Energy Efficiency in California's Public Power Sector

A Status Report

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CALIFORNIA MUNICIPAL UTILITIES ASSOCIATION

A PUBLIC AGENCY NCPA NORTHERN CALIFORNIA POWER AGENCY

SCPPA

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Acknowledgements

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Project Managers: Scott Tomashefsky, Northern California Power Agency (NCPA)
Rachel Radell, Northern California Power Agency (NCPA)
David Walden, Southern California Public Power Authority (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. Assembly Bill 2021 (Levine) added to these policies by requiring the establishment of 10-year energy efficiency targets on a triennial basis. Public power supports these policies and partners with state agencies and the environmental community to aggressively pursue all cost-effective energy efficiency.

This report, *Energy Efficiency in California's Public Power Sector: A 2011 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." Forty POUs are submitting energy efficiency data in compliance with the provisions of the legislation.

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

POU's 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 that are served. Even with this commitment, the cost for each utility to deliver energy savings can vary dramatically from year-to-year, depending upon the customer base of the individual utility, the climate zone in which the utility is located, physical size of the service territory, customer desires to invest in energy efficiency, and increasingly, economic distress.

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

- POUs continue to make major investments in energy efficiency, despite being impacted by the worst economic recession to affect California in decades. During FY09/10, POUs spent $123 million on energy efficiency programs, slightly less than spending realized in the previous year. Despite an unprecedented slowdown in the state's economy, including a foreclosure rate that is among the highest in the nation, energy efficiency spending by public power utilities are double the amount spent on programs just three years earlier.
- Reductions in electricity consumption remain strong within the public power community. In the most recent reporting year, peak demand dropped nearly 94 megawatts and more than 520

million kilowatt-hours were saved, continuing a dramatic upward trend in terms of annual increases in savings.

- California's POUs have invested nearly half a billion dollars on energy efficiency programs in the past five years, representing direct investment in local community infrastructure and the support of economic development.
- Public power energy efficiency programs provide more than three dollars of societal benefits for every dollar spent. Applying the Total Resource Cost (TRC) societal test, the weighted average cost effectiveness for all publicly owned energy efficiency programs in FY09/10 was 3.15. Any number greater than 1.0 comes with the theoretical assumption that the program is indeed cost-effective.
- The 15 largest POUs account for nearly 97 percent of public power's total energy efficiency savings. Twelve of these utilities had annual net energy savings that exceeded 10,000 megawatt hours.
- While the trend is clearly declining, lighting programs still provide the largest share of energy efficiency savings to public power utilities. In the most recent reporting period, lighting accounted for more than a quarter of total energy savings achieved.
- California's POUs are reasonably consistent with their collective energy efficiency targets in FY09/10. Among the entire group, the utilities realized 78 percent of their savings targets last year, with the result jumping well above 100 percent when the two largest POUs are removed from the calculation.

I. Introduction

The California Municipal Utilities Association (CMUA) is pleased to submit this fifth report providing an update on the status of publicly-owned utility (POU) energy efficiency programs in California. The report is provided to the California Energy Commission (CEC) in compliance with Section 6 of Senate Bill 1037 (SB1037) and Section 3 of Assembly Bill 2021 (AB2021), which require each 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. A report shall contain a description of programs, expenditures, and expected and actual energy savings results."

Forty utilities are detailing their energy efficiency activities in this document, programs which cover approximately 25 percent of customer electric load served in California. Beyond the informational requirements described in the abovementioned statute for each utility, this document is designed in a manner that provides a comprehensive assessment that can be utilized by state policymakers and interested stakeholders to gauge the effectiveness of energy efficiency programs within the public power community.

The following report includes a number of sections beyond this introduction, as well as several appendices with specific utility information. Section II provides a brief technical description of the methodologies used by the public power community to report energy savings and measure savings. Previous reports have provided extensive documentation regarding the energy efficiency reporting tools that are utilized to evaluate utility programs and should be relied upon if additional technical information is needed beyond the level of detail provided in Section II.

Section III highlights the range of public power energy efficiency programs that are currently available to customers. Included in this discussion is a snapshot of utility best practices, multi-utility collaboration efforts, and an update regarding programs that are utilizing funding from the American Recovery and Reinvestment Act (ARRA), including the deployment of advanced metering infrastructure (AMI) and the development of the smart grid. Specific attention is given to evaluation, measurement and verification (EM&V) activities, and the work currently being undertaken with the staff of the CEC to develop consistent EM&V protocols going forward.

Section IV offers a numerical summary of energy efficiency savings stemming from current POU energy efficiency programs, including a comparison to how these savings compare to currently adopted energy efficiency targets adopted by each utility's local governing board. The section shares important perspectives about continuing economic uncertainties and how those uncertainties impact customer behavior. Demand reduction programs are highlighted in Section V, with the last section offering principal conclusions and insights about the direction of future reports.

Specific information regarding individual utility program data and summaries are provided in Appendix A of this report. A comprehensive list of EM&V reports along with a link to each one can be found in Appendix B.

II. Reported Energy Savings and Verification Methodologies

This section provides a brief overview of the analytical tools developed by the public power community to report its energy efficiency savings and develop energy efficiency targets, as well as activities being undertaken to further refine the processes used to verify reported savings. Since SB1037 was passed in 2005, public power has significantly invested in the development of tools and resources for POUs to use when reporting and verifying the results of their energy efficiency programs. KEMA, Incorporated (KEMA) and Energy and Environmental Economics (E3) have provided public power with their considerable expertise in this effort. These resources were developed to allow all California POUs participating in this collaborative report to measure energy efficiency program effectiveness and report program savings in a consistent and comprehensive manner.

The E3 Reporting Tool is a sophisticated Excel spreadsheet model used to report the results of utility energy efficiency programs. The model contains a database of over 5,000 energy savings measures. In late 2009, the measure database was updated based on the final 2009 KEMA Report. The most significant change to the model (referred to as the 2010 E3 Reporting Tool) were updates to measure attributes (e.g., energy savings, useful life) for the majority of measures. The changes align the measure attributes with the latest information available from DEER. Other changes to the model include a natural replacement/early retirement option for applicable measures, updated net to gross reference table (based on DEER), and various minor improvements to simplify data input. The 2010 E3 Reporting Tool will be used to report program results beginning with the next report.

The California POU Energy Efficiency Resource Assessment Model (CalEERAM) is an energy efficiency potential model designed to estimate technical, economic, and market energy efficiency potential for a utility's service area. Developed by Navigant Consulting (formerly Summit Blue Consulting), the model forecasts energy savings and demand reduction potential within the residential, commercial, and industrial sectors for years 2011-2020. Customized versions of the model were created for 36 POUs, but not for SMUD or LADWP.

