating	Res Water Heating	1	5,960	89,400	1	$ 12,500		$ 2,591	$ 15,091
Other	Other								
Total		80	307,050	4,277,680	481	$ 188,615		$ 124,000	$ 312,615

LODI ELECTRIC UTILITY (LEU)

- Established in 1910
- 28,000 customers (23,000 residential; 5,000 commercial/industrial)
- Peak demand: 130 megawatts, occurs in: summer daytime
- Annual Energy Use: 459,637,092 kilowatt-hours (FY05/06)

LEU Energy Efficiency Program Highlights

Since 1998, LEU has spent more than $6 million on demand-side management rebates and programs to increase energy efficiency for the Lodi community, resulting in a 12 percent peak demand reduction and an 8 percent energy reduction.

Current Commercial Customer Programs:

- Lodi Commercial Rebate Program: Offers rebates to small business customers who purchase and install energy efficiency measures, such as: attic insulation, window tinting/shade screens, programmable thermostats, ceiling fans, maintain refrigeration/HVAC equipment.
- Lodi Industrial Customer High Efficiency Program: Offers rebates of up to $10,000 to large commercial/industrial customers in Lodi; the rebate is for pumps/motors, process equipment improvements, building envelope improvements, HVAC/chiller replacements, lighting retrofits; the rebate formula- $0.15 for every kilowatt-hours of proven energy savings.

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 residential customers for installing attic/wall insulation, ceiling fans, repairing/replacing HVAC duct work, for installing attic fans, whole fans, shade screens/window tinting.
- Lodi Helping Hands Project: Provides weatherization services to low-income families and senior shut-in's.

Current Commercial and Residential Customer Programs

- Lodi Refrigerator/Freezer Recycling Program: Offers (once per year), the removal and recycling of old refrigerators/freezers to Lodi customers.
- Lodi Energy Audit Program: Provides free on-site and computer/on-line energy audits for residential and small commercial customers.

Current Public School Programs:

- Lodi "LivingWise" Program: Provides energy efficiency kits and manuals to up to 500 6th grade students in Lodi schools - teaching them about the basics of energy and water conservation.
- Lodi Solar Schoolhouse Program: Provides teacher mini-grants and teacher training regarding solar/renewable energy resources; we also sponsor, via this program, an annual Lodi Solar Olympics: Held each May 2006 event we had 400 students participate; we utilize public benefits funds for the mini-grants, and to pay for the professional services of the Rahus Institute.

Current Low Income Residential Support Programs:

- Lodi C.A.R.E. Package Program: Grants to very low-income in paying their electric utility account; the program coordination/customer screening is provided by the Lodi Salvation Army (we pay their time and talents, as well as grant dollars of up to $150 per eligible family). Provides rebates to all customers who purchase an EnergyStar® refrigerator, dishwasher, and/or front-loading clothes washer.
- Lodi Helping Hands Project: Provides weatherization services to low-income families and senior shut-in's.

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

Proposed LEU Energy Efficiency Programs and Services: **(for 2006-2007)**
Maintain Existing Programs at current levels.

New Energy Efficiency Programs:
LEU has earmarked an additional $100,000 in spending for demand-side management programs for this current fiscal year compared to FY05/06.

- Lighting Retrofit Lodi Library: LEU is scheduled to complete a retrofit of the lighting at the Lodi Library during FY06/07. The actual energy savings associated with the retrofit is projected to be approximately $1,000 per month; the payback in energy savings alone will be just over 3 years.

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 6/30/2006.

Lodi - 0506 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling	4	4,877	73,152	8	$ 15,000		$ 1,809	$ 16,809
HVAC	Non-Res Heating								
HVAC	Non-Res Shell	7	12,259	163,216	7	$ 28,020		$ 4,037	$ 32,056
Lighting	Non-Res Lighting	190	7,045	70,448	190	$ 15,844		$ 1,742	$ 17,586
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration	1	1,193	17,892	1	$ 750		$ 443	$ 1,193
Appliances	Res Clothes Washers	25	60,861	608,608	25	$ 26,600		$ 15,052	$ 41,652
Appliances	Res Dishwashers	3	7,866	102,253	2	$ 8,300		$ 2,529	$ 10,829
Consumer Electronics	Res Electronics	0	172	1,548	0	$ 250		$ 38	$ 288
HVAC	Res Cooling	8	16,561	174,594	10	$ 5,380		$ 4,318	$ 9,698
HVAC	Res Heating								
HVAC	Res Shell	39	24,027	444,873	39	$ 47,840		$ 11,003	$ 58,843
Lighting	Res Lighting	9	48,886	439,978	67	$ 2,904		$ 10,882	$ 13,786
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration	65	417,886	4,358,538	4	$ 22,200	$ 27,940	$ 107,796	$ 157,936
Other	Res Solar	4	9,600	288,000	4	$ 27,200		$ 7,123	$ 34,323
Water Heating	Res Water Heating								
Other	Other	29	278,005	2,224,038	29	$ 24,900		$ 55,005	$ 79,905
Total		384	889,238	8,967,138	387	$ 225,187	$ 27,940	$ 221,776	$ 474,903

Lodi - 0607 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling	2	2,303	33,844	4	$ 14,000		$ 594	$ 14,594
HVAC	Non-Res Heating								
HVAC	Non-Res Shell	0	150	1,496	0	$ 255		$ 26	$ 281
Lighting	Non-Res Lighting	29	110,610	1,236,464	30	$ 7,000	$ 20,000	$ 21,686	$ 48,686
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration	3	5,964	89,460	3	$ 3,750		$ 1,569	$ 5,319
Appliances	Res Clothes Washers	15	35,464	354,640	15	$ 11,625		$ 6,220	$ 17,845
Appliances	Res Dishwashers	2	6,496	84,448	2	$ 7,125		$ 1,481	$ 8,606
Consumer Electronics	Res Electronics								
HVAC	Res Cooling	6	24,816	260,640	20	$ 9,555		$ 4,571	$ 14,126
HVAC	Res Heating								
HVAC	Res Shell	35	26,784	483,946	35	$ 58,858		$ 8,488	$ 67,345
Lighting	Res Lighting	5	26,520	238,680	36	$ 1,600		$ 4,186	$ 5,786
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration	48	330,530	3,433,744	51	$ 31,248		$ 60,223	$ 91,471
Other	Res Solar								
Water Heating	Res Water Heating								
Other	Other	107	746,666	5,973,331	107	$ 140,000		$ 104,763	$ 244,763
Total		252	1,316,302	12,190,693	303	$ 285,016	$ 20,000	$ 213,806	$ 518,822

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 is by the commercial/industrial sectors and over 30 percent by residential customers.
- A peak demand of 6165 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 FY 2000-01 to FY 2005-06, LADWP expenditures for its Energy Efficiency Programs totaled $92.5 million.
- These programs achieved peak demand reduction of 176.2megawatts during this period and 358.3 gigawatt-hours of energy savings.
- The average cost of these savings is $450/kilowatts and $0.014/kilowatt-hours.
- The savings are based on engineering estimates and the DEER database. Savings have been adjusted annually since FY 2003-04 based on measurement and verification performed by an independent 3rd party.

Overview of LADWP Energy Efficiency Programs

Current Commercial Customer Programs: Total: Non-Residential Program cost: $1.85 million resulting in 1.62 megawatts of peak demand reduction and 5.7 million gigawatt-hours of energy savings annually.

- Commercial Lighting Efficiency Offer: Provide rebates to retrofit existing buildings with high-efficiency lighting measures. This highly successful program has resulted in over 50 megawatts of peak reduction over the life of the program.
- HVAC Program: Provide rebates to retrofit existing buildings with high-efficiency packaged and split system air conditioners and heat pumps that exceed efficiency standards.

- 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.
- Premium-Efficiency Motors Program: Pilot program to provide rebates to retrofit existing buildings that install high-efficiency electric motors.
- 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 1000 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: $2.61 million resulting in 1.64 megawatts of peak demand reduction and 8.2 million gigawatt-hours of energy savings annually.

- Consumer Rebate Program: More than 6,500 customers received 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. Through this program, more than 3,000 refrigerators were recycled in an environmentally sound manner in FY05-06.
- Compact Fluorescent Lamp Distribution: Direct distribution of over 300,000 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/year in Affordable Housing Trust Fund grants.
- Home Energy Saver Online Audit: Computerized energy audit analyzes energy use and makes recommendations for efficiency opportunities.

Proposed LADWP Energy Efficiency Programs and Services: (for 2006-2007)

Commercial Customer Programs: Total Non-Residential Program cost: $9.84 million resulting in 6.00 megawatts of peak demand reduction and 27.7 million 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 2006-07 to move toward maximum achievable program participation.
- HVAC Program: Provide rebates to retrofit existing buildings with high-efficiency packaged and split system air conditioners and heat pumps that exceed newly increased efficiency standards.
- 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: New program launched in 2006-07 that provides incentives for energy efficient refrigeration measures.
- Custom Performance Incentives: New program introduced in 2006-07 to provide rebates for energy efficient measures that are not on existing non-residential rebate menus.
- Small Business Direct Install: New program for 2006-07 to pay 100 percent of the cost of a lighting retrofit, up to $1,200 for small business customers.
- New Construction: New 2006-07 program that 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.
- 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: $12.2 million resulting in 16.87 megawatts of peak demand reduction and 90.9 million 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 Recycling: LADWP provides free pick-up and recycling of old, inefficient refrigerators, along with a free 6-pack of CFLs and a new cash incentive of $35 for each recycled refrigerator.
- Compact Fluorescent Lamp Distribution: Significantly expand distribution of free CFLs to 1 million residential customers through direct distribution, events, community groups, and with other energy efficiency programs.
- 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.
- CFL Manufacturers Buy-down: New program for 2006-07 to provide incentives to manufacturers intended to reduce the price of CFL to retail purchasers.
- Low-Income Refrigerator Exchange: Reintroduced program for 2006-07 to provide 50,000 new energy efficient refrigerators to low-income customers in exchange for existing inefficient older models.

Demand Reduction Programs: Total Other Program cost: $6.36 million resulting in 8.46 megawatts of peak demand reduction and 2.69 million gigawatt-hours of energy savings annually.

- Thermal Energy Storage: Developing program for 2006-07 to provide incentives and technical assistance for TES systems that shift load and include energy efficient designs.

Note: FY05/06 figures have not been audited and reporting includes previous year expenditures for projects concluded during FY05/06.

LOS ANGELES DEPT OF WATER & POWER (LADWP)

Time Period for Reporting Data: Fiscal Year ending 6/30/2006.

LADWP 0506 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling	343	628,920	10,476,424	439	$ 134,198		$ 356,438	$ 490,636
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting	1,249	4,891,298	53,888,509	1,249	$ 530,348		$ 729,095	$ 1,259,443
Process	Non-Res Motors	26	145,454	2,181,804	35	$ 15,550		$ 114,809	$ 130,359
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers	2	5,491	54,912	2	$ 1,800		$ 3,365	$ 5,165
Appliances	Res Dishwashers	0	634	8,237	0	$ 550		$ 1,024	$ 1,574
Consumer Electronics	Res Electronics								
HVAC	Res Cooling	148	(80,595)	(461,956)	(116)	$ 94,033		$ 174,454	$ 268,487
HVAC	Res Heating								
HVAC	Res Shell	129	73,744	1,474,880	129	$ 209,500		$ 389,373	$ 598,873
Lighting	Res Lighting	595	3,317,075	29,864,457	4,675	$ 140	$ 478,080	$ 14,408	$ 492,628
Pool Pump	Res Pool Pump	64	381,600	3,816,000	261	$ 92,100		$ 172,676	$ 264,776
Refrigeration	Res Refrigeration	696	4,509,442	81,169,949	696	$ 195,295	$ 354,375	$ 487,389	$ 1,037,059
Other	Res Solar								
Water Heating	Res Water Heating								
Other	Other	8,459	2,687,880	8,063,640	9,043	$ 2,683,800		$ 3,675,101	$ 6,358,901
Total		11,712	16,560,942	190,536,856	16,414	$ 3,957,313	$ 832,455	$ 6,118,132	$ 10,907,900

LADWP 0607 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling	1,677	3,986,193	79,463,006	9,838	$ 2,217,930		$ 469,624	$ 2,687,554
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting	3,841	20,092,928	237,221,978	4,310	$ 3,000,000	$ 1,140,000	$ 1,401,974	$ 5,541,974
Process	Non-Res Motors	254	1,456,345	21,845,172	343	$ 100,129		$ 129,104	$ 229,233
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration	228	2,173,095	25,834,454	571	$ 170,299		$ 152,681	$ 322,980
Appliances	Res Clothes Washers								
Appliances	Res Dishwashers								
Consumer Electronics	Res Electronics								
HVAC	Res Cooling	436	328,522	5,002,651	519	$ 214,525		$ 29,566	$ 244,091
HVAC	Res Heating								
HVAC	Res Shell	6	3,520	70,400	6	$ 10,000		$ 416	$ 10,416
Lighting	Res Lighting	14,680	79,748,674	717,738,070	106,819	$ 3,125,000	$ 1,125,000	$ 4,241,809	$ 8,491,809
Pool Pump	Res Pool Pump	41	136,000	1,360,000	93	$ 25,500		$ 8,038	$ 33,538
Refrigeration	Res Refrigeration	1,711	10,709,589	112,423,037	1,711	$ 3,149,810	$ 537,625	$ 664,417	$ 4,351,852
Other	Res Solar								
Water Heating	Res Water Heating								
Other	Other	4,236	34,440,000	424,600,000	4,973	$ 4,998,000		$ 2,509,372	$ 7,507,372
Total		27,109	153,074,867	1,625,558,769	129,183	$ 17,011,193	$ 2,802,625	$ 9,607,000	$ 29,420,818

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.

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 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 City of Lompoc Energy Efficiency Programs and Services: (for 2006-2007)

- Maintain existing programs at current levels with additional promotion of these 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.
- Measure and evaluate the impact of energy efficiency programs.

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 6/30/2006.

Lompoc 0506 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling								
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting	6	28,126	285,224	6	$ 2,290	$ 320	$ 5	$ 2,615
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers	1	3,405	34,048	1	$ 8,400		$ 45	$ 8,445
Appliances	Res Dishwashers	0	1,347	17,514	0	$ 1,800	$ 1,620	$ 45	$ 3,465
Consumer Electronics	Res Electronics								
HVAC	Res Cooling								
HVAC	Res Heating								
HVAC	Res Shell								
Lighting	Res Lighting								
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration	8	85,263	1,534,738	8	$ 20,850	$ 3,330	$ 45	$ 24,225
Other	Res Solar	1	2,400	72,000	1	$ 3,500	$ 90	$ 90	$ 3,680
Water Heating	Res Water Heating	5	4,800	43,200	5	$ 100	$ 45	$ 45	$ 190
Other	Other	48	12,717	169,169	48	$ 1,048	$ 362	$ 45	$ 1,455
Total		70	138,058	2,155,892	70	$ 37,988	$ 5,767	$ 320	$ 44,075

Lompoc 0607 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling								
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting	9	42,166	439,664	9	$ 8,140	$ 320	$ 5	$ 8,465
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers	2	3,840	38,400	2	$ 9,360		$ 45	$ 9,405
Appliances	Res Dishwashers	0	1,684	21,892	1	$ 2,250	$ 2,025	$ 45	$ 4,320
Consumer Electronics	Res Electronics								
HVAC	Res Cooling								
HVAC	Res Heating								
HVAC	Res Shell								
Lighting	Res Lighting								
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration	11	97,946	1,763,035	11	$ 19,710	$ 3,375	$ 45	$ 23,130
Other	Res Solar							$ 90	$ 90
Water Heating	Res Water Heating	5	4,800	43,200	5	$ 100	$ 45	$ 45	$ 190
Other	Other	56	13,268	166,278	56	$ 1,240	$ 390	$ 45	$ 1,675
Total		81	163,705	2,472,469	82	$ 40,800	$ 6,155	$ 320	$ 47,275

MERCED IRRIGATION DISTRICT

- For more than 75 years, the Merced Irrigation District (MID) has been in the business of generating wholesale electrical power.
- MID provides electric services for more than 6,500 customers, and has signed contracts for more than 11,500 new residential units.
- 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 PGE under a long-term contract that expires in 2014.

MID Energy Efficiency Program Highlights

In year 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: In 2000, MID began to offer rebates to the participants of the Commercial Energy Retrofit Programs. Rebates of $0.06 per kilowatt-hours saved up to $125,000 per year, per customer and cannot exceed 50 percent of the project cost. From 2000-2004, 37 projects were completed for a total of 11,296,861 kilowatt-hours saved and MID paid $710,566 in rebates. In 2005, eight projects were completed for a total of 2,119,402 kilowatt-hours saved and $112,631 was paid in rebates. As of September 2006, MID has completed six additional projects with a total of 3,666,955 kilowatt-hours saved and $167,202 in rebates. Another seven projects are expected to be completed by year-end, with an estimated savings of 1,436,757 kilowatt-hours and $86,205 in rebates.

- 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. In 2004, two projects were completed with a combined energy savings of 4,686,596

kilowatt-hours and MID contributed with $125,550 in rebates. In 2005, two projects were completed saving 401,456 kilowatt-hours and $24,426 was paid in rebates. For 2006, the Commercial New Construction Program has five projects completed with 1,811,503 kilowatt-hours saved for a total of $113,651 paid in rebates.

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. In 2004, Residential Customers had a total of 398 rebate applications submitted and $37,092 was paid in rebates. In 2005, MID received 108 rebate applications for a total of $9,225 in rebates. Through November 2006, MID has received 165 residential applications for a total of $26,902 in rebates.
- Spruce Up Your Home Tree Shade Program: Last year, MID and the Tree Partners Foundation of Atwater joined together to establish the Shade Tree Program. MID gave away 400 trees to residential customers, and about 100 trees were donated to local schools.
- 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. From 2000-2004, MID contributed $42,475 to the CARE Program and $9,072 under the Medical Baseline and Life-Support Program. In 2005, MID contributed $35,969 for the CARE Program and $6,873 for the Medical Baseline and Life-Support Program. For 2006, MID has 409 customers under the CARE program and 40 customers under the Medical Baseline and Life-Support Program, in which MID contributes $74,911 and $8,316 respectively.

Proposed MID Energy Efficiency Projects and Services:

- MID will be offering the same programs for the calendar year of 2007.
- The rebate amount for both the Commercial Retrofit Program and the Commercial New Construction will increase from $0.06/ kilowatt-hours to $0.07/ kilowatt-hours saving up to $150,000 per year (instead of $125,000) per customer and will not exceed 50 percent of the project cost.

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 2005, two Photovoltaic Pilot Programs were installed; a 10 kilowatt-hours system and a 46 kilowatt-hours system for a total of $252,000 in rebates. These systems will be monitored for a total of 12 months. MID will evaluate their performance and decide whether further photovoltaic systems would benefit the District and its customers.

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 12/31/05

Merced 2005 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling	0	11,909	133,339	12	$ 1,710		$ 2,931	$ 4,641
HVAC	Non-Res Heating								
HVAC	Non-Res Shell	0	98	1,464	0	$ 8,800		$ 32	$ 8,832
Lighting	Non-Res Lighting	13	72,850	826,708	15	$ 199,860		$ 18,174	$ 218,034
Process	Non-Res Motors	7	52,472	787,080	9	$ 41,670		$ 17,303	$ 58,973
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers	0	870	8,704	0	$ 2,550		$ 191	$ 2,741
Appliances	Res Dishwashers	0	742	9,651	0	$ 2,175		$ 212	$ 2,387
Consumer Electronics	Res Electronics								
HVAC	Res Cooling	0	294	2,976	0	$ 150		$ 65	$ 215
HVAC	Res Heating								
HVAC	Res Shell								
Lighting	Res Lighting								
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration	0	2,755	49,594	0	$ 4,100		$ 1,090	$ 5,190
Other	Res Solar								
Water Heating	Res Water Heating								
Other	Other								
Total		22	141,991	1,819,516	37	$ 261,015		$ 40,000	$ 301,015

Merced 2006 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling	5	4,946	75,844	7	$ 65,500		$ 953	$ 66,453
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting	45	264,893	2,913,821	52	$ 40,380		$ 36,605	$ 76,985
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers	0	719	7,192	0	$ 2,325		$ 90	$ 2,415
Appliances	Res Dishwashers	0	640	8,320	0	$ 1,875		$ 105	$ 1,980
Consumer Electronics	Res Electronics								
HVAC	Res Cooling	9	5,363	98,744	14	$ 16,860		$ 1,240	$ 18,100
HVAC	Res Heating								
HVAC	Res Shell	1	919	9,192	1	$ 600		$ 115	$ 715
Lighting	Res Lighting	0	2,378	21,398	3	$ 190		$ 269	$ 459
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration	0	2,755	49,594	0	$ 4,100		$ 623	$ 4,723
Other	Res Solar								
Water Heating	Res Water Heating								
Other	Other								
Total		61	282,614	3,184,105	78	$ 131,830		$ 40,000	$ 171,830

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.
- 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:

Current Commercial Customer Programs (2005):

- Commercial Power Saver: Includes rebates in the amount of $135,541 for the installation of energy efficiency measures at existing commercial and industrial businesses. Measures include sunscreens or window film, energy efficient dual pane windows, cool roofs, energy efficient air conditioners, and lighting retrofits. The 2005 program's actual peak load reduction was 631.1 kilowatts, and the annual energy savings was 2,148,700 kilowatt-hours.
- Custom Power Saver: Includes rebates in the amount of $850 for the installation of customized energy efficiency measures at existing commercial and industrial facilities. The 2005 program's actual peak load reduction was 1.6 kilowatts, and the annual energy savings was 10,500 kilowatt-hours.

Current Residential Customer Programs (2005):

- Power Saver Plus: includes rebates for the installation of energy efficient measures in existing homes. Qualifying measures include sunscreens or window film, energy efficient dual pane windows, whole house fans, and energy efficient air conditioners. 2005 Rebates provided totaled $419,758; resulting in peak load reduction of 1309.9 kilowatts; the annual energy savings was 720,500 kilowatt-hours.
- Power Saver Home: rebates for contractors or homeowners who exceed Title 24 central air conditioning or heat pump efficiency rating requirements for new residential construction. The program encourages energy efficiency at the design and construction level. 2005 Rebates provided totaled $45,420; resulting in an actual peak load reduction of 76.4 kilowatts; the annual energy savings was 42,000 kilowatt-hours.

Current Low-Income Residential Customer Programs (2005):

- MID CARES: Low-income energy efficiency programs that provides interagency coordination, community outreach, education, and information. This program includes a

weatherization program that weatherized 142 qualified residential customer residences in 2005. at a contract cost of. The 2005 program expenditures were $119,385; resulting in an actual peak load reduction of 31 kilowatts and annual energy savings was 80,430 kilowatt-hours.

Proposed MID Energy Efficiency Programs and Services: **(for 2006-2007)**

- 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

MID Renewable Energy Resources:

MID continues to invest in its existing small hydro power plants and began to purchase energy from wind power sources:

- Stone Drop: Direct new investment operation and maintenance costs to continue operation of an existing small hydroelectric power plant. The plant capacity is 230 kilowatts and 2005 energy production was 560,900 kilowatt-hours.
- High Winds Project 2005 Purchase Power Contract**:** Above Market Cost of new Eligible Renewable Energy Resources purchased from the High Winds Project in Solano County to meet the MID Renewables Portfolio Standard Policy goals adopted pursuant to Section 387 of the California Public Utilities Code. MID purchased 25,000 kilowatts of project capacity for at 10-year period that began June 1, 2004. The 2005 energy delivery was 62,764,000 kilowatt-hours at an Above Market Rate of $0.00824/ kilowatt-hours.
- Demonstration Solar Energy Project: Two kilowatts solar photovoltaic energy panels for downtown office building to demonstrate the effectiveness of solar panels for residential use in the MID service area.

MID Demand Reduction Programs:

- STEP Program: Customer rate discounts for participation in the "Shave the Energy Peak" (STEP) demand side management program. STEP allows MID operators to reduce electricity demand by cycling air conditioners during peak use periods during the months of May through September. Total programs costs include the capital expenditures of $190,144 for replacement of 1124 load control receivers, and 510 installations at new sites. Costs also include $367,185 in rate discounts for the 13,334 residential, commercial, and industrial customers that participated in the 2005 program. The available and actual peak load reduction is 7,000 kilowatts.
- Interruptible Rate Discount: Rate discount for commercial and industrial customers who agree to interrupt a portion of their load upon notification from MID. Interruption of customer load may be required during peak usage periods when potential power shortages occur. The available peak load reduction was 22,648 kilowatts.

MODESTO IRRIGATION DISTRICT

Time Period for Reporting Data: Calendar Year ending 12/31/05

Modesto 2005 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling	41	28,873	433,088	44	$ 16,015		$ 16,027	$ 32,042
HVAC	Non-Res Heating								
HVAC	Non-Res Shell	9	37,700	406,917	9	$ 4,933		$ 15,059	$ 19,991
Lighting	Non-Res Lighting	494	2,471,510	22,556,302	633	$ 126,492		$ 834,730	$ 961,221
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration	2	10,450	156,750	2	$ 850		$ 5,801	$ 6,651
Appliances	Res Clothes Washers								
Appliances	Res Dishwashers								
Consumer Electronics	Res Electronics								
HVAC	Res Cooling	561	382,501	6,883,202	693	$ 269,140		$ 254,723	$ 523,863
HVAC	Res Heating								
HVAC	Res Shell	220	167,314	2,270,202	220	$ 195,960		$ 84,012	$ 279,972
Lighting	Res Lighting								
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration		60,006	1,080,108			$ 58,400	$ 39,971	$ 98,371
Other	Res Solar								
Water Heating	Res Water Heating								
Other	Other		63,680	191,040			$ 9,000	$ 7,070	$ 16,070
Total		1,327	3,222,034	33,977,609	1,601	$ 613,390	$ 67,400	$ 1,257,392	$ 1,938,182

Modesto 2006 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling	13	12,934	194,003	15	$ 8,375		$ 6,539	$ 14,914
HVAC	Non-Res Heating								
HVAC	Non-Res Shell	4	32,300	323,000	4	$ 1,500		$ 10,886	$ 12,386
Lighting	Non-Res Lighting	451	2,264,958	20,436,412	582	$ 112,090		$ 688,774	$ 800,864
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers								
Appliances	Res Dishwashers								
Consumer Electronics	Res Electronics								
HVAC	Res Cooling	200	136,593	2,456,758	247	$ 64,000		$ 82,801	$ 146,801
HVAC	Res Heating								
HVAC	Res Shell	98	107,240	1,072,400	98	$ 26,250		$ 36,143	$ 62,393
Lighting	Res Lighting	3	14,200	127,800	19		$ 1,750	$ 4,307	$ 6,057
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration		65,760	1,183,680			$ 75,000	$ 39,894	$ 114,894
Other	Res Solar								
Water Heating	Res Water Heating								
Other	Other	226	823,680	11,591,040	238	$ 150,000	$ 9,000	$ 390,656	$ 549,656
Total		995	3,457,664	37,385,093	1,203	$ 362,215	$ 85,750	$ 1,260,000	$ 1,707,965

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 Utilities serves residential, commercial, industrial, and agricultural customers.
- Moreno Valley Utilities served 1,024 accounts by the end of 2004. Currently about 3,038 accounts are served, expected to increase to 5,000 by the end of FY06/07. Seventy percent of energy sales are residential, with the remaining 30 percent consisting of commercial and industrial, with a few agricultural.
- Load Demand: 3.5 megawatts
- Annual Energy Use: 15 gigawatt-hours
- Moreno Valley Utilities' mission: Provide high quality and reliable service to customers

Moreno Valley Utilities Energy Efficiency Program Highlights

In FY 05/06, 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 Utilities 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: (2006-2007)

- 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 three 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 Utilities 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 6/30/06.