CalEERAM is an Excel spreadsheet model based on the integration of energy efficiency measure impacts and costs, utility customer characteristics, utility load forecasts, and utility avoided costs and rate schedules. Excel is used as the modeling platform to provide transparency to the estimation process. Using Excel also allows the model to be customized to each client's unique characteristics, and can accommodate their ability to provide specific model input data. The model utilizes a "bottoms-up" approach in that the starting points are the study area building stocks and equipment saturation estimates, forecasts of building stock decay and new construction, energy efficiency technology data, past energy efficiency program accomplishments, and decision maker variables that help drive the

market scenarios. CalEERAM does not estimate annual market energy efficiency potential based on a diffusion curve. Instead, the model calculates market potential based on a decision maker adoption rate algorithm.

CalEERAM estimates energy efficiency resource potential for three perspectives. Each perspective provides "net" estimates of resource potential:

- **Technical Energy Efficiency Potential** represents the amount of energy efficiency savings that could be achieved when not considering economic and market barriers to customers installing energy efficiency measures. Technical potential is calculated as the product of the energy efficiency measures' savings per unit, the quantity of applicable equipment in each facility, the number of facilities in a utility's service area, and the measure's current market saturation. Technical potential estimates include energy efficiency measures that may not be cost-effective, and technical potential does not consider market barriers such as customers' lack of awareness of or willingness to implement energy efficiency measures. Technical energy efficiency potential estimates, while not realistically obtainable, are used to establish the outer boundary of what can be achieved through energy efficiency programs.

- **Economic Energy Efficiency Potential** represents the portion of the technical energy efficiency potential that is "cost-effective," from a societal perspective, as defined by the Total Resource Cost (TRC) test. Economic potential does not consider market barriers that limit a voluntary utility efficiency program's success in encouraging customers to install energy efficiency measures.

- **Achievable Energy Efficiency (Market) Potential** is an estimate of the portion of the economic energy efficiency potential that could be attributed to a utility energy efficiency program, recognizing the effect of a limited set of market barriers. Market energy efficiency potential is modeled to vary with specific parameters, such as the magnitude of measure incentives and customer awareness and willingness to adopt energy efficient measures.

Utility energy efficiency targets are on a slightly different timetable, compared to the annual energy efficiency program report that is provided to the CEC each March. Ten-year energy efficiency targets are adopted by each utility's local governing board every three years, an activity that was completed last year. The next update is scheduled for 2013.

Verifying Program Results (Independent Evaluation)

AB 2021 calls for POUs to report annually on "the results of an independent evaluation that measures and verifies the energy efficiency savings and reduction in energy demand achieved by its energy efficiency and demand reduction programs."[1] Public power has strategically responded to this directive

[1] Language is contained in Section 9615(e)(3) of the Public Utilities Code.

in a manner that confirms the accuracy of reported savings while optimizing the exchange of program information across the entire range of public power utilities, large and small.

At the time this report was published, the public power community had available more than 50 separate measurement and verification studies. A comprehensive listing of each evaluation report is provided in Appendix D. Unless otherwise noted, each document will be available at http://www.ncpa.com/energy-efficiency-m-v-reports.html, with subsequent reports posted to the same URL as they become available.

The evaluation process used to provide utility program managers with feedback relies generally on the approaches articulated in the National Action Plan for Energy Efficiency, adopted CPUC protocols, and the innovation and expertise of firms experienced in program evaluation. To further enhance the value of the information obtained from these reports, the public power community has been working closely with CEC staff to develop a consistent set of evaluation protocols for third-party consultants that are retained to evaluate utility programs.

During the past year, the CEC has conducted several workshops regarding the evaluation process and has created a working version of evaluation guidelines, and these insights are already adding value to the analyses being undertaken across the public power community. SCPPA and NCPA continue their active collaboration in this regard, sharing best practices and coordinating the distribution of program evaluation information throughout the public power community.

Utility Updates Regarding Independent Evaluation Activities

As a practical matter, measurement and verification reports are intended to be used by utilities to understand the effectiveness of specific program areas with the purpose of enhancing programs offerings in the future. In general, many of the verification studies done to date have focused on high savings impact measures and measures that exhibit the greatest levels of uncertainty. Key findings from the initial volume of reports submitted by POUs confirm high realization rates for utility-reported energy savings, a positive development that suggests that public power's energy efficiency reporting provides a reliable source of data to help state policymakers gauge the success of the state's overall energy efficiency efforts.

Ironically, the economic slowdown has some impact on program evaluation and savings realization rates. In some cases, some businesses participating in energy efficiency programs do not survive the economic downturn, even though the efficiency measures they paid for were installed, but ultimately are not being utilized as intended. In essence, unanticipated vacancies can negatively impact realization rates. In addition to the economic impacts, the continuing debate surrounding the use of net-to-gross ratios, especially when empirical data is not readily available, has made it difficult for evaluators to conduct a reliable net-to-gross analysis. Such debate is not exclusively focused on public power. In fact, the investor-owned utilities have effectively abandoned the use of net-to-gross ratios, something the public power community will consider for the next report.

Recognizing that the full array of studies is available via a Web link as noted above, the following list provides a small sample of these efforts from a number of POUs:

- **Burbank Water & Power**. Burbank retained the services of an independent third party contractor to evaluate its energy efficiency programs. Projects reviewed included three residential programs and one non-residential program. These programs account for over 80 percent of Burbanks total reported savings. Overall, these programs were found to have a realization rate of 101 percent, which shows that the DEER deemed savings were actually underestimating the savings for these programs.

- **Lodi**. Lodi retained the services of an independent third party contractor to evaluate its energy efficiency programs. Projects reviewed represent a random sampling from non-residential energy efficiency program portfolio, which accounted for over 40 percent of the total claimed savings. The independent third party evaluation concluded that realization rates were 80 percent of the reported savings, which is a slight decrease from the 87 percent realization rate last year.

- **Roseville Electric**. Roseville completed its first and second year assessments of randomly selected programs and large rebates as part of its designed measurement and verification plan. For FY09, projected energy savings were verified for small commercial lighting, commercial and industrial Hi-Bay Lighting and LivingWise. Unfortunately, the economic downturn significantly impacted the small commercial lighting program. "During the site visits it was observed that the majority of chosen locations were no longer in business (one location had the power shut off completely). Even though fixture counts were conducted within these locations the actual savings may be less than assumed due to the high vacancy rate. It is not surprising during these tough economic times that higher than normal vacancy rates will be encountered. Roseville verified with its records that all of the following locations were occupied during the 2009 fiscal year."