Moreno Valley 0506 (v14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling	58	127,277	1,909,158	57	$ 31,489		$ 2,753	$ 34,242
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting	13	117,388	1,291,270	18	$ 29,067		$ 1,862	$ 30,929
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers								
Appliances	Res Dishwashers								
Consumer Electronics	Res Electronics								
HVAC	Res Cooling								
HVAC	Res Heating								
HVAC	Res Shell								
Lighting	Res Lighting								
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration								
Other	Res Solar								
Water Heating	Res Water Heating								
Other	Other								
Total		71	244,665	3,200,428	75	$ 60,555		$ 4,615	$ 65,170

Moreno Valley 0607 (v14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling	12	26,940	404,104	12	$ 6,667		$ 2,592	$ 9,259
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting	4	17,225	189,470	6	$ 4,263		$ 1,215	$ 5,478
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers								
Appliances	Res Dishwashers								
Consumer Electronics	Res Electronics								
HVAC	Res Cooling								
HVAC	Res Heating								
HVAC	Res Shell								
Lighting	Res Lighting								
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration								
Other	Res Solar								
Water Heating	Res Water Heating								
Other	Other								
Total		17	44,165	593,575	18	$ 10,930		$ 3,807	$ 14,737

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: **(for 2006-2007)**
Maintain Existing Programs at current levels and increase funding for solar photovoltaics.

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 6/30/2006.

Needles - 0506 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling								
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting								
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers								
Appliances	Res Dishwashers								
Consumer Electronics	Res Electronics								
HVAC	Res Cooling	13	17,776	319,968	12	$ 22,000			$ 22,000
HVAC	Res Heating								
HVAC	Res Shell								
Lighting	Res Lighting								
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration								
Other	Res Solar								
Water Heating	Res Water Heating								
Other	Other								
Total		13	17,776	319,968	12	$ 22,000			$ 22,000

Needles - 0607 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling								
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting								
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers								
Appliances	Res Dishwashers								
Consumer Electronics	Res Electronics								
HVAC	Res Cooling	13	17,776	319,968	12	$ 22,000			$ 22,000
HVAC	Res Heating								
HVAC	Res Shell								
Lighting	Res Lighting								
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration								
Other	Res Solar	12	26,400	792,000	12	$ 27,500			$ 27,500
Water Heating	Res Water Heating								
Other	Other								
Total		26	44,176	1,111,968	24	$ 49,500			$ 49,500

PORT OF OAKLAND

- 200-300 customers, 100 percent are commercial
- Peak demand: 12 megawatts
- Annual energy use: 74 gigawatt-hours

Port of Oakland Energy Efficiency Program Highlights

Current Energy Efficiency Projects:

- The Port of Oakland 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, up to 100 percent of the total energy audit cost.

- Energy Efficient Equipment Upgrade Installation Rebates: The Port has implemented two programs that provide generous rebates and solid technical support for the installation of new, energy efficient equipment by our commercial customers. Under one program, the eligible projects must reduce energy usage by a minimum of 10 percent, and must be operated and produce verifiable energy savings for at least five (5) years to be eligible for a rebate of the equipment cost differential (up to a 100 percent rebate for energy saving of 40 percent or more). Under the second energy equipment installation program, customers will be reimbursed for projects based on a single flat incentive rate of $0.08 per annual kilowatt-hours saved, applied to annual energy savings (kilowatt-hours) of 20 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 is $0.05 per annual kilowatt-hours saved.

Research, Development, and Demonstration Programs:

- The Port will provide a rebate of up to 20 percent of the total cost of an electric vehicle charging station(s) and/or a compressed natural gas station.

Proposed Port of Oakland Energy Efficiency Programs and Services: (for 2006-2007)

- Maintain existing programs at current levels.

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

- New Solar Energy Generating Facilities: Beginning January 1, 2007, this rebate will reimburse new solar energy generating facilities a one time flat rate of $ 2.80 per watt (Direct Current); and 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 the said facility at the same rate the Port sell power to the said facility. In addition, the new solar energy generating facilities must obtain Port Utility Administration (PUA) approval and must comply with all the regulatory requirements prior to the construction of the facility.

- New Wind Energy Generating Facilities: Beginning January 1, 2007, 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. If the facility generates less than 7.5 kilowatts, then the rebate will be a one-time flat rate of $ 2.50 per watt. In the event the new wind power facility generates more than the electric customer's monthly electric consumption, the Port will purchase the excess electric power from the said facility at the same rate the Port sell electric power to the said facility. In addition the new wind power energy generating facilities must obtain PUA approval and must comply with all the regulatory requirements prior to the construction of the facility.

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 6/30/2006.

Port of Oakland - 0506 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling								
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting	98	879,170	14,066,720	98	$ 43,959			$ 43,959
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers								
Appliances	Res Dishwashers								
Consumer Electronics	Res Electronics								
HVAC	Res Cooling								
HVAC	Res Heating								
HVAC	Res Shell								
Lighting	Res Lighting								
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration								
Other	Res Solar								
Water Heating	Res Water Heating								
Other	Other								
Total		98	879,170	14,066,720	98	$ 43,959			$ 43,959

Port of Oakland - 0607 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling								
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting								
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers								
Appliances	Res Dishwashers								
Consumer Electronics	Res Electronics								
HVAC	Res Cooling								
HVAC	Res Heating								
HVAC	Res Shell								
Lighting	Res Lighting								
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration								
Other	Res Solar								
Water Heating	Res Water Heating								
Other	Other		10,507	31,522		$ 150,000			$ 150,000
Total			10,507	31,522		$ 150,000			$ 150,000

CITY OF PALO ALTO UTILITIES

- 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 was founded in 1900.
- CPAU has 28,653 electric meters
- CPAU's annual electric load is 20 percent residential; 48 percent commercial and 32 percent industrial.
- CPAU's eligible renewable energy resources were 8 percent of the total load in 2005, and are projected to be 12 percent for 2006, and 17 percent by 2008. The Long-term Energy Acquisition Plan sets a target of 20 percent by 2015.
- CPAU offers a voluntary 100 percent renewable energy alternative for retail customers, which added 3 percent in 2005 and projected 4 percent in 2006. This "PaloAltoGreen" program was ranked #1 in the nation (based on per capita participation) by National Renewable Energy Laboratory in 2005.

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% from the electric commodity purchase budget during the 2001 energy crisis. Over the past 8 years, these programs have resulted in peak demand reductions of 7.8 megawatts. Cumulative energy savings are over 71,000 megawatt-hours with an equivalent 43 metric tons reduction in CO_2 production for the 8-year period.

Current Commercial Customer Programs and Services:

- Commercial Advantage Program: Incentives offered to commercial customers for investments in efficient lighting, motors, HVAC and Custom Project/targets peak demand and energy reductions. Net Peak savings: 4 megawatts; Net Annual Savings: 1.35 megawatt-hours, Program Cost: $300,000.
- Consultant Assistance for Resource Efficiency: Comprehensive technical assistance for commercial customers to identify efficiency measures to facilitate peak demand reduction and energy savings. No quantified savings; Program Cost: $250,000.

- MeterLinks: Online utility data accessible for large industrial customers that enable the customer to facilitate efficient implementation of load management programs and energy usage management. No quantified savings; Program Cost: $60,000.
- 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. Net Peak savings: 65 kilowatts; Net Annual Savings: 285,000 kilowatt-hours; Program Cost: $95,000.

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. Net Peak savings: 21 kilowatts; Net Annual Savings: 100,000 kilowatt-hours; Program Cost: $300,000.
- Low-Income Assistance Programs: CPAU provides weatherization and equipment replacement to low-come residents. Net Peak savings: 23 kilowatts; Net Annual Savings: 60,000 kilowatt-hours; Program Cost: $95,000.

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. No quantified savings; Program Cost: $85,000.

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. No quantified savings; Program Cost: $57,000.

Proposed New Energy Efficiency Programs and Services: **(for 2006-2007)**

- Training building operators for retro-commissioning commercial facilities. (No quantified savings available).

Modifications to Existing Energy Efficiency Programs: (for 2006-2007)
Commercial Customer Programs:

- Expansion of 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. Expected net peak savings: 130 kilowatts; Net Annual Savings: 570,000 kilowatt-hours; Program Costs $120,000.

- Revisions to the Commercial Advantage Program Scope: Revised incentives (to respond to changes in equipment efficiencies mandated by new energy codes: Title 20) offered to commercial customers for investments in efficient lighting, motors, HVAC and Custom Project/targets peak demand and energy reductions. Expected Net Peak savings: 4 megawatts; Net Annual Savings: 11.8 megawatt-hours; Program Costs: $475,000.

Residential Customer Programs:

- Revision of measures in Residential Smart Energy Program: Comprehensive residential energy efficiency incentive program that provides rebates and technical assistance promote home shell improvements and the installation of attic/roof insulation, high efficiency cooling and refrigeration equipment, appliances and lighting. Expected net peak savings: 35 kilowatts; Net Annual Savings: 180,000 kilowatt-hours; Program Costs $320,000.
- Expansion of Low-Income Program to More Customers: CPAU provides weatherization and equipment replacement to low-income residents. Expected net peak savings: 46 kilowatt; Net Annual Savings: 118,000 kilowatt-hours; Program Costs: $125,000.

Existing Energy Efficiency Programs without Major Modifications 2006-2007:

Commercial Customer Programs:

- Consultant Assistance for Resource Efficiency
- MeterLinks

Community Programs

- Community Energy Education:

Public Schools Programs:

- Palo Alto Public Schools

Future Energy Efficiency Programs: (beyond 2006-07)

CPAU expects to significantly increase 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 identify all cost-effective potential electric (and gas) efficiency measures, and is developing an implementation policy for the next fiscal year.

CPAU Demand Reduction Programs:

CPAU's 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 5 megawatts of demand during Stage 3 alerts. CPAU does not anticipate any changes to the existing voluntary demand response program**.**

CITY OF PALO ALTO UTILITIES

CITY OF PALO ALTO
UTILITIES

Time Period for Reporting Data: Fiscal Year ending 6/30/06.

Palo Alto 0506 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling	32	221,683	3,546,931	3,238	$ 14,720		$ 91,815	$ 106,535
HVAC	Non-Res Heating								
HVAC	Non-Res Shell	1	11,900	119,000	1	$ 438		$ 3,080	$ 3,518
Lighting	Non-Res Lighting	69	321,670	2,405,281	70	$ 49,899	$ 30,596	$ 62,262	$ 142,757
Process	Non-Res Motors	6	39,044	585,660	8	$ 2,865		$ 15,160	$ 18,025
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers	5	11,066	110,664	5	$ 113,049		$ 2,865	$ 115,914
Appliances	Res Dishwashers	4	10,496	136,448	3	$ 30,750		$ 3,532	$ 34,282
Consumer Electronics	Res Electronics								
HVAC	Res Cooling	1	1,176	13,277	3	$ 555		$ 344	$ 899
HVAC	Res Heating	1	3,279	43,634	1	$ 5,365		$ 1,130	$ 6,495
HVAC	Res Shell	11	1,585	29,109	11	$ 8,791		$ 754	$ 9,544
Lighting	Res Lighting	6	66,962	525,960	6	$ 17,961		$ 13,615	$ 31,576
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration	5	30,763	553,738	5	$ 53,040		$ 14,334	$ 67,374
Other	Res Solar								
Water Heating	Res Water Heating								
Other	Other	17	1,157,102	8,657,726	17	$ 73,598		$ 224,111	$ 297,709
Total		158	1,876,727	16,727,428	3,368	$ 371,031	$ 30,596	$ 433,000	$ 834,627

Palo Alto 0607 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling	32	221,683	3,546,931	3,238	$ 14,720		$ 56,867	$ 71,587
HVAC	Non-Res Heating								
HVAC	Non-Res Shell	1	11,900	119,000	1	$ 438		$ 1,908	$ 2,345
Lighting	Non-Res Lighting	69	321,882	2,407,613	70	$ 49,899	$ 30,596	$ 38,601	$ 119,096
Process	Non-Res Motors	6	39,044	585,660	8	$ 2,865		$ 9,390	$ 12,255
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers	5	11,600	116,000	5	$ 118,500		$ 1,860	$ 120,360
Appliances	Res Dishwashers	8	22,400	291,200	7	$ 37,500		$ 4,669	$ 42,169
Consumer Electronics	Res Electronics								
HVAC	Res Cooling	7	3,494	61,373	10	$ 150		$ 984	$ 1,134
HVAC	Res Heating	3	8,198	109,087	3	$ 13,418		$ 1,749	$ 15,167
HVAC	Res Shell	29	5,224	97,956	29	$ 22,105		$ 1,571	$ 23,675
Lighting	Res Lighting	15	129,308	1,090,877	15	$ 32,321		$ 17,490	$ 49,810
Pool Pump	Res Pool Pump	2	5,600	56,000	4			$ 898	$ 898
Refrigeration	Res Refrigeration	30	190,480	3,428,640	30	$ 60,000		$ 54,971	$ 114,971
Other	Res Solar								
Water Heating	Res Water Heating	0	716	10,740	0			$ 172	$ 172
Other	Other	21	1,157,887	8,661,651	21	$ 88,298		$ 138,871	$ 227,169
Total		228	2,129,416	20,582,728	3,440	$ 440,213	$ 30,596	$ 330,000	$ 800,809

PASADENA WATER AND POWER (PWP)

- Established in 1906
- PWP provides electric service to more than 62,250 metered accounts over a 23 square-mile service area.
- Peak demand: 278 megawatts occurred July 2005
- Annual energy use is 1,171,029 megawatt-hours
- The mission of PWP's energy efficiency programs are 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.