- **Turlock Irrigation District**. TID continued their high savings realization rates this year in their non-residential custom and non-residential refrigeration programs. They were verified at realization rates of 94 percent and 98 percent, respectively. These programs represent over half of the total claimed savings for 2009.

III. Overview of Energy Efficiency Programs

Public power utilities have a long history of commitment to the deployment of energy efficiency programs, well before the statutory directives of SB1037 and AB2021 which formalized the reporting requirements that have been in place since 2005. POU's 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 public power system 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.

This section provides a snapshot of a variety of energy efficiency programs offered by the state's publicly-owned utilities, highlighting utility best practices, multi-utility collaboration efforts. The latter part of this section will offer a brief synopsis of the programs relying on funding from the American Recovery and Reinvestment Act (ARRA).

The Impact of the Recession on Utility Energy Efficiency Programs

California is currently in the midst of the deepest economic recession it has experienced since the Great Depression. Statewide unemployment remains among the highest in the country, job growth continues to lag other regions, and businesses struggle to stay afloat. While there are signs of some level of economic recovery being reported in areas along the coast, the regions of the Central Valley, the High Sierra, and the southeastern desert continue to struggle from the impacts of the recession.

These struggles have increased the difficulties for California utilities to effectively deploy aggressive energy efficiency programs. Utility customers are challenged by the lack of disposable income, which precludes them from investing in energy efficiency programs, even if the investment would produce energy savings that would pay for itself in a very short timeframe. Utilities are hampered by severe budgetary considerations at both the local and state level, which reduce the level of staffing available for customer outreach and key account communication, decreases staff training that is critical for the development of new and innovative programs, and often results in a suboptimal package of programs that are ultimately offered to customers.

Clearly, California's economic situation has impacted every utility in the state, small and large, public power and investor-owned utility. Consider the following examples that impeded certain utilities in 2010:

- **Biggs -** The economic recession has seriously impacted the northern part of the Sacramento Valley over the past three years, and therefore the ability of Biggs to generate residential customer interest in its energy efficiency program. During that time, residential customer participation rates in energy efficiency programs have declined 87 percent, in conjunction with a high rate of customers falling behind in their ability to pay their monthly electricity bills. In the case of Biggs, disposable income among residential customers is simply not available for energy efficiency investment.

- **Lodi Electric -** Although some projects were pursued, some large customers opted to wait on installing energy conservation measures. Projects involving "low hanging fruit" such as a lighting retrofit were still popular. However, projects involving process equipment upgrades, where significant energy savings can be achieved, were held back.

- **Plumas-Sierra** - The utility's forecasted goals are closely tied to its Ground Source Heat Pump program. With the downturn of the economy, building permits for new homes in the Plumas-Sierra service territory have declined by 88 percent since 2007.

- **Rancho Cucamonga -** Utility staff reports that the continuing economic struggles are placing a strain on the cash flows of small businesses. There appears to be great reluctance among utility customers to participate in any programs with upfront monetary costs.

- **Riverside -** Riverside Public Utilities continues to struggle with many economic and programmatic challenges, highlighted by an eight percent reduction in sales during the past two years and a doubling in low income program participation levels. Last year, the utility focused its new commercial programs on direct installation, which targeted cash-strapped businesses. These new programs included programmable thermostats for small businesses, installation of VendingMisers for any business with cold drink vending machines, and the extension of the lighting program for small businesses.

Public Power Success Stories: Best Practices

Despite the impact of the economic recession, public power's commitments to energy efficiency programs remain critically important to utilities across the state. 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, and refrigeration. POUs also partner with schools and public institutions to educate residents and

implement a variety of beneficial programs. Some of the more popular programs include those related to compact fluorescent lighting as well refrigerator replacements.

In these uncertain times, public power utilities rely on their unique relationships with their customers to drive the success of their energy efficiency programs, particularly with respect to their ability to specifically tailor programs to meet the needs of their communities. Inherent in the POU business model is its responsiveness to local concerns, allowing them to maximize the value of all energy efficiency programs, taking into consideration 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.

As in previous reports, this section of the report is designed to feature best practices that are likely to be utilized by multiple utilities or are already moving down that path. Such activities build upon the strong network of collaboration that public power has traditionally relied upon to produce the most effective package of energy efficiency programs.

Whole House Efficiency Programs

Many utilities are giving serious consideration to the system benefits that are realized by customers as they consider investing in energy efficiency programs. Burbank Water & Power is an example of a public power utility that has aggressively deployed such a program, commencing its "Green Home House Program" in November 2009. This program has several components, all provided at no charge to participants:

1. In-home energy and water education: A Burbank-retained consultant meets with residents to discuss energy and water usage.
2. Efficiency Installations: Devices that save electricity, water and natural gas are installed for free in the residence, including showerheads, bathroom and kitchen faucet aerators, and compact fluorescent light bulbs.
3. Attic Insulation: Attic insulation levels are reviewed in homes with central air conditioning. When below a specified R-value, the homeowner is offered free insulation as part of the program's service.
4. Duct Testing and Sealing: When crews are dispatched to provide insulation services, a duct testing and sealing team is included, providing these services for free as well.
5. Irrigation System Inspection and Programming: Given the dire state of water supply in California, BWP has included irrigation system inspection and controller programming as part of this on-site program. Controllers will be programmed to comply with the City's landscape watering ordinance (no more than three proscribed days/week) and the irrigation system will be turned on and inspected for any over-spray or other problems.

BWP heavily advertises this program via direct mail and utility newsletters that are provided to customers on a quarterly basis, as well as through the use of video that is available on the city's public access channel. In its first year alone, the utility served 1,600 households. In future years, the utility is

looking to work with the local gas company to provide even more extensive services for low-income households in Burbank, as well as provide air conditioning tune-up services.

Riverside Public Utilities is another public power utility that provides a whole house program to its customers, offering rebates to customers that complete two or more energy efficiency measures at a time. Points are awarded for each type of measure and then rebate multipliers are given at specific point intervals on a sliding scale to encourage implementation of more energy efficiency measures. The program is currently funded with ARRA dollars and expected to improve energy efficiency in over 200 homes. Once ARRA funding is expended, the program will be continued using Public Benefit funds.

Vending Miser

Vending Miser is a program that entails the installation of "EnergyMiser®" intelligent energy controllers that use passive infrared sensors to power-down refrigerated vending machines, glass door coolers or snack machines when the area around the machine is not occupied. If there is no foot traffic in front of the machine for 15 minutes the machine is shut down. If someone walks by the machine, the sensor will sense the movement and send power back to the machine, keeping the product cold while significantly reducing energy use and costs. As a result, the technology produces an average energy savings exceeding 35 percent or even greater. The Vending Miser program has been successfully implemented at Glendale and Riverside, and was utilized on a trial basis by Silicon Valley Power. Imperial Irrigation District and Roseville have indicated their intent to start the program sometime in 2011.

Keep Your Cool Program

Keep Your Cool is an energy efficiency program that provides for the direct installation of energy efficient measures in grocery stores and restaurants. Keep Your Cool contractors look at the age and condition of existing walk-in and reach-in coolers and freezers, door gaskets, strip curtains and door closers. After evaluating the existing equipment, the contractor makes recommendations to improve the energy efficiency of these commercial refrigeration units.

The Keep Your Cool Program was originally implemented by Silicon Valley Power, and has grown throughout the public power community, now utilized by more than a dozen utilities across the state. While some utilities are just starting the first phase of the program, several other utilities are completing their second phase of the program.

Efficiency measures installed in the first phase of the Keep Your Cool program include door gaskets, auto door closers, and strip curtains. Phase two adds other measures, including but not limited to programmable electronically commutated (EC) motors, anti-sweat heater (ASH) controllers and LED case lighting. In general, the programs have been quite popular, often leading to program oversubscription and subsequent increases in funding to meet future demand.

Programs Focused on Education

The close relationship between public power utilities and the communities makes education a logical focus of locally-driven energy efficiency programs. With major challenges surrounding school district funding throughout California, most POUs provide active support to schools to help them reduce energy consumption and manage their energy expenditures. To that end, significant attention is given to programs that replace less efficient lighting and air conditioning systems. Other utilities promote educational activities for students to learn the basics of energy science, energy conservation, and energy efficiency.

The Youth Energy Summit is a program that prepares students by providing them with the tools to become civic-minded energy advocates. The event is now in its third year, having reached out to more than 200 students in the Sacramento area. The summit is primarily sponsored by SMUD, Roseville Electric, Lodi Electric, and California State University, Sacramento.

During the annual two-day event, students learn from highly regarded energy experts on subject matters such as alternative transportation, solar and wind energy technologies, new technologies in energy efficiency, climate change, green jobs, and energy-related policies. The students who participate put their newly acquired skills to use by completing energy-related service learning projects in their community. Students documented and share their experiences with legislators and the general public at the State Capitol on Earth Day in April, with scholarships awarded to the top student teams were awarded scholarships.

Azusa, Burbank, Glendale, Lodi, Roseville, and Truckee Donner PUD are among the POUs offering the LivingWise Program, an approach where students learn about energy and water conservation in their classrooms. Through the program, all 6th grade students in the participating public power communities receive a kit containing water and energy saving devices and information. This information fits in perfectly with the environmental content that teachers instruct on. The science teachers consistently report that the LivingWise kits provide insights that help the students truly understand the concepts. The tools the students receive in the kits are taken home and installed with the help of family members. In this way, the instruction extends beyond the classroom and to households, reinforcing the lessons learned. LivingWise provides students and their families with the tools needed to audit and retrofit their homes, generating immediate, verifiable and lasting energy and water resource savings.

The Impact of the American Recovery and Reinvestment Act (ARRA)

In addition to the range of best practices described above, public power is starting to take advantage of the one-time opportunity to enhance its program offerings during 2010 and 2011, courtesy of the federal government. ARRA, signed into law in February 2009, provides more than $60 million to 29

municipal communities in California, under the Energy Efficiency and Conservation Block Grant (EECBG) program and $175 million in smart grid funding.[2]

For cities with a population exceeding 35,000, the dollars included in the EECBG program are provided to municipalities directly by the U.S. Department of Energy. Small cities, however, receive their funding directly from the CEC. As of mid-March, only a small percentage of cities have fully expended their funding while many are working through the many logistics of deploying programs tied to federal funding. With many of the program details being developed in what often seems like real-time, the timetable for spending funds was delayed for most municipalities receiving funding. As such, reported energy savings attributed to ARRA funding will not be of significance until the next report.

Despite the logistical challenges associated with the use of stimulus dollars, all cities, large and small, are on track to spend their EECBG funds within the allotted timeframe, helping many utilities in their pursuit of their efficiency goals beginning next year. Due to the ease of certain program implementation which allow for direct purchases of specific equipment and labor-related rules regarding prevailing wages, several utilities dedicated a portion of their energy efficiency funding to street light replacement activities. Additional information describing specific EECBG activities are included in the narrative of each participating utility included in Appendix A.

Within the public power community, smart grid funding under the Stimulus went to five utilities: Anaheim, Burbank, Glendale, Modesto Irrigation District, and SMUD. A more detailed description is provided in Section V of this report.

IV. Program Results and Observations

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

Table 4 summarizes POU energy efficiency program savings and cost information for fiscal years 2006 through 2010.[3] During FY09/10, POUs spent approximately $123 million on energy efficiency programs, which, when added to previous investments, has led to nearly a half billion dollars in expenditures from

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[2] Public utility districts and irrigation districts were not eligible for funding under the EECBG program.

[3] 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 FY09/10 is actually calendar year 2010. CMUA, NCPA, SCPPA, and CEC staff recognize this data nuance.

the public power community over the past five years. Supporting those investments were reductions in peak demand last year exceeding 93 megawatts as well as more than 520 million kilowatt-hours of energy saved over the course of the year.

While the results are impressive, the expenditures are down $22.6 million and approximately 121 million kilowatt-hours from last year's totals. Two factors beyond the general state of the economy account for the decline. First, FY09 represented a period where some utilities aggressively promoted the distribution of compact fluorescent lighting (CFL), including LADWP and Pasadena. LADWP's CFL distribution campaign in FY09 resulted in the distribution of more than 2.5 million CFLs to customers (two per customer), providing 141 million kilowatt hours of savings. Pasadena provided 224,000 CFLs to 16,000 customers as part of its Power of 10 CFL Challenge. Such programs were not intended to be sustained in 2010, reducing reported savings for the year. The timing of key customer installation, something that impacts the regular trend line of program implementation, also accounted for some of the decline in this report. In the case of Silicon Valley Power, several data center energy efficiency projects, delayed over the course of several years, all came to fruition in FY09. These projects were clearly not expected to be available again, and by that very nature, provided a return to normal energy efficiency growth levels. Taken out of context, however, the reduction in program expenditures may be perceived as a point of program failure. This is clearly not the case.