PWP Energy Efficiency Program Highlights

Total program expenditures of $1,258,241 in FY 05/06, resulting in a total savings of more than 77,547,724 kilowatt-hours or 4,501,758 kilowatt-hours annually, broken down into the following:

- Residential efficiency programs saved 1,300,593 kilowatt-hours and reduced 356 kilowatts.
- Commercial efficiency programs saved 3,201,166 kilowatt-hours and reduced 1,023 kilowatts.

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 will pay first year's energy savings as a result of DSM project or 25 percent of project cost, whichever is less.
- High Performance Building Program: This program rewards customers whose buildings energy efficiency exceeds Title 24 standards by over 12 percent. These incentives encourage owners to make energy efficiency a major goal in their projects, and recognize the extra effort required to achieve these higher levels of efficiency. Rebates are capped at a maximum of $100,000 per freestanding building or individual electric meter. The program matches one month's electricity savings for each percentage better than code that the building performs.
- LEED Certification Program: Pasadena Green Building Program promotes the design and construction of environmentally responsible buildings. Providing incentives for the design of buildings certified by the U.S. Green Building Council's LEED™ Rating System underscores the City of Pasadena's principle of stewardship of the natural environment. Green Building Incentives will be awarded to successful applicants 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, washing machines, dishwashers, room air conditioners, and ceiling fans.
- Coupons for Free Compact Fluorescent Lamps: 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 recycling of old inefficient refrigerators as customers buy new refrigerators or retire second units. Customers receive a $50 incentive for their refrigerators that are recycled.
- Efficient Home Cooling: Rebates provided to residential customers who install new central air conditioners (13.1 SEER minimum), Energy Star® doors and windows, whole house fans, solar attic fans, and Energy Star® programmable thermostats.
- 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 APOGEE Home Energy Suite, a home energy analysis survey.
- Cool Residential Trees Rebates: Incentives to residents who plant energy-saving shade trees. Provides detailed guidebook on siting, planting and maintaining shade trees.
- Residential Programs Outreach & Education: Promotes PWP's residential conservation programs via events, brochures, direct mail, workshops, and advertising.

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.
- Municipal Energy Renovation Project: PWP funded energy efficiency measures installed during the City Hall seismic retrofit 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.

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.

Proposed PWP Energy Efficiency Programs and Services: (for 2006-2007)
- Maintain existing programs for residential customers at cost-effective levels.
- Energy Star® Incentive Program: Reorganize product menu; encourage refrigerator recycling.
- Residential Efficient Cooling: Remove the Programmable Thermostat and Whole House Fans, and add window shades and attic insulation to the rebate menu.
- Work with developers to ensure that all new electric loads are efficient.
- Evaluate the appropriateness of any new energy efficiency technologies through an RD&D program.
- 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.
- Energy Partnering Program: Suspended for FY 06/07, to later be released in FY 07/08 as a modified version.

- 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 Food Service Pilot Program (new): Free energy audits are provided to small food service businesses. Promoted jointly with The Gas Company. Recommendations for lighting and equipment retrofits which can save electricity and natural gas are provided to the customer. Customer has the opportunity to receive a free lighting retrofit and rebates on purchased energy efficient appliances.
- 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.

Renewable Energy Development Plans:

- Staff will be conducting a study on city-owned property for possible installation of photovoltaic panels.
- Staff will review existing photovoltaic demonstration programs for necessary enhancements to provide necessary PV generation per SB 1 goals.

PWP Demand Reduction Programs:

- Staff is evaluating potential technologies for future demand reduction programs, such as Professional Wet Cleaning, smart metering and Ice Bear thermal energy storage.
- Work in conjunction with other POUs on joint RD&D projects.

PASADENA WATER AND POWER (PWP)

Time Period for Reporting Data: Fiscal Year ending 6/30/06.

Pasadena 0506 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling	958	2,918,531	52,533,562	958	$ 564,871		$ 64,185	$ 629,056
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting	66	282,634	5,652,688	66	$ 40,796		$ 4,636	$ 45,431
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers	6	14,106	141,056	6	$ 121,600		$ 8,512	$ 130,112
Appliances	Res Dishwashers								
Consumer Electronics	Res Electronics								
HVAC	Res Cooling	167	124,007	2,366,599	229	$ 41,240		$ 9,437	$ 50,677
HVAC	Res Heating								
HVAC	Res Shell	18	23,432	468,634	18	$ 19,440		$ 15,543	$ 34,983
Lighting	Res Lighting	29	162,388	1,561,706	210	$ 34,382		$ 11,925	$ 46,307
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration	116	725,952	13,067,136	116	$ 130,360		$ 35,715	$ 166,075
Other	Res Solar	21	37,044	1,111,320	21	$ 75,488		$ 3,489	$ 78,977
Water Heating	Res Water Heating								
Other	Other		213,328	639,984		$ 71,610		$ 5,013	$ 76,622
Total		1,379	4,501,422	77,542,684	1,623	$ 1,099,787		$ 158,455	$ 1,258,241

Pasadena 0607 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling	1,400	2,545,200	50,904,000	1,400	$ 240,000		$ 64,185	$ 304,185
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting	124	697,910	13,958,192	124	$ 110,000		$ 4,636	$ 114,636
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers	6	14,152	141,520	6	$ 122,000		$ 8,512	$ 130,512
Appliances	Res Dishwashers								
Consumer Electronics	Res Electronics								
HVAC	Res Cooling	181	151,791	2,792,456	276	$ 42,500		$ 9,437	$ 51,937
HVAC	Res Heating								
HVAC	Res Shell							$ 15,543	$ 15,543
Lighting	Res Lighting	18	93,310	968,266	108	$ 36,267		$ 11,925	$ 48,192
Pool Pump	Res Pool Pump	43	112,000	1,120,000	77	$ 25,000		$ 5,000	$ 30,000
Refrigeration	Res Refrigeration	203	1,520,352	27,366,336	203	$ 321,040		$ 35,715	$ 356,755
Other	Res Solar	34	61,740	1,852,200	34	$ 125,813		$ 3,489	$ 129,302
Water Heating	Res Water Heating								
Other	Other		47,760	143,280		$ 16,032		$ 5,013	$ 21,045
Total		2,010	5,244,214	99,246,251	2,228	$ 1,038,652		$ 163,455	$ 1,202,107

PLUMAS-SIERRA RURAL ELECTRIC COOP (PSREC)

- PSREC was established in 1937.
- 6,245 member-owners and 7574 metered accounts. Residential sales account for 50 percent of revenue, commercial/industrial for 44 percent, irrigators for 5 percent, and 1 percent other. Estimated growth rate of 2.9 percent per year.
- Peak demand: 30 megawatts for both summer (noon-8pm) and winter (5-10am)
- Annual energy use: 157 gigawatt-hours (49 percent commercial/industrial, 44 percent residential, 6 percent irrigation, 1 percent other)
- PSREC facilities include: two 69 kilovolts interconnect substations, 150 miles of transmission line, 11 distribution subs and 1200 miles of 12.47/7.2 kilovolts distribution line.
- PSREC employs 70 employees
- PSREC mission: To provide utility services with a high level of reliability for fair and reasonable costs. PSREC is dedicated to improving the quality of life of their member-owners and local communities. The focus is to provide electric, telecommunications, satellite television, and internet services that enhance the lives of the rural communities it serves.

Plumas–Sierra Energy Efficiency Program Highlights

PSREC implemented energy efficiency programs in the early 1980s. These programs are designed to encourage members to be more energy efficient, decrease energy demand and costs, and conserve resources. PSREC has consistently exceeded its Public Benefits spending requirements. PSREC uses KEMA's Measure Quantification.

Current Energy Efficiency Programs and Services:
PSREC manages a comprehensive package of customer-centered energy efficiency programs, helping members make their homes more energy efficient.

- Energy Star® Rebates: Generous rebates and solid technical support are available to members who purchase and install Energy Star® appliances.
- *GeoExchange* Heating and Cooling Program: Includes rebates and 0 percent interest loop-leases, is one of the most successful ground-source heat pump programs in the Nation.
- Energy Audits: PSREC provides free energy audits for residential and business customers. It offers interactive online energy audit programs for residential customers interested in

quantifying the costs and benefits of pursuing energy efficient home retrofits or incorporating energy efficient building techniques and appliances into plans for a new home.

- PSREC also encourages the use of Marathon water heaters, compact fluorescent bulbs, water heater blankets and low-flow showerheads by providing discounts to members when they purchase them through us. PSREC also gives away hundreds of CFLs every year.
- PSREC's Solar Program provides generous rebates and loan options available for the purchase of photovoltaic and solar hot water systems. It also provides on-site analysis of solar resources and a valuable partnership with Cooperative Community Energy to assist with system design and financial analysis.

Proposed PSREC Energy Efficiency Programs and Services: **(2007)**
Maintain existing programs at current levels.

New programs proposed:

- Solar Incentives: PSREC plans to increase the incentives for residential or commercial installation of solar photovoltaic systems.
- New Construction: PSREC will be targeting energy reduction by suggesting specific energy efficiency techniques for all new construction in our upcoming "*Green Building*" program. This program will focus on load reduction for our largest residential loads, energy efficient air and water heating. The program will require certified homes to have some of the following features: GeoExchange system, Marathon water heater, and utilize either passive or active solar energy, a higher standard for insulation, windows, infiltration control, and sealed ductwork. These programs will reduce system costs for individual residents as well as encourage homebuilders and housing developments to participate and utilize our marketing resources as an additional value.

PSREC Demand Reduction Programs:
PSREC has implemented a demand reduction program that provides financial incentives to customers who agree to be available to curtail electric load in emergency situations, during peak periods for the summer months of July, August and September. The curtailment periods will occur to avoid the possibility of rolling blackouts. PSREC pays participating customers $40 per 100 HP of load shed. Ranchers can earn a bonus at the end of the season for signing up, even if they are never curtailed. No requests to reduce load were made in 2005 or 2006, and therefore there were no peak demand reductions.

PLUMAS-SIERRA RURAL ELECTRIC COOP (PSREC)

Time Period for Reporting Data: Calendar Year ending 12/31/05

Plumas Sierra 2005 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling								
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting								
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers	3	6,635	66,352	3	$ 1,450		$ 9,102	$ 10,552
Appliances	Res Dishwashers	1	1,728	22,464	1	$ 1,050		$ 3,081	$ 4,131
Consumer Electronics	Res Electronics	0	138	1,238	0	$ 40		$ 170	$ 210
HVAC	Res Cooling	1	30,437	760,920	191	$ 69,700	$ 3,400	$ 104,379	$ 177,479
HVAC	Res Heating								
HVAC	Res Shell								
Lighting	Res Lighting	3	17,534	157,810	25	$ 3,036		$ 21,647	$ 24,683
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration	3	21,744	391,392	3	$ 6,400		$ 53,689	$ 60,089
Other	Res Solar								
Water Heating	Res Water Heating	1	4,270	64,056	1	$ 2,735		$ 8,787	$ 11,522
Other	Other		7,642	22,925				$ 3,145	$ 3,145
Total		12	90,128	1,487,157	224	$ 84,411	$ 3,400	$ 204,000	$ 291,811

Plumas Sierra 2006 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling								
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting								
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers	3	7,779	77,792	3	$ 1,700		$ 10,887	$ 12,587
Appliances	Res Dishwashers	1	2,074	26,957	1	$ 1,260		$ 3,772	$ 5,032
Consumer Electronics	Res Electronics	0	172	1,548	0	$ 50		$ 217	$ 267
HVAC	Res Cooling	1	28,646	716,160	180	$ 92,000	$ 8,000	$ 100,224	$ 200,224
HVAC	Res Heating								
HVAC	Res Shell								
Lighting	Res Lighting	4	23,244	209,196	33	$ 4,338		$ 29,276	$ 33,614
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration	1	8,802	158,443	1	$ 4,925		$ 22,173	$ 27,098
Other	Res Solar								
Water Heating	Res Water Heating	1	4,930	73,944	1	$ 3,415		$ 10,348	$ 13,763
Other	Other		95,520	286,560			$ 6,000	$ 40,103	$ 46,103
Total		12	171,167	1,550,600	219	$ 107,688	$ 14,000	$ 217,000	$ 338,688

PORT OF OAKLAND

- *200-300* 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, up to 100 percent of the total energy audit cost.

- Energy Efficient Equipment Upgrade Installation Rebates: The Port has implemented a program that provides generous rebates and solid technical support for the installation of new, energy efficient equipment by our commercial customers. Under one program, the eligible projects must reduce energy usage by a minimum of 10 percent, to be eligible for a rebate of the equipment cost differential (up to a 100 percent rebate for energy saving of 40 percent or more). Under the second energy equipment installation program, customers will be reimbursed for retrofitting existing equipment projects based on a single flat incentive rate of $0.08 per annual kilowatt-hours saved, applied to annual energy savings (kilowatt-hours) of 20 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 is $0.05 per annual kilowatt-hours saved.
- Research, Development, and Demonstration Programs: The Port will provide a rebate of up to 20 percent of the total cost of Electric Vehicle Charging Station(s). The Port will provide a rebate of up to 20 percent of the total cost of Clean Natural Gas (CNG) Station.

Proposed Port of Oakland Energy Efficiency Programs and Services: **(for 2006-2007)**

- Maintain existing programs at current levels.

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

- New Solar Energy Generating Facilities: Beginning January 1, 2007, this rebate will reimburse new solar energy generating facilities a one time flat rate of $ 2.80 per watt (Direct 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.