Table 4 Program Summary

2006-2010 Publicly-Owned Utility Program Results

Year	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle MWH Savings	Total Utility Cost ($)
FY05/06	52,552	169,302,601	2,249,214	$ 54,412,728
FY06/07	56,772	254,331,659	3,062,361	$ 63,151,647
FY07/08	82,730	401,919,205	4,473,801	$ 103,907,266
FY08/09	117,435	644,260,232	6,749,912	$ 146,093,107
FY09/10	93,712	522,928,998	5,586,299	$ 123,433,250

Continuing a long-standing trend within the public power community, the majority of energy efficiency program impacts reflect public power's two largest utilities: LADWP and SMUD. From a state policy perspective focused on the need to understand the diversity of public power utilities, it is important to understand the energy efficiency program trends of the other POUs across the state.

Table 5 attempts to do so, highlighting public power's commitment to energy efficiency programs, from the largest to smallest community. Given the wide range of diversity among utilities and program offerings, the reported results show a continuing trend of increased program spending and electricity savings. During FY09/10, the remaining utilities spent more than $51 million on energy efficiency programs, a 13 percent increase compared to the previous year. While peak load reductions declined

slightly to just below 38 megawatts, total annual savings increased for the fourth consecutive year, exceeding 219 million kilowatt-hours.

Table 5 Program Summary (excluding LADWP & SMUD)

2006-2010 Results - Excluding LADWP & SMUD				
Year	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle MWH savings	Total Utility Cost ($)
FY05/06	19,292	67,766,218	953,628	$ 21,921,485
FY06/07	21,174	96,740,737	1,402,162	$ 28,663,125
FY07/08	37,822	171,738,010	2,079,276	$ 39,000,521
FY08/09	40,791	208,658,443	2,670,085	$ 45,476,667
FY09/10	37,781	219,315,182	2,529,693	$ 51,301,075

Looking at it yet another way, the 15 utilities measured by annual kilowatt hours of savings provided nearly 97 percent of the amount reported by the entire POU community. Table 6 provides the FY 09/10 data for the 15 utilities and shows their combined energy savings as a percentage of the total POU energy savings for the year. In comparing the list to those in previous years, SMUD has now eclipsed LADWP as the utility with the largest level of annual savings. The newest addition to the Top 15 this year is Colton. Their emergence on the list is directly attributable to the aggressive deployment of commercial lighting programs in the city. Similarly, the positions of several utilities on the list were clearly impacted by customer decisions to proceed or not proceed with projects during the current reporting year.

Table 6 Utilities Most Heavily Influencing Energy Efficiency Savings

FY 09/10 Energy Savings- Top (15) Utilities				
Utility	Net Peak KW Savings	Net Annual KWh Savings	Utility Percent of Total Savings	Cumulative Percentage of Total Savings
SMUD	27,842	155,650,550	29.8%	29.8%
LADWP	28,090	147,963,267	28.3%	58.2%
Anaheim Public Utilities	2,245	36,355,989	7.0%	65.1%
Silicon Valley Power	2,628	30,592,561	5.9%	71.0%
Riverside Public Utilities	3,600	18,601,295	3.6%	74.6%
Modesto Irrigation District	2,107	16,800,076	3.2%	77.8%
Imperial Irrigation District	2,370	16,783,700	3.2%	81.0%
Glendale Water and Power	4,637	16,135,976	3.1%	84.1%
Pasadena Water and Power	3,928	14,559,044	2.8%	86.9%
TID	1,945	12,253,034	2.3%	89.2%
Roseville Electric	2,169	10,997,675	2.1%	91.3%
Burbank Water & Power	2,371	10,142,608	1.9%	93.3%
Colton	784	7,579,201	1.5%	94.7%
City of Palo Alto Utilities	3,438	5,269,542	1.0%	95.7%
Truckee Donner Public Utility District	1,122	3,775,270	0.7%	96.5%

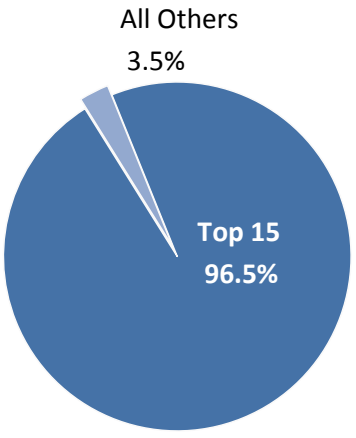


Table 7 provides a comprehensive summary of energy efficiency savings and an aggregated measure of cost effectiveness, including all of the utilities not shown in the previous table. The table highlights a wide range of savings, which is largely a reflection of utility size and economic considerations. The two largest municipalities (LADWP, SMUD) had peak savings during the reporting period that exceeded five megawatts. Another 13 utilities (Anaheim, Burbank, Glendale, Imperial Irrigation District, Modesto Irrigation District, Palo Alto, Pasadena, Redding, Riverside, Roseville, Silicon Valley Power, Truckee Donner Public Utility District, and Turlock Irrigation District) had peak savings that fell in the range of 1-5 megawatts.

With respect to cost effectiveness, the aggregated TRCs for public power equals 3.15 in FY09/10, meaning that public power energy efficiency programs produce more than three dollars in societal benefit for every dollar spent. In virtually all cases, TRCs for individual utilities satisfy the criteria for providing cost-effective savings to their respective communities.