- New Wind Energy Generating Facilities: Beginning January 1, 2007, 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 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 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.

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

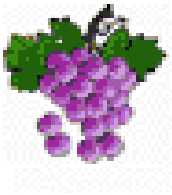
PORT OF OAKLAND

Time Period for Reporting Data: Fiscal Year ending 6/30/06.

Port of Oakland - 0506 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling								
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting	98	879,170	14,066,720	98	$ 43,959			$ 43,959
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers								
Appliances	Res Dishwashers								
Consumer Electronics	Res Electronics								
HVAC	Res Cooling								
HVAC	Res Heating								
HVAC	Res Shell								
Lighting	Res Lighting								
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration								
Other	Res Solar								
Water Heating	Res Water Heating								
Other	Other								
Total		98	879,170	14,066,720	98	$ 43,959			$ 43,959

Port of Oakland - 0607 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling								
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting								
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers								
Appliances	Res Dishwashers								
Consumer Electronics	Res Electronics								
HVAC	Res Cooling								
HVAC	Res Heating								
HVAC	Res Shell								
Lighting	Res Lighting								
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration								
Other	Res Solar								
Water Heating	Res Water Heating								
Other	Other		10,507	31,522		$ 150,000			$ 150,000
Total			10,507	31,522		$ 150,000			$ 150,000

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 490 customers, a peak demand of 16.4 megawatts and sales of 59,000 megawatt-hours.
- Based upon comparable facilities in comparable climate zones, peak demand would grow to 18 megawatts and annual electric sales to 63,000 megawatt-hours by 2010.

Rancho Cucamonga Energy Efficiency Program Highlights

Energy Efficiency/Public Benefits Goals and Objectives:

- Develop Public Benefit funding programs.
- Explore opportunities to develop solar energy.
- Develop strategies to comply with the Renewable Portfolio Standards.

Current Rancho Cucamonga Energy Efficiency Programs:
Through June 30, 2006, the City has collected $260,000 in public benefit program funds. The City staff is in the process of designing its public benefit and energy efficiency programs.

Qualifying programs being considered include cost-effective demand-side management services to promote energy efficiency and conservation, new investment in renewable energy resources and technologies, development and demonstration programs to advance science and technology, and services for low-income electricity customers. Public benefits collections from customers in excess of costs incurred by qualifying programs will be deferred to future years.

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 6/30/06.

Rancho Cucamonga - 0506 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling								
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting	93	133,955	401,866	93	$ 20,093			$ 20,093
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers								
Appliances	Res Dishwashers								
Consumer Electronics	Res Electronics								
HVAC	Res Cooling								
HVAC	Res Heating								
HVAC	Res Shell								
Lighting	Res Lighting								
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration								
Other	Res Solar								
Water Heating	Res Water Heating								
Other	Other								
Total		93	133,955	401,866	93	$ 20,093			$ 20,093

Rancho Cucamonga - 0607 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling								
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting								
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers								
Appliances	Res Dishwashers								
Consumer Electronics	Res Electronics								
HVAC	Res Cooling								
HVAC	Res Heating								
HVAC	Res Shell								
Lighting	Res Lighting								
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration								
Other	Res Solar								
Water Heating	Res Water Heating								
Other	Other		101,888	305,664			$ 120,000		$ 120,000
Total			101,888	305,664			$ 120,000		$ 120,000

REDDING ELECTRIC UTILITY (REU)

- REU provides services to 41,845 residential and business customers
- Peak demand – 245 megawatts
- Redding: summer peaking w/spike demand
- Annual energy use is 775 gigawatt-hours
- REU 2006 calendar year: 65.7 percent renewable.(includes large hydro)

REU Energy Efficiency Program Highlights

Since 1998, REU has spent more than $14 million in rebates and incentives to provide education and raise awareness of energy efficiency and to increase energy efficiency for the Redding community, resulting in 11 megawatts of demand reduction with a annual energy savings of 26,500 (megawatt-hours).

Current REU Energy Efficiency programs:

- Heating Ventilation and Air-Conditioning (HVAC) Rebate Program: **REU** provides financial incentives for HVAC systems with a SEER of 14 or greater (2005/06 Program). The HVAC program also includes requirements of duct pressure tests, incentives for repair/replacement, HVAC servicing.
- FY05/06 HVAC Program: Adopt New Title 24 standards, using EER instead of SEER for ratings and rebates. REU has conducted and sponsored multiple training programs for local HVAC contractors. 7,415 rebates have been awarded and more than $2.8 million have been paid out to the Redding community for the HVAC Program.
- Energy Star® Incentives: In excess of 16,715 rebates have been granted for the purchase of Energy Star® dishwasher, clothes washer, refrigerator, windows and electric water heaters.
- Low-Income Programs: (Weatherization, Community Assistance (**CARE**), and low-income pricing discounts): REU has provided our community more than $1.6 million in financial support**.**
- "Earth Advantage" Rebate Program: REU initiated in 2005 a Residential **"**GREEN**"** new construction program requiring homes to be more than 20 percent more efficient than Title 24. The program provides opportunities for using sustainable energy building

products. Since April of 2005, nine builders have committed to this program, committing to constructing more than 500 "Earth Advantage: homes.

Energy Efficient Technology Applications and Research Development and Demonstration for City Buildings:

- New Fire Station 8 and Fire Station 10: **E**nhanced technologies including solar panels and ice storage.
- Municipal Airport: Thermal energy, ice storage project shifting on-peak demand to off-peak hours.
- R&D Project: Commercial ice-storage for existing air-conditioning systems at two Fire Stations. Should shift 8-10 kilowatts to off peak. Commercial Thermal Energy Storage Program launch in spring 2007.
- Residential Ice Storage: R&D testing in 2006. REU expects to roll out Thermal Energy Storage Program in late 2007.
- New County Library: Located in Redding is featuring Thermal Energy Storage and solar technologies will open in the fall of 2006.

Proposed REU Energy Efficiency Programs and Services: **(for 2006-2007)**

- Maintain existing programs.

New REU Demand Reduction Programs:

- REU Pool Timer Program: REU will introduce a new peak shifting program in the spring of 2007, the REU Pool Timer Program is designed to educate and incent residential pool owners to shift their pool timers 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 5 megawatts of peak demand shift, improving REU's overall system efficiency (load factor).

- Thermal Energy Storage: REU has begun the introduction and implementation of an aggressive thermal energy storage program. This program will use existing and new, small-scale, refrigerant-based air conditioning systems to make ice in off-peak hours for use during on-peak hours to condense the refrigerant -- instead of using the systems' compressor. Local test results show a 94-95 percent reduction in peak demand and a daily energy savings of 20-22 percent.

REDDING ELECTRIC UTILITY (REU)

Time Period for Reporting Data: Fiscal Year ending 6/30/06.

Redding - 0506 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling								
HVAC	Non-Res Heating								
HVAC	Non-Res Shell	55	471,172	4,711,720	55	$ 25,984		$ 13,392	$ 39,375
Lighting	Non-Res Lighting	39	228,907	2,522,371	51	$ 26,313		$ 7,169	$ 33,482
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers	74	176,640	1,766,400	74	$ 55,200		$ 5,020	$ 60,220
Appliances	Res Dishwashers	6	57,139	742,810	18	$ 20,252		$ 2,111	$ 22,363
Consumer Electronics	Res Electronics								
HVAC	Res Cooling	458	1,895,029	34,086,944	757	$ 488,578		$ 96,882	$ 585,460
HVAC	Res Heating								
HVAC	Res Shell	1,044	811,263	14,999,968	1,044	$ 739,897		$ 42,633	$ 782,530
Lighting	Res Lighting								
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration	48	285,120	5,132,160	48	$ 63,071		$ 14,587	$ 77,658
Other	Res Solar	2	4,800	144,000	2	$ 15,190		$ 409	$ 15,599
Water Heating	Res Water Heating	1	2,592	38,880	1	$ 1,000		$ 111	$ 1,111
Other	Other		31,840	95,520				$ 271	$ 271
Total		1,728	3,964,502	64,240,773	2,050	$ 1,435,485		$ 182,585	$ 1,618,070

Redding - 0607 (v14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling	17	21,225	318,375	24	$ 9,375		$ 574	$ 9,949
HVAC	Non-Res Heating								
HVAC	Non-Res Shell	160	1,360,000	13,600,000	160	$ 75,000		$ 24,503	$ 99,503
Lighting	Non-Res Lighting	109	599,860	9,165,020	152	$ 51,800		$ 16,513	$ 68,313
Process	Non-Res Motors	6	22,160	332,400	8	$ 7,500		$ 599	$ 8,099
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers	38	89,600	896,000	38	$ 1,750		$ 1,614	$ 3,364
Appliances	Res Dishwashers	3	29,760	386,880	9	$ 2,000		$ 697	$ 2,697
Consumer Electronics	Res Electronics								
HVAC	Res Cooling	584	2,416,648	43,456,640	963	$ 611,500		$ 78,296	$ 689,796
HVAC	Res Heating								
HVAC	Res Shell	931	728,195	12,961,584	931	$ 395,900		$ 23,353	$ 419,253
Lighting	Res Lighting	178	1,560,320	17,130,880	176	$ 25,200		$ 30,865	$ 56,065
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration	48	285,120	5,132,160	48	$ 62,700		$ 9,247	$ 71,947
Other	Res Solar	11	24,000	720,000	11	$ 80,000		$ 1,297	$ 81,297
Water Heating	Res Water Heating	10	71,856	1,356,240	10	$ 27,250		$ 2,444	$ 29,694
Other	Other								
Total		2,095	7,208,744	105,456,179	2,530	$ 1,349,975		$ 190,000	$ 1,539,975

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 102,000 electric and 62,000 water customers within the City of Riverside. Peak demand was reached on July 21, 2006, with 586.75 megawatts. Annual energy use is approximately 2,000 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 $3,612,588 in FY 2005-2006 resulted in savings of more than 5,931,655 kilowatt-hours. Since FY 2001-2002 total program costs for all energy efficiency programs were $28,027,100, resulting in 63.29 GWH 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 - Seasonal Energy Efficiency Ratio (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 percent to 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 1 megawatt of local renewable generation, the following are the completed projects as of December 2006 totaling over 500 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 20,000 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: **(for 2006-2007)**

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:

- An increase to the Residential PV Program rebate. The rebate will be increased from $2 to $3 per watt up to 50 percent of the project cost, which ever is less, and incentive cap of $15,000 has been placed per customer.
- Addition of the low-income refrigerator recycling program administered by SCPPA. This program will recycle low-income family inefficient refrigerators and provide them with a brand new Energy Star® rated unit.
- The Energy Star® Refrigerator rebate will be increased from $100 to $200 per unit per customer.
- The Residential Air Conditioning rebate will be increased from a flat per ton rebate to a 10 percent of the project cost rebate with a cap of $750 per customer.

RIVERSIDE PUBLIC UTILITIES

Time Period for Reporting Data: Fiscal Year ending 6/30/06.

Riverside - 0506 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling	51	86,363	1,295,447	22	$ 19,600		$ 1,956	$ 21,556
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting								
Process	Non-Res Motors	0	340	5,100	0	$ 1,600		$ 8	$ 1,608
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers	5	11,948	119,480	5	$ 38,625		$ 180	$ 38,805
Appliances	Res Dishwashers	2	7,411	96,346	2	$ 19,300		$ 145	$ 19,445
Consumer Electronics	Res Electronics								
HVAC	Res Cooling	578	2,707,721	80,483,386	557	$ 271,455		$ 121,535	$ 392,990
HVAC	Res Heating								
HVAC	Res Shell	22	37,021	737,547	22	$ 11,179	$ 2,464	$ 1,114	$ 14,757
Lighting	Res Lighting	6	54,540	599,940	6	$ 105,444		$ 906	$ 106,350
Pool Pump	Res Pool Pump	8	48,360	483,600	33	$ 9,300		$ 730	$ 10,030
Refrigeration	Res Refrigeration	19	107,602	1,936,829	19	$ 154,600		$ 2,925	$ 157,525
Other	Res Solar	26	56,160	1,684,800	26	$ 46,800		$ 2,544	$ 49,344
Water Heating	Res Water Heating								
Other	Other								
Total		717	3,117,466	87,442,475	693	$ 677,903	$ 2,464	$ 132,044	$ 812,411

Riverside - 0607 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling	46	77,583	1,166,103	20	$ 67,500		$ 4,364	$ 71,864
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting								
Process	Non-Res Motors	0	340	5,100	0	$ 1,600		$ 19	$ 1,619
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers	5	12,760	127,600	5	$ 41,250		$ 478	$ 41,728
Appliances	Res Dishwashers	3	8,832	114,816	3	$ 23,000		$ 430	$ 23,430
Consumer Electronics	Res Electronics								
HVAC	Res Cooling	580	2,622,027	77,707,723	568	$ 311,000		$ 290,824	$ 601,824
HVAC	Res Heating								
HVAC	Res Shell	101	68,036	1,346,133	101	$ 4,009	$ 1,825	$ 5,038	$ 10,871
Lighting	Res Lighting	6	54,000	594,000	6	$ 100,000		$ 2,223	$ 102,223
Pool Pump	Res Pool Pump	8	52,000	520,000	36	$ 10,000		$ 1,946	$ 11,946
Refrigeration	Res Refrigeration	18	104,400	1,879,200	18	$ 150,000		$ 7,033	$ 157,033
Other	Res Solar	28	60,000	1,800,000	28	$ 50,000		$ 6,737	$ 56,737
Water Heating	Res Water Heating								
Other	Other								
Total		795	3,059,978	85,260,676	785	$ 758,359	$ 1,825	$ 319,091	$ 1,079,275

ROSEVILLE ELECTRIC (RE)

- Established in 1912
- 48,891 customers (43,268 residential and 5,623 commercial). Roseville projects an average 1,500 new meters annually for the next 7 years
- Peak demand – 342.9 megawatts; summer afternoon peak
- Annual energy use: 1,192 gigawatt-hours (FY05/06)
- 151 employees

Roseville Electric Energy Efficiency Program Highlights

Roseville Electric (RE) started energy efficiency programs in the early 1980s. From 2001 to 2006 these programs have resulted in peak demand reductions of 10.3 megawatts. Cumulative energy savings are over 79,000 megawatt-hours with an equivalent 59,000-ton reduction in CO_2 production for the six-year period.

Current Commercial 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 commercial 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 commercial customers to reduce air conditioning load. The program also provides educational information regarding the care of trees to help ensure energy savings.

Current 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.

Current 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.
- New Construction Program: RE also provides incentives for builders that go beyond the above agreements.

Current Municipal Facilities Programs:

- Municipal Facilities Upgrades: RE has implemented a 10-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 redesigns to reduce watts per sq ft 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.
    - Install solar electric generation on City buildings.
    - New construction design features on City buildings including; LEED certification, shade overhanging eves and skylights to reduce lighting needs.
- Utility Education Center: RE and other City entities are developing the "Utility Exploration Center" that will function as an educational resource for the community. The Center is scheduled to open 2007.
- Photovoltaic Systems: Two community buildings and one public pool generate power through rooftop photovoltaic systems. More are in the planning stage.

Current School Programs:

- Lighting retrofits: Assisted local schools with T12 to T8 and T12 to T5 retrofits.
- LED Exit Signs: Replacement of incandescent or fluorescent exit signs with LED signs.
- Energy Efficient Thermostats: installation of programmable thermostats.
- Computer Monitor Replacements: Replace computer monitors with more efficient monitors.

Proposed Energy Efficiency Programs: (for 2006-2007)

- Maintain existing programs with an effort to increase the participation in the residential and small commercial air conditioning programs.
- Introduce BEST Homes program. This new construction program encourages customer independence by incorporating energy efficient measures and PV systems in new homes.
- Promote the commercial new construction program to encourage all new commercial buildings to surpass Title 24.
- Sensor controlled light shades for the west side and other energy efficient enhancements included in construction of a new library building and utility exploration center.
- Investigate new energy efficient strategies.

Renewable Energy Development: (Currently 376 kilowatts of solar generation installed in Roseville.)

Fiscal year 2006:

- Introduction of RE's new Green Roseville (green energy) program to residential and commercial customers.
- To date, there is Continuing the residential and commercial solar retrofit incentive programs.
- RE is also working with NCPA to ensure the efficiency and longevity of the geothermal resources.

Proposed 2007:

- Continue what we are doing in FY06.
- Photovoltaic panels on Silverado Middle School and Roseville Civic Center.
- New Construction: RE will partner with builders to build renewable energy generation facilities in new developments. The proposed Roseville BEST program encourages 20 percent of all new homes to include rooftop photovoltaic systems and energy efficiency upgrades besides the energy efficient upgrades.

Roseville Electric Demand Reduction Programs: (Goal for all programs – 5 percent of load by 2012)

Fiscal year 05/06:

- Commercial/Industrial load reduction program with a 4 megawatts potential.

Proposed Fiscal Year 06/07:

- Implement residential load management program using AC switches and thermostats. RE goal is 1.0 megawatt in 2007 summer with an overall goal of 5 megawatts.
- Commercial/Industrial load reduction goal of 6 megawatts.
- Investigate new demand reduction and load shifting technologies such as thermal energy storage.

ROSEVILLE ELECTRIC (RE)

Time Period for Reporting Data: Fiscal Year ending 6/30/06.

Roseville - 0506 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling	398.1	1,029,185	17,070,745	596.3	$ 279,018		$ 150,697	$ 429,715
HVAC	Non-Res Heating								
HVAC	Non-Res Shell	12.4	43,775	490,234	12.4	$ 23,677		$ 4,328	$ 28,005
Lighting	Non-Res Lighting	208.4	1,204,792	14,406,106	256.5	$ 148,877		$ 127,174	$ 276,051
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers	6.1	14,732	147,320	6.1	$ 18,752	$ 3,493	$ 1,301	$ 23,545
Appliances	Res Dishwashers	4.7	11,546	150,093	4.7	$ 22,550	$ 2,481	$ 1,325	$ 26,355
Consumer Electronics	Res Electronics								
HVAC	Res Cooling	1,009.5	1,219,106	26,291,912	1,015.0	$ 434,470	$ 86,864	$ 232,099	$ 753,433
HVAC	Res Heating								
HVAC	Res Shell	220.6	207,487	2,182,120	220.6	$ 78,916	$ 1,189	$ 19,263	$ 99,368
Lighting	Res Lighting								
Pool Pump	Res Pool Pump	2.0	11,000	110,000	7.5	$ 2,150	$ 110	$ 971	$ 3,231
Refrigeration	Res Refrigeration	110.1	710,034	12,780,605	110.1	$ 46,400	$ 2,717	$ 112,824	$ 161,941
Other	Res Solar								
Water Heating	Res Water Heating								
Other	Other	4.8	117,761	428,199	4.8	$ 1,911	$ 16,961	$ 3,780	$ 22,652
Total		1,977	4,569,417	74,057,333	2,234	$ 1,056,722	$ 113,813	$ 653,761	$ 1,824,296

Roseville - 0607 (v14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling	275	275,000	4,950,000	275	$ 137,500		$ 48,827	$ 186,327
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting	275	1,100,000	12,100,000	275	$ 137,500		$ 119,355	$ 256,855
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers	4	9,280	92,800	4	$ 10,000	$ 2,200	$ 915	$ 13,115
Appliances	Res Dishwashers	1	4,608	59,904	2	$ 12,000	$ 1,320	$ 591	$ 13,911
Consumer Electronics	Res Electronics								
HVAC	Res Cooling	1,018	1,366,950	29,029,472	1,065	$ 912,410	$ 93,846	$ 286,347	$ 1,292,603
HVAC	Res Heating								
HVAC	Res Shell	297	287,474	3,004,672	297	$ 113,990	$ 1,898	$ 29,638	$ 145,526
Lighting	Res Lighting								
Pool Pump	Res Pool Pump	22	56,000	560,000	38	$ 15,000	$ 275	$ 5,524	$ 20,799
Refrigeration	Res Refrigeration	76	487,920	8,782,560	76	$ 30,000	$ 1,650	$ 86,631	$ 118,281
Other	Res Solar								
Water Heating	Res Water Heating								
Other	Other	790	2,936,416	31,689,248	790	$ 401,000		$ 312,583	$ 713,583
Total		2,758	6,523,647	90,268,656	2,821	$ 1,769,400	$ 101,188	$ 890,412	$ 2,761,000

SACRAMENTO MUNICIPAL UTILITY DISTRICT (SMUD)

- Customer Accounts: 520,000 residential, 65,000 non-residential (as of October 2006)
- Peak Demand: 3,300 megawatts (July 24, 2006)
- Annual Energy Use: 11 million megawatt-hours (2006)

SMUD Energy-Efficiency Program Highlights

- SMUD has been continuously operating energy-conservation and energy-efficiency programs since 1976.
- In 2005, SMUD spent $21.6 million for residential and commercial energy-efficiency programs. These programs delivered 21.5 megawatts of peak-load reduction and 85.0 GWh of annual energy savings.
- For 2006 residential and commercial energy-efficiency programs, SMUD is currently projecting to spend $21.6 million, and is projecting to save 20.2 megawatts and 87.1 gigawatt-hours of annual energy savings.

Current Commercial/Industrial Customer Programs: (2006)
Commercial/industrial energy efficiency programs were budgeted for $8.1 million, with goals of 5.5 megawatts of peak-load reduction and 21 gigawatt-hours in annual energy savings.

- 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).
- 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.
- 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.

Current Residential Customer Programs: (2006)
Residential energy-efficiency programs were budgeted for $15.6 million, with goals of 11 megawatts of peak-load reduction and 45 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 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, compact disk, and paper energy audits; and telephone assistance.
- Residential Appliance Efficiency: Provides rebates for qualifying (Energy Star®, Consortium for Energy Efficiency) appliances: clothes washers, dishwashers, refrigerators, room air conditioners. Also provides rebates for and free pick-up of, and recycles, 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 a rebate for customers who install a qualifying two- or variable-speed pump and motor. Through marketing, encourages customers to operate pool pumps and sweeps during off-peak hours.
- Residential New Construction: Provides incentives to builders to build homes that exceed the Title 24 energy efficiency standards by 20 percent or more. The Zero 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.

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, 2 pm to 6 pm, weekdays, June through 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)

Time Period for Reporting Data: Calendar year ending 12/31/05.

SMUD - 2005 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling	2,473	7,440,947	140,626,111	2,473	$ 732,786		$ 1,773,779	$ 2,506,565
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting	5,025	26,126,833	365,749,985	5,025	$ 2,518,834		$ 2,998,168	$ 5,517,003
Process	Non-Res Motors	86	323,720	4,855,793	86	$ 17,988		$ 44,996	$ 62,984
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration	57	506,255	4,050,043	57	$ 1,303		$ 8,795	$ 10,098
Appliances	Res Clothes Washers	44	390,595	5,468,330	44	$ 51,500		$ 147,662	$ 199,162
Appliances	Res Dishwashers								
Consumer Electronics	Res Electronics								
HVAC	Res Cooling	6,333	6,040,528	149,058,770	6,333	$ 5,392,780		$ 3,158,244	$ 8,551,024
HVAC	Res Heating								
HVAC	Res Shell	704	1,258,284	23,593,236	704	$ 144,160		$ 142,828	$ 286,988
Lighting	Res Lighting	5,497	37,408,430	353,249,680	5,497	$ 1,338,157		$ 2,210,507	$ 3,548,664
Pool Pump	Res Pool Pump	799	712,806	10,553,610	799	$ 51,700		$ 270,741	$ 322,441
Refrigeration	Res Refrigeration								
Other	Res Solar								
Water Heating	Res Water Heating	3	17,364	347,280	3	$ 2,400		$ 881	$ 3,281
Other	Other	523	4,737,524	47,375,243	523	$ 174,839		$ 448,599	$ 623,438
Total		21,544	84,963,287	1,104,928,081	21,544	$ 10,426,448		$ 11,205,201	$ 21,631,649

SMUD 2006 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling	2,839	10,030,114	168,196,122	2,839	$ 1,071,701		$ 2,687,730	$ 3,759,431
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting	4,624	22,131,134	278,236,141	4,624	$ 2,785,604		$ 1,913,116	$ 4,698,720
Process	Non-Res Motors	34	105,050	1,575,745	34	$ 6,554		$ 6,562	$ 13,117
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration		2,175	17,402		$ 411		$ 1,142	$ 1,552
Appliances	Res Clothes Washers	54	476,860	6,676,040	54	$ 59,400		$ 44,992	$ 104,392
Appliances	Res Dishwashers	5	14,276	171,312	5	$ 5,070		$ 9,741	$ 14,811
Consumer Electronics	Res Electronics								
HVAC	Res Cooling	4,588	4,035,709	106,671,442	4,168	$ 3,844,900		$ 2,404,086	$ 6,248,986
HVAC	Res Heating								
HVAC	Res Shell	347	728,635	12,532,625	347	$ 148,884		$ 135,925	$ 284,809
Lighting	Res Lighting	6,152	43,299,677	353,340,860	6,152	$ 1,713,575		$ 2,426,341	$ 4,139,916
Pool Pump	Res Pool Pump	582	355,555	5,229,525	582	$ 49,375		$ 210,728	$ 260,103
Refrigeration	Res Refrigeration	704	4,608,600	44,472,000	704	$ 505,000		$ 1,017,310	$ 1,522,310
Other	Res Solar								
Water Heating	Res Water Heating	4	23,152	463,040	4	$ 12,000		$ 1,744	$ 13,744
Other	Other	219	1,285,527	12,855,269	219	$ 138,040		$ 398,607	$ 536,647
Total		20,151	87,096,464	990,437,524	19,731	$ 10,340,514		$ 11,258,027	$ 21,598,541

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 (54.5%) 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 our customers are residential. Our goal is to help our customers use their electricity more efficiently.

Overview of Shasta Lake Energy Efficiency Programs

In 2005/2006, Shasta Lake spent approximately $90,000 in rebates and consulting services to support programs. Net annual savings were 63,998 kilowatt-hours from 1,383 appliances installed, calculated using a CEC-approved spreadsheet calculation methodology.

Current Commercial and Industrial Customer Programs:

- Free Energy Audits: 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.

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: (for 2006-2007)

- 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.

Proposed New Energy Efficiency Programs: (2006-2007)

The City of Shasta Lake is not proposing any new energy efficiency programs for 2006-2007, but 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 late November the installation of 50 electric and water advanced meters as a demonstration program as a first step in providing the capability of implementing a remote metering program. If successful, this remote meter reading system would allow the City to implement an interruptible load program, time of use metering and other such programs.

CITY OF SHASTA LAKE

Time Period for Reporting Data: Fiscal Year ending 6/30/2006.