Table 7 Summary of Utility Results FY 09/10

All POU Summary	Resource Savings Summary				Cost Summary				
	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)	TRC
Alameda Municipal Power	175	1,325,684	14,216,544	7,752	115,465	-	463,603	579,068	1.77
Anaheim	2,245	36,355,989	308,705,966	170,057	2,699,858	1,896,334	-	4,596,192	7.36
Azusa Light and Water	704	2,098,981	24,496,411	13,401	346,051	178,772	106,586	631,409	1.59
Banning Electric Utility	238	1,890,210	12,747,070	7,073	180,902	-	155,157	336,059	1.69
Biggs	2	36,878	471,437	255	10,468	-	17,132	27,600	1.68
Burbank Water & Power	2,371	10,142,608	109,776,161	59,520	1,037,696	2,714,051	380,154	4,131,901	1.41
Colton	784	7,579,201	70,361,131	37,228	664,002	-	-	664,002	6.64
Corona	1	3,457	34,568	20	7,450	-	11,344	18,794	0.11
Glendale	4,637	16,135,976	184,603,254	103,499	1,614,707	1,831,096	246,331	3,692,134	2.74
Gridley	100	380,860	3,336,090	1,827	15,385	67,523	70,607	153,515	2.12
Healdsburg	90	504,025	4,053,886	2,208	69,785	37,512	43,147	150,444	1.80
Hercules	1	1,512	16,234	9	650	-	-	650	1.32
Imperial ID	2,410	16,917,473	261,023,565	150,375	2,483,240	-	1,799,237	4,282,477	1.47
Industry	-	-	-	-	-	-	-	-	-
LADWP	28,090	147,963,267	1,812,203,547	1,005,865	23,082,428	10,772,625	10,595,548	44,450,600	3.12
Lassen	104	528,080	5,617,513	3,073	214,196	2,893	104,360	321,450	1.35
Lodi	560	1,928,969	21,598,024	12,010	601,798	-	125,000	726,798	1.52
Lompoc	18	166,086	2,083,257	1,137	64,742	4,058	6,795	75,595	2.15
Merced	345	3,094,287	34,924,465	18,583	297,569	-	249,431	547,000	4.55
Modesto Irrigation District	2,107	16,800,076	205,807,653	110,698	1,533,180	675,395	1,438,551	3,647,126	2.88
Moreno Valley	130	501,817	5,018,168	2,789	31,378	-	-	31,378	9.82
Needles	2	2,828	50,904	32	150,000	-	-	150,000	0.30
Palo Alto	3,438	5,269,542	42,712,840	23,412	802,922	-	1,286,523	2,089,445	1.92
Pasadena	3,928	14,559,044	197,392,267	108,105	3,146,603	762,402	393,250	4,302,255	1.53
Pittsburgh Power DBA Island Energy	90	100,479	1,903,067	1,012	583	-	2,832	3,415	9.05
Plumas-Sierra Rural Electric Coop	80	362,029	3,306,410	1,764	76,557	-	103,896	180,454	1.19
Port of Oakland	-	-	-	-	-	-	-	-	-
Rancho Cucamonga Municipal Utility	-	85,675	856,749	476	2,307	66,352	16,000	84,659	0.91
Redding Electric Utility	1,113	2,216,193	20,843,091	13,399	1,318,106	349,105	201,834	1,869,045	2.82
Riverside	3,687	19,185,402	250,360,246	143,869	3,329,529	800,615	1,832,288	5,962,432	3.74
Roseville	2,169	10,997,675	180,291,805	100,767	1,506,122	8,735	759,523	2,274,381	2.88
SMUD	27,842	155,650,550	1,244,402,445	503,983	13,467,996	-	14,213,579	27,681,575	2.82
Shasta Lake	158	1,266,339	19,316,980	10,705	82,981	14,872	56,445	154,298	9.19
Silicon Valley Power	2,628	30,592,561	324,803,620	180,210	4,179,745	174,132	2,791,944	7,145,822	2.67
Trinity Public Utility District	-	7,414	151,164	92	15,882	-	-	26,684	0.02
Truckee Donner	1,155	4,007,032	37,081,572	19,880	462,071	2,210	270,122	734,404	5.14
Turlock Irrigation District	1,945	12,253,034	150,747,130	81,927	870,661	21,974	489,796	1,382,431	2.18
Ukiah Public Utility	54	281,198	3,198,624	1,787	68,374	-	44,463	112,838	1.55
City of Vernon Light & Power	312	1,736,568	27,785,088	14,691	154,086	-	60,838	214,924	6.88
Victorville	-	-	-	-	-	-	-	-	-
Summary	93,712	522,928,998	5,586,298,947	2,913,491	$64,705,477	$20,380,656	$38,336,316	$123,433,250	3.15

Note: All data is fiscal year, except for the following calendar year utilities: IID, Merced, Modesto, Plumas Sierra, SMUD, Truckee Donner, and TID.

Table 8 reviews the aggregated results by program sector. From the tables, it is clear that lighting and cooling programs once again account for the largest share of the savings. Regarding specific program results, lighting (particularly non-residential direct installations) continues to dominate public power energy efficiency programs, accounting for more than half of the total energy savings achieved. Utility rebates accounted for the majority of program expenditures, although about one-fifth of the total was dedicated to utility marketing, administrative costs, and most significantly, measurement and verification efforts.

Table 8 Summary by Program Sector FY 09/10

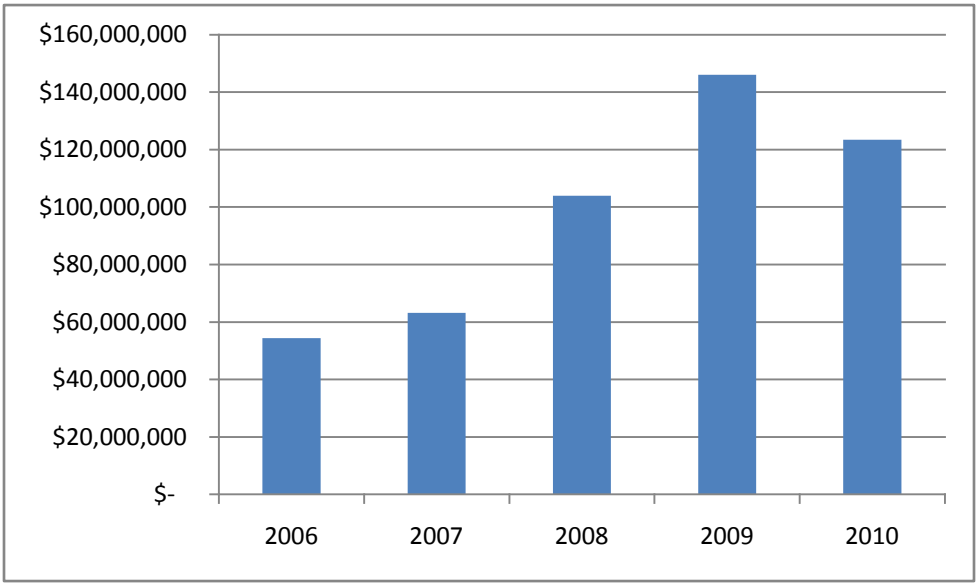
All POU Summary		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	284	284	796,076	9,816,857	4,623	$ 490,084		$ 688,090	$ 1,178,174
HVAC	Res Cooling	9,849	7,956	19,491,679	303,124,611	177,332	$ 7,447,629	$ 1,177,518	$ 5,066,491	$ 13,691,638
Appliances	Res Dishwashers	38	39	116,936	1,576,271	800	$ 142,595	$ 55	$ 189,695	$ 332,346
Consumer Electronics	Res Electronics	1,280	1,280	15,655,723	156,555,140	63,422	$ 1,020,100	$ 7,502	$ 1,058,936	$ 2,086,538
HVAC	Res Heating	417	417	1,552,858	28,136,388	11,488	$ 465,433		$ 112,731	$ 578,164
Lighting	Res Lighting	22,377	9,293	68,490,051	544,997,549	233,421	$ 3,693,224	$ 376,916	$ 2,808,504	$ 6,878,644
Pool Pump	Res Pool Pump	614	513	532,818	5,363,679	3,093	$ 250,746		$ 138,770	$ 389,516
Refrigeration	Res Refrigeration	4,215	4,205	27,712,028	327,834,840	172,541	$ 3,159,779	$ 6,588,778	$ 2,313,022	$ 12,061,579
HVAC	Res Shell	3,682	3,786	1,484,118	26,320,527	14,466	$ 1,306,932	$ 440,230	$ 259,278	$ 2,017,241
Water Heating	Res Water Heating	84	84	537,093	7,207,486	3,500	$ 100,797	$ 7,711	$ 38,040	$ 146,548
Comprehensive	Res Comprehensive	1,594	790	6,557,203	36,856,542	17,851	$ 626,017	$ 1,127,355	$ 157,538	$ 1,910,910
Process	Non-Res Cooking	21	21	104,652	1,255,826	674	$ 28,043		$ 6,173	$ 34,216
HVAC	Non-Res Cooling	15,418	10,242	59,442,996	824,953,538	443,253	$ 10,570,651	$ 1,669,454	$ 4,746,757	$ 16,986,862
HVAC	Non-Res Heating	3	3	37,086	556,295	293	$ 2,884		$ 3,443	$ 6,327
Lighting	Non-Res Lighting	31,613	28,022	161,947,785	1,627,211,709	878,343	$ 22,521,793	$ 5,968,907	$ 9,996,689	$ 38,487,390
Process	Non-Res Motors	2,054	2,032	8,210,953	124,824,674	65,503	$ 1,295,399		$ 362,511	$ 1,657,910
Process	Non-Res Pumps	69	69	1,279,396	13,068,713	7,140	$ 77,600	$ 849,031	$ 43,882	$ 970,513
Refrigeration	Non-Res Refrigeration	8,605	3,655	30,517,209	313,996,571	164,811	$ 2,501,435	$ 431,678	$ 2,599,858	$ 5,532,971
HVAC	Non-Res Shell	1,261	1,222	2,904,077	40,069,310	22,967	$ 540,412	$ 39,449	$ 104,988	$ 684,849
Process	Non Res Process	1,842	1,427	14,401,060	187,932,572	88,059	$ 597,773		$ 872,113	$ 1,469,886
Comprehensive	Non Res Comprehensi\	10,425	9,352	41,538,672	343,918,008	169,404	$ 3,629,473	$ 532,070	$ 2,733,329	$ 6,894,872
Other	Other	9,015	9,020	59,618,532	660,721,842	370,507	$ 4,236,678	$ 1,164,002	$ 4,035,478	$ 9,436,158
SubTotal		124,760	93,712	522,928,998	5,586,298,947	2,913,491	$ 64,705,477	$ 20,380,656	$ 38,336,316	$ 123,433,250
T&D	T&D	997	796	2,467,358	36,282,560	19,132	$ 0	$ 4,000,000		$ 4,000,000
Total		125,757	94,509	525,396,356	5,622,581,507	2,932,623	$ 64,705,477	$ 24,380,656	$ 38,336,316	$ 127,433,251

EE Program Portfolio TRC Test	**3.15**	**3.15**

TRC excludes T&D

Table 9 shows the trends in public power program expenditures since 2006. With total expenditures now at $123 million, 2010 represents the third consecutive year that public power expenditures have topped the $100 million threshold.

Table 9 Program Expenditures



Understanding Public Power Energy Efficiency Funding Sources

Public Utilities Code, Section 9615(e)(1) requires POUs to include "the sources of funding for its investment in energy efficiency and demand reduction program investments." To that end, unless otherwise noted, it is assumed in this report that program funding for energy efficiency programs within the public power community comes from the traditional public goods charge that is collected from each utility customer.

It is important to recognize these charges are designated not only for energy efficiency, but also for renewable investment, electricity-related research and development, and low income assistance. When the Legislature authorized the imposition of a public benefits charge beginning in 1998, local governing boards were given full discretion regarding how these funds would be allocated. Over the years, certain restrictions have been imposed on this discretion, limiting how future dollars can be allocated. As an example, under the California Solar Initiative, public utilities are precluded from reducing their expenditures on energy efficiency or low income assistance to fund its solar programs. That said, local governing boards allocate the majority of their public benefits expenditures to energy efficiency programs.

In some instances, local governing boards allocate dollars above and beyond public benefits expenditures, or even increase the public benefits surcharge to a level above the minimum 2.85% of sales requirement. Additional dollars as a practical matter come directly from the general fund of each jurisdiction, but could, from an energy policy context, be considered a means to defer procurement investment, to put it in context that is consistent with the language of AB2021. For the 2010 report,

specific investments beyond the public benefits fund were reported by Alameda, Burbank, Modesto Irrigation District, Palo Alto, Roseville, and Truckee Donner PUD. Pasadena's public benefits charge is assessed at a level beyond the minimum 2.85% sales requirement, generating additional funding for energy efficiency programs.

Critical to the ultimate success of public power energy efficiency programs is the ability to optimize the use of public dollars that are dedicated to energy efficiency activities. The following table illustrates just how effective public power utilities are in their ability to deliver benefits to the communities they serve. Putting aside the growing costs of measurement and verification, the majority of expenditures represent direct incentives to the customer and direct installation costs. By keeping overhead costs low, POUs are able to maximize the flow of money into their respective communities, which fosters economic development and customer investment into existing building infrastructures. In turn, these investments help to retain local jobs as well as promote local job growth. Table 10 shows POU expenditures as both a percent of retail sales, and as the total program cost per net unit of energy saved. It is clear that California's POUs have established a high benchmark for efficient and effective delivery of energy efficiency programs.

Table 10 Efficacy of Public Power Efficiency Programs

2010 Estimated retail sales	$ 7,753,446,000
2010 Efficiency program expenditures	$ 123,433,250
Expenditures as a percent of sales	1.59%
Program cost per (net) MWH saved	$ 236

Energy Efficiency Targets: Measuring Progress to Plan

Last year, each POU in California adopted a set of 10-year energy efficiency targets covering the years 2011-2020. In this report, we provide final information comparing actual and targeted savings for the three-year period ending in 2010. Such a comparison is important to state policymakers because the information is used by the CEC to develop statewide energy efficiency targets for energy policy development, guidance to the CARB in its greenhouse gas program, and other related policy objectives.