Shasta Lake - 0506 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling								
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting	0	2,432	6,080	0	$ 32		$ 497	$ 529
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers	2	5,915	59,152	2	$ 2,100		$ 4,834	$ 6,934
Appliances	Res Dishwashers	0	1,100	14,300	0	$ 525		$ 1,169	$ 1,694
Consumer Electronics	Res Electronics								
HVAC	Res Cooling	11	7,586	133,509	3	$ 4,350		$ 10,910	$ 15,260
HVAC	Res Heating								
HVAC	Res Shell	8	9,408	150,568	8	$ 10,520		$ 12,304	$ 22,824
Lighting	Res Lighting								
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration	2	9,568	172,224	2	$ 2,950		$ 14,074	$ 17,024
Other	Res Solar								
Water Heating	Res Water Heating	0	1,054	15,816	0	$ 50		$ 1,292	$ 1,342
Other	Other								
Total		24	37,064	551,649	17	$ 20,527		$ 45,080	$ 65,607

Shasta Lake 0607 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling								
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting	2	11,840	130,240	3	$ 10,000		$ 7,426	$ 17,426
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers	2	5,763	57,632	2	$ 1,800		$ 3,286	$ 5,086
Appliances	Res Dishwashers	0	1,320	17,160	0	$ 500		$ 978	$ 1,478
Consumer Electronics	Res Electronics								
HVAC	Res Cooling	7	6,118	107,082	8	$ 4,125		$ 6,106	$ 10,231
HVAC	Res Heating								
HVAC	Res Shell	8	9,502	150,928	8	$ 10,550		$ 8,606	$ 19,155
Lighting	Res Lighting	4	22,160	199,440	30	$ 2,000		$ 11,372	$ 13,372
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration	1	6,240	112,320	1	$ 3,375		$ 6,404	$ 9,779
Other	Res Solar								
Water Heating	Res Water Heating	0	1,054	15,816	0	$ 50		$ 902	$ 952
Other	Other								
Total		25	63,998	790,618	52	$ 32,400		$ 45,080	$ 77,480

SILICON VALLEY POWER

- Established in 1896
- 50,092 customers; 83 percent are residential customers but only 9.4 percent of power sales are residential. 86 percent of sales are to the 1,936 industrial customers. SVP projects an average increase of 1.9 percent annually in sales.
- Peak demand: 400 megawatts; occurred August 2005 at 1500 hours; 73.3 percent load factor.
- Annual energy use: 2,636 gigawatt-hours in 2005.
- SVP owns power generation facilities. Has invested in joint ventures that produce electric power and trades on the open market. Over 34 percent of its power comes from geothermal, wind, and other eligible renewable sources.
- The City of Santa Clara employs 138 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 86 percent 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 fiscal year 2005-2006 was $2,266,277 ($4,147,768 on all public benefit programs), resulting in 984 megawatts demand reduction and 4,467 gigawatt-hours reductions. Since 1998, total program costs for all public benefit programs were $39,308,507, resulting in 731,943 gigawatt-hours reductions.

SVP Energy Efficiency Program Objectives:
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 energy efficient lighting, motors, air conditioners, motion sensors, programmable thermostats, cool roofs, new construction, and customized energy-efficiency installations).
- Business Energy Information: Management information on energy usage through 15-minute interval meters, Itron's 'The Utility Manager' software, training, and other sources.

Current Residential Customer Programs:

- Residential In-Home Energy Audits and Education: Through this technical support program, SVP staff provided on-site audit analysis, energy efficiency recommendations and distribute 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, compact fluorescent light bulbs (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 community buildings. The second installation at Valley Village Retirement Center will be completed at the end of this fiscal year. Industrial customers provided $10,000 of the funding for this installation.
- 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.

Current Community Programs:

- Solar Electric Project: A capital project to install a 100 kilowatts 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.
- Breathe Easy Express: This program was a community demonstration of electric hybrid transit bus technology and has been completed successfully (RD&D program).

Proposed Energy Efficiency Programs and Services: **(for 2006-2007)**

- Continuation of Existing Programs

Commercial Customer Programs:

- "Optimal Power Use Service[sm]" (OPUS)
- Business Audits
- Business Energy Information
- Business Rebates

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

Community Programs:

- Public Facilities' Energy Efficiency Program

Modifications to Existing Energy Efficiency Programs and New Programs:

Business Customer Programs:

- RD&D Showcase Grant: This program was originally developed to encourage businesses to develop new energy-efficient technologies. This program is currently being redeveloped (RD&D program).
- Business Solar Photovoltaic Rebate: Provides financial incentives for the installation of solar systems at business sites. Businesses can receive $2.50 per output watt up to a total of $125,000 per customer. Businesses are required to complete an energy audit in order to receive a rebate, as is the case with the statewide California Solar Initiative.

Residential Customer Programs*:*

- Refrigerator & Room Air Conditioner Recycling: Rebate for recycling old refrigerators and room air conditioners. The program budget has more than doubled and ACs were added.
- Low-Income Refrigerator Replacements: Replaces old refrigerators for residents in the financial low-income program with new, energy saving appliances. The budget for next years has increased to double the number of units replaced from 50 to 100 per year.
- Residential Appliance Rebates*:* Rebates provided to residents for the purchase and installation of Energy Star® labeled refrigerators. Since nearly all dishwashers on the market are Energy Star® qualifying, this rebate was discontinued.
- 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 budget for this program has more than doubled form $100,000 to $250,000 in the next budget year. The rebate application has been simplified to match statewide programs (renewable program).

Community Programs:

- Solar Electric Project: A capital project to install a PV carport at a city facility is underway. Increased funding for the current year of $500,000 has been added to last year's allocation of $1,000,000 to allow for additional structures (renewable program).

SVP Demand Reduction Programs:

In 2005, SVP had a load factor of 73.3 percent, primarily due to a large percentage of sales to large high tech firms that operate three daily 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 1 megawatt 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.

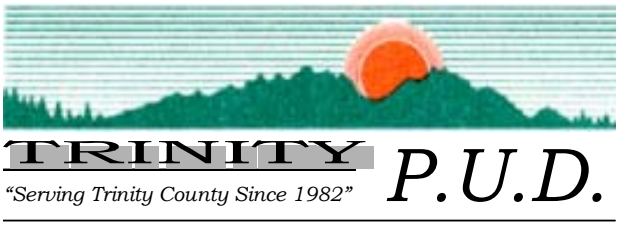
SILICON VALLEY POWER

Time Period for Reporting Data: Fiscal Year ending 6/30/06.

SVP 0506 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling	27	26,981	404,712	45	$ 58,360	$ 29,180	$ 58,627	$ 146,167
HVAC	Non-Res Heating								
HVAC	Non-Res Shell	15	21,448	321,718	15	$ 30,696	$ 15,348	$ 31,891	$ 77,936
Lighting	Non-Res Lighting	537	3,596,842	37,106,254	574	$ 273,950	$ 136,956	$ 616,213	$ 1,027,119
Process	Non-Res Motors	2	226,280	3,394,200	3	$ 24,260	$ 12,130	$ 55,618	$ 92,008
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration	0	2,807	11,229	0	$ 596	$ 298	$ 668	$ 1,562
Appliances	Res Clothes Washers								
Appliances	Res Dishwashers	4	10,189	132,454	3	$ 19,900	$ 13,564	$ 19,937	$ 53,401
Consumer Electronics	Res Electronics		14,021	70,104	0	$ 2,540	$ 635	$ 3,060	$ 6,235
HVAC	Res Cooling	0	11,939	131,050	21	$ 2,450	$ 2,215	$ 3,566	$ 8,231
HVAC	Res Heating								
HVAC	Res Shell	9	5,702	114,048	9	$ 15,400	$ 7,700	$ 15,541	$ 38,641
Lighting	Res Lighting	26	141,057	1,292,334	169	$ 11,610	$ 5,805	$ 23,401	$ 40,816
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration	36	261,811	4,712,602	36	$ 53,705	$ 38,642	$ 95,990	$ 188,337
Other	Res Solar								
Water Heating	Res Water Heating								
Other	Other	47	240,088	802,181	48	$ 12,350	$ 234,162	$ 19,347	$ 265,859
	Non-Res Miscellaneous	47	127,905	940,271	60	$ 4,962	$ 506,433	$ 13,758	$ 525,153
	General Direct Install Cc						$ 278,624		$ 278,624
	Other Incentive Costs					$ (5,003)			$ (5,003)
Total		751	4,687,070	49,433,156	984	$ 505,777	$ 1,281,692	$ 957,616	$ 2,745,085

SVP - 0607 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling	27	27,029	405,432	46	$ 58,030	$ 29,015	$ 27,580	$ 114,625
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting	786	5,731,430	59,813,390	838	$ 387,005	$ 153,455	$ 434,862	$ 975,322
Process	Non-Res Motors	2	246,717	3,700,752	3	$ 25,091	$ 12,446	$ 27,415	$ 64,952
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration	1	8,000	32,000	1	$ 1,699	$ 425	$ 896	$ 3,020
Appliances	Res Clothes Washers								
Appliances	Res Dishwashers								
Consumer Electronics	Res Electronics	90	7,912	71,208	90	$ 4,600	$ 1,150	$ 2,358	$ 8,108
HVAC	Res Cooling	6	13,336	154,920	27	$ 10,060	$ 3,265	$ 5,153	$ 18,478
HVAC	Res Heating								
HVAC	Res Shell	10	6,480	129,600	10	$ 17,500	$ 8,750	$ 8,350	$ 34,600
Lighting	Res Lighting	27	147,452	1,349,020	177	$ 12,120	$ 3,031	$ 11,316	$ 26,466
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration	99	705,880	12,705,840	99	$ 71,500	$ 69,125	$ 87,614	$ 228,239
Other	Res Solar								
Water Heating	Res Water Heating								
Other	Other	66	208,538	1,385,388	84	$ 25,748	$ 290,499	$ 17,534	$ 333,781
	Non-Res Miscellaneous	583	5,139,800	51,119,400	1,137	$ 680,001	$ 750,000	$ 526,922	$ 1,956,924
Total		1,697	12,242,574	130,866,950	2,513	$ 1,293,354	$ 1,321,160	$ 1,150,000	$ 3,764,515

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.
- Serves small northern California area consisting of 6,900 meters in mountain terrain covering a 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 17 megawatts, normally occurring in the winter.
- 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

TPUD public benefits expenditures total approximately $196,000 per year and have resulted in kilowatt-hours savings of more than 113,906 kilowatt-hours per year since FY99/00.

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.
- Low-Income Assistance: Rate discount program for qualified low-income residential customers.

Proposed TPUD Energy Efficiency Programs and Services: **(for 2006-2007)**

- Maintain existing programs at current levels.

TPUD Demand Reduction Programs:
TPUD does not currently have a demand reduction program in place.

TRINITY PUBLIC UTILITY DISTRICT

Time Period for Reporting Data: Calendar year ending 12/31/05.

Trinity PUD - 0506 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling								
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting								
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers								
Appliances	Res Dishwashers								
Consumer Electronics	Res Electronics								
HVAC	Res Cooling								
HVAC	Res Heating								
HVAC	Res Shell		22,107	442,144		$ 57,640			$ 57,640
Lighting	Res Lighting								
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration								
Other	Res Solar								
Water Heating	Res Water Heating								
Other	Other								
Total			22,107	442,144		$ 57,640			$ 57,640

Trinity PUD - 0607 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling								
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting								
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers								
Appliances	Res Dishwashers								
Consumer Electronics	Res Electronics								
HVAC	Res Cooling								
HVAC	Res Heating								
HVAC	Res Shell		13,517	270,336		$ 33,803			$ 33,803
Lighting	Res Lighting								
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration								
Other	Res Solar								
Water Heating	Res Water Heating								
Other	Other								
Total			13,517	270,336		$ 33,803			$ 33,803

TRUCKEE DONNER PUBLIC UTILITY DISTRICT

- Established in 1927
- 12,562 customers, 88 percent are residential
- TDPUD projects an average growth rate of 3-5 percent per year, for the next 10 years
- 2005 Peak demand – 32.2 megawatts (winter peaking)
- 2005 Energy Use- 146.6 gigawatt-hours

TDPUD Energy Efficiency Program Highlights

The Town of Truckee expects to become the "Greenest Small Town in America" by 2010 due to its high per capita number of green buildings and high energy and water efficiency and renewable energy projects expected to be built by 2010.

Current 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 load and provided savings.
- 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 including: ground source heat pumps; duct testing; and the purchase of energy efficient clothes washers and refrigerators, and electric GSHP and solar water heaters.

Current 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 including: ground source heat pumps; duct testing; and the purchase of energy efficient clothes washers and refrigerators, and electric GSHP and solar water heaters.

Current Community Programs:

- Green Building Education**:** TDPUD has partnered with the local Sierra Green Building Assn. and the 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**.**
- Green Building Design Assistance**:** TDPUD Energy Specialists work with homeowners, businesses and developers to provide information and resources design assistance for the development of "green" building plans. TDPUD has taken the lead in the production of a "Green Building Resource Guide" for the community.
- Landscape Water Conservation Workshops: TDPUD has partnered with local nurseries to conduct landscape water conservation workshops for the community.

Current Education Programs:

Public Schools:

- Energy Education: TDPUD personnel make presentations on energy issues to local schools each year.
- "LivingWise" Resource Efficiency Program: TDPUD collaborates with the 6th grade staff in the local schools to provides the curriculum and resources for "LivingWise" Resource Efficiency program.
- Truckee High School Green Film Festival: TDPUD organized and supported the 2006 Truckee HS "Green Film Festival"
- Climate Change Symposium: TDPUD assists the Tahoe-Truckee Regional Education Coalition w/Climate Change Symposium.

Community Education Programs:

- Green Building Symposium: TDPUD organizes and provides support for the Truckee Home Show's Green Building Symposium.
- Smart Living EXPO: TDPUD helps organize and participates in the Smart Living EXPO in Reno, NV.
- Regional Sustainability Assessment/Education: TDPUD collaborates with No. NV AIA on Regional Sustainability Assessment/Education.

Proposed TDPUD Energy Efficiency Programs and Services: **(for 2006-2007)**

- Existing Programs to be maintained at current levels.

New/Modified Commercial Customer Programs:

- 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 will soon be eligible for this rebate.
- Solar PV Program: TDPUD plans to offer financial incentives to commercial customers who incorporate solar PV technologies into their businesses.

New/Modified Residential Customer Programs:

- 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.
- Solar PV Program: TDPUD plans to offer financial incentives to residential customers who incorporate solar PV technologies into their homes.
- Low-Income Weatherization: TDPUD is providing home weatherization services to low-income residential customers.

TDPUD Demand Reduction Programs:

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

TRUCKEE DONNER PUBLIC UTILITY DISTRICT

Time Period for Reporting Data: Calendar year ending 12/31/05.

Truckee PUD 2005 (v14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling								
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting	0	1,562	17,178	0	$ 1,600	$ 2,000	$ 4,000	$ 7,600
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers	2	3,661	36,608	2	$ 800		$ 1,600	$ 2,400
Appliances	Res Dishwashers								
Consumer Electronics	Res Electronics								
HVAC	Res Cooling								
HVAC	Res Heating								
HVAC	Res Shell	0	926	12,043	0	$ 6,000	$ 5,000	$ 10,000	$ 21,000
Lighting	Res Lighting	4	19,200	172,800	25	$ 7,500	$ 12,000	$ 24,000	$ 43,500
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration	0	1,375	24,754	0	$ 950		$ 1,900	$ 2,850
Other	Res Solar								
Water Heating	Res Water Heating	1	4,221	63,312	1	$ 600	$ 2,000	$ 400	$ 3,000
Other	Other		15,920	47,760				$ 10,000	$ 10,000
Total		7	46,865	374,454	28	$ 17,450	$ 21,000	$ 51,900	$ 90,350

Truckee PUD 2006 (v14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling								
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting	0	1,562	17,178	0	$ 1,600	$ 2,000	$ 4,000	$ 7,600
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers	2	3,661	36,608	2	$ 800		$ 1,600	$ 2,400
Appliances	Res Dishwashers								
Consumer Electronics	Res Electronics								
HVAC	Res Cooling								
HVAC	Res Heating								
HVAC	Res Shell	0	926	12,043	0	$ 6,000	$ 5,000	$ 10,000	$ 21,000
Lighting	Res Lighting	4	19,200	172,800	25	$ 7,500	$ 12,000	$ 24,000	$ 43,500
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration	0	1,375	24,754	0	$ 950		$ 1,900	$ 2,850
Other	Res Solar								
Water Heating	Res Water Heating	1	4,221	63,312	1	$ 600	$ 2,000	$ 400	$ 3,000
Other	Other		15,920	47,760				$ 10,000	$ 10,000
Total		7	46,865	374,454	28	$ 17,450	$ 21,000	$ 51,900	$ 90,350

TURLOCK IRRIGATION DISTRICT

In 1887, TID became the first publicly owned irrigation district in the state of California. Organized under the newly authorized Wright Act. 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:

- 94,635 customers
- 73 percent are residential
- TID expects a 3 percent annual growth rate for the next 7 years
- Peak demand – 476 megawatts (summer peak)
- Annual energy use: 1,814 gigawatt-hours (2005).
- Power content (*2005 Projected*) — Eligible renewable 6 percent, large hydro 42 percent, coal 24 percent, and natural gas 28 percent.

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. TID will be continuing the existing programs at current levels and will be implementing new programs.

Current 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 the energy use.
- Residential Energy Rebate Program: TID manages a comprehensive residential energy efficiency rebate program. Generous rebates and solid technical support are available to residential customers to promote energy efficiency in their homes.
- Low Income Rate Discounts: TID currently has in place two rate discount programs for qualified residential customers. Qualified residents are eligible to receive a $9 reduction in their customer charge and an additional 15 percent rate reduction on their first 800 kilowatt-hours of monthly usage. TID also offers customers who require more energy as a result of medical conditions a discount of 50 percent off the energy charge for the first 500 kilowatt-hours of monthly usage. As TID has some of the lowest rates in the state, customers in need reap a substantial savings.
- Weatherization Program: TID has contracted with two organizations within our community to provide free weatherization services for qualified low-income residents.

Proposed New Energy Efficiency Programs: (2006)

- Solar Photovoltaic Demonstration Project: TID is evaluating a solar photovoltaic demonstration project at TID's main office building. This project would be accessible to our customers and provide TID with the opportunity to educate our community about the benefits of renewable energy.
- Shade Tree Program: TID will be implementing a shade tree program for both residential and commercial customers.
- Solar Rebate Program: TID will be implementing a solar rebate program to provide incentives for residential and commercial customers investing in solar.

Modifications to Existing Energy Efficiency Programs: (2006)

- Energy Efficiency Rebate Programs: TID will be developing revised programs as a result of the DOE adoption of a 13 SEER minimum for residential air conditioners and the update to Title 24, requiring a new set of baseline savings assumptions for standard rebates in 2006. In the past, non-residential rebates were based on a reduction in kilowatts. In 2006, non-residential rebates will be based on kilowatt-hours reduction.

TID Demand Reduction Programs:

TID does not currently have any demand-side management programs in place.

TURLOCK IRRIGATION DISTRICT

WATER & POWER
Serving Central California since 1887

Time Period for Reporting Data: Calendar Year ending 12/31/05

TID 2005 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling	287	395,917	5,938,755	287	$ 51,720		$ 13,150	$ 64,870
HVAC	Non-Res Heating								
HVAC	Non-Res Shell	11	12,836	194,220	11	$ 7,080		$ 430	$ 7,510
Lighting	Non-Res Lighting	455	1,655,000	26,480,000	455	$ 61,637		$ 58,635	$ 120,272
Process	Non-Res Motors	1,663	2,537,498	38,062,470	1,663	$ 243,535		$ 84,282	$ 327,817
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration	199	762,558	11,438,370	199	$ 53,976		$ 25,328	$ 79,304
Appliances	Res Clothes Washers	17	789,800	7,898,000	330	$ 107,700		$ 17,489	$ 125,189
Appliances	Res Dishwashers								
Consumer Electronics	Res Electronics								
HVAC	Res Cooling	181	131,267	1,945,197	182	$ 436,325		$ 4,307	$ 440,632
HVAC	Res Heating								
HVAC	Res Shell	266	154,539	1,545,390	266	$ 69,300		$ 3,422	$ 72,722
Lighting	Res Lighting								
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration	69	443,136	7,976,448	69	$ 288,500		$ 17,662	$ 306,162
Other	Res Solar								
Water Heating	Res Water Heating								
Other	Other								
Total		3,149	6,882,551	101,478,850	3,463	$ 1,319,773		$ 224,705	$ 1,544,478

TID 2006 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking	-	-	-	-	-	-	-	
HVAC	Non-Res Cooling	219	431,898	6,478,469	219	$ 160,872	-	$ 31,822	$ 192,694
HVAC	Non-Res Heating	-	-	-	-	-	-	-	-
HVAC	Non-Res Shell	8	14,003	211,871	8	$ 22,022		$ 1,041	23,063
Lighting	Non-Res Lighting	347	1,805,406	28,886,503	347	$ 191,718		$ 141,891	333,609
Process	Non-Res Motors	1,270	2,768,106	41,521,588	1,270	$ 757,500		$ 203,954	961,454
Process	Non-Res Pumps	-	-	-	-	-	-	-	-
Refrigeration	Non-Res Refrigeration	152	831,859	12,477,889	152	$ 167,889		$ 61,292	229,181
Appliances	Res Clothes Washers	19	44,743	447,429	19	$ 54,000		$ 1,538	55,538
Appliances	Res Dishwashers	-	-	-	-	-	-	-	-
Consumer Electronics	Res Electronics	-	-	-	-	-	-	-	-
HVAC	Res Cooling	26	16,960	203,520	26	$ 12,000		$ 700	12,700
HVAC	Res Heating	-	-	-	-	-	-	-	-
HVAC	Res Shell	-	-	-	-	-	-	-	-
Lighting	Res Lighting	-	-	-	-	-	-	-	-
Pool Pump	Res Pool Pump	-	-	-	-	-	-	-	-
Refrigeration	Res Refrigeration	36	208,800	3,758,400	36	$ 84,000		$ 12,923	96,923
Other	Res Solar	-	-	-	-	-	-	-	-
Water Heating	Res Water Heating	-	-	-	-	-	-	-	-
Other	Other	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-
Total		2,077	6,121,775	93,985,668	2,077	$ 1,450,000		$ 455,161	$ 1,905,161

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 (4th quarter 2006): Geothermal 46 percent, small hydro 1 percent, large hydro 34 percent, Natural gas 9 percent, Nuclear <1 percent, Coal 10 percent. [47 percent eligible renewable]
- Renewable generation and hydropower provide over 81 percent of Ukiah's power needs

UPU Energy Efficiency Program Highlights

UPUs first energy efficiency programs were implemented in January of 2003. For Fiscal Year ending 6/30/2006 these programs have resulted in peak demand reductions of 18 kilowatts, net demand savings of 23 kilowatts, and cumulative energy savings of 21,511 kilowatt-hours.

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. 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.
- "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 2006-2007)

- Maintain existing programs at current levels until new programs are in place
- 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

The City of Ukiah is in the process of updating the current Public Benefits Programs and Incentives offered to their customers. It is anticipated the new programs will be in place the first quarter of 2007. For current information, please visit the City of Ukiah website at www.cityofukiah.com; under Departments select Utilities, and then go to the Electric Division page.

Ukiah Demand Reduction Programs:

Ukiah does not currently have any demand-side management programs in place.

UKIAH PUBLIC UTILITY

Time Period for Reporting Data: Fiscal Year ending 6/30/2006.

Ukiah 0506 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling								
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting								
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers	1	1,376	13,760	1	$ 2,250		$ 592	$ 2,842
Appliances	Res Dishwashers	0	518	6,739	0	$ 2,100		$ 290	$ 2,390
Consumer Electronics	Res Electronics								
HVAC	Res Cooling	9	10,402	180,463	14	$ 33,290		$ 7,761	$ 41,051
HVAC	Res Heating								
HVAC	Res Shell	7	4,698	93,966	7	$ 38,489		$ 4,041	$ 42,530
Lighting	Res Lighting								
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration	0	2,150	38,707	0	$ 4,800		$ 1,665	$ 6,465
Other	Res Solar								
Water Heating	Res Water Heating	0	286	4,296	0	$ 300		$ 185	$ 485
Other	Other	1	2,080	62,400	1	$ 5,386		$ 2,683	$ 8,069
Total		18	21,511	400,331	23	$ 86,615		$ 17,216	$ 103,831

Ukiah - 0607 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling								
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting	11	67,880	746,680	15	$ 38,750		$ 20,917	$ 59,667
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers	1	1,376	13,760	1	$ 2,250		$ 385	$ 2,635
Appliances	Res Dishwashers	0	518	6,739	0	$ 2,100		$ 189	$ 2,289
Consumer Electronics	Res Electronics								
HVAC	Res Cooling	26	16,529	290,751	48	$ 28,358		$ 8,145	$ 36,503
HVAC	Res Heating								
HVAC	Res Shell	7	4,698	93,966	7	$ 38,489		$ 2,632	$ 41,121
Lighting	Res Lighting	4	21,720	195,480	30	$ 1,875		$ 5,476	$ 7,351
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration	0	2,150	38,707	0	$ 4,800		$ 1,084	$ 5,884
Other	Res Solar	3	7,200	216,000	3	$ 22,500		$ 6,051	$ 28,551
Water Heating	Res Water Heating	0	286	4,296	0	$ 300		$ 120	$ 420
Other	Other								
Total		53	122,358	1,606,379	104	$ 139,422		$ 45,000	$ 184,422

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 2006, the electric system served approximately 2,050 customers, supplied approximately 1,157,000 megawatts, and had a peak demand of 190.8 megawatts.

City of Vernon Energy Efficiency 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.

Overview of City of Vernon Energy Efficiency 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: (for FY 2006-2007)

- 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 is also focusing on improving the energy efficiency of its electric distribution system. Vernon is considering the following options to reduce system energy losses: 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 6/30/2006.

Vernon 0506 (V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling								
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting	12	43,922	307,454	12	$ 9,410			$ 9,410
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers								
Appliances	Res Dishwashers								
Consumer Electronics	Res Electronics								
HVAC	Res Cooling								
HVAC	Res Heating								
HVAC	Res Shell								
Lighting	Res Lighting								
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration								
Other	Res Solar								
Water Heating	Res Water Heating								
Other	Other								
Total		12	43,922	307,454	12	$ 9,410			$ 9,410

Vernon 0607(V14)						Cost Summary			
CPUC Sector (Used for CEC Form 3.1a and 3.2)	Category	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Demand Savings (kW)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Process	Non-Res Cooking								
HVAC	Non-Res Cooling								
HVAC	Non-Res Heating								
HVAC	Non-Res Shell								
Lighting	Non-Res Lighting	101	232,821	1,629,747	101	$ 79,533			$ 79,533
Process	Non-Res Motors								
Process	Non-Res Pumps								
Refrigeration	Non-Res Refrigeration								
Appliances	Res Clothes Washers								
Appliances	Res Dishwashers								
Consumer Electronics	Res Electronics								
HVAC	Res Cooling								
HVAC	Res Heating								
HVAC	Res Shell								
Lighting	Res Lighting								
Pool Pump	Res Pool Pump								
Refrigeration	Res Refrigeration								
Other	Res Solar								
Water Heating	Res Water Heating								
Other	Other								
Total		101	232,821	1,629,747	101	$ 79,533			$ 79,533

Appendix B: References to Documents Supporting Report

American Public Power Association, *Energy Innovator Award Winners*, http://www.appanet.org/files/Word/EIAAwardWinnersDetail.doc, on-line as of December 4, 2006.

California Energy Commission, *Funding and Energy Savings from Investor-Owned Utility Energy Efficiency Programs in California for Program Years 2000 through 2004*, CEC Publication CEC-400-2005-042-REV2, August 2005.

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KEMA Incorporated. *Measure Quantification Methodology: Statewide Savings and Costs (Final Report)*, August 15, 2006.

Roseville Electric, *Alternative AC Efficiency Calculations*, July 2006.