A review of Table 11 indicates that actual savings for public power utilities are generally close to targeted savings. Taking into consideration the time lags associated with new administrative support for aggressive programs stemming from the passage of SB1037/AB2021 and California's economic downturn, public power's cumulative three-year progress to plan amounted to 82 percent. Smaller

POUs managed to achieve savings that were 99.8 percent of the targeted level. We are pleased to report that 18 utilities exceeded their three-year cumulative targets for 2007-2010.

Table 11 Progress Towards AB 2021 Targets

	Annual					Cumulative	
	Actuals				Target	Actuals	Target
	2007 Actual Savings MWH	2008 Actual Savings MWH	2009 Actual Savings MWH	2010 Actual Savings MWH	2010 AB 2021 Target MWH	Program Cumulative Savings 2007-2010	AB 2021 Cumulative Target 2007-2010
Alameda Municipal Power	921	2,135	2,211	1,326	759	6,593	3,040
Anaheim	8,724	16,808	25,805	36,356	16,593	87,693	64,839
Azusa Light and Water	1,041	2,352	2,145	2,099	2,667	7,637	10,432
Banning Electric Utility	253	634	3,030	1,890	1,042	5,808	4,166
Biggs	48	133	111	37	36	328	148
Burbank Water & Power	5,607	8,719	8,574	10,143	11,658	33,043	45,931
Colton	10,247	1,583	2,109	7,579	2,625	21,518	10,501
Corona	98	23	7	3	467	131	1,867
Glendale	8,510	13,548	11,803	16,136	11,819	49,997	46,468
Gridley	651	24	70	381	93	1,126	368
Healdsburg	152	236	361	504	197	1,253	792
Hercules	0	8	10	2	153	19	606
Imperial ID	8,118	30,644	11,285	16,917	36,949	66,964	111,567
Industry	-	-	-	-	-	-	-
LADWP	61,641	115,519	287,574	147,963	280,000	612,698	1,009,000
Lassen	90	123	478	528	638	1,219	2,550
Lodi	383	3,091	1,674	1,929	2,000	7,077	8,000
Lompoc	102	304	392	166	1,039	964	4,160
Merced	3,773	1,871	1,536	3,094	2,322	10,275	9,288
Modesto	5,561	16,129	14,681	16,800	7,636	53,171	25,877
Moreno Valley	44	298	285	502	822	1,129	3,289
Needles	1	72	186	3	817	261	3,269
Palo Alto	4,711	4,399	4,668	5,270	1,600	19,047	10,000
Pasadena	4,238	8,164	30,064	14,559	17,000	57,025	45,500
Pittsburgh Power DBA Island Energy	-	10	449	100	161	560	625
Plumas Sierra	487	422	231	362	621	1,503	2,484
Port of Oakland	53	280	-	-	374	333	1,624
Rancho Cucamonga Municipal Utility	57	359	13	86	448	515	1,791
Redding Electric Utility	1,677	1,640	2,297	2,216	2,103	7,830	10,564
Riverside	13,109	10,682	16,052	19,185	23,410	59,029	91,320
Roseville	4,326	9,314	8,584	10,998	6,638	33,221	29,832
SMUD	95,950	114,662	148,028	155,651	196,000	514,290	518,000
Shasta Lake	47	30	286	1,266	129	1,629	517
Silicon Valley Power	10,889	24,509	39,628	30,593	25,762	105,619	103,048
Trinity Public Utility District	19	12	15	7	-	53	-
Truckee Donner	604	4,456	3,576	4,007	1,000	12,642	4,004
TID	9,206	10,937	13,054	12,253	18,491	45,450	48,978
Ukiah Public Utility	30	279	553	281	265	1,142	1,056
City of Vernon Light & Power	230	935	2,436	1,737	-	5,338	-
Victorville	-	-	-	-		-	-
Summary	261,597	405,342	644,260	522,929	674,333	1,834,128	2,235,502

V. Demand Reduction Programs

As noted in previous reports, many of the large POUs have some form of demand response program or are in the process of implementing new programs. This section highlights some of the innovative programs being undertaken by public power systems, including an update on smart grid efforts tied to ARRA funding. Such programs benefit from the ability of public power utilities to effectively collaborate on program design and deployment.

Smart Grid Projects

Anaheim

Anaheim has begun the implementation of Advanced Metering Infrastructure/Meter Data Management System (AMI/MDMS) as a component of Anaheim's preparation for Smart Grid and to provide a platform to support compliance with anticipated regulatory and legislative requirements related to drought, demand-response, energy efficiency, and time-based rates including Time of Use, Critical Peak Pricing, and Critical Peak Rebates. This project is intended to replace all electric and water meters with state-of-the-art smart meters with two-way communications. It will also support in-home communications with home appliances, air conditioning systems, pool pumps, and in-home displays, and web access to provide customers with real-time or near-real-time information to facilitate improved management of electric and water consumption. To date, just over 7,000 Anaheim customers have been converted to smart meters. An eMeter Energy IP Meter Data Management System has been installed and is fully operational. Additionally, the utility has installed a TIBCO Enterprise Service Bus to facilitate the integration of AMI and its Outage Management System. Finally, this summer, the utility will launch a new web site hosted by OPOWER designed to help customers conserve energy and save money.

Burbank

BWP received a $20 million grant for a citywide smart grid initiative. BWP recognizes that a number of fundamental changes are underway in the industry that will significantly increase the need for utilities to monitor and actively manage demand on their systems. BWP's Smart Grid Program includes deployment of a comprehensive, secure integration of multiple, intelligent Smart Grid infrastructure systems and control processes designed to accelerate the modernization of the local grid and address these challenges. BWP with its compact service territory, high customer density, and favorable climate is the perfect location to develop a full-scale Smart Grid deployment to serve as a model for other utilities to emulate. Its program includes the following primary projects, all of which will be initiated over the next few years:

- Secure Wi-Fi Mesh Network.
- Meter Data Management System
- Advanced Metering Infrastructure for both electric and water
- Mission-Critical Asset Protection Program

- Outage Management System
- Distribution Automation
- Customer Smart Choice Programs
- Energy Demand Management System

Glendale

GWP was selected by the U.S. Department of Energy for a $20 million smart grid grant, one of 33 public power utilities to be selected. The total value of the Glendale City AMI-Smart Grid Initiative is over $70 million. GWP began the project in August 2009, to be completed over the next three years.

The Glendale City AMI-Smart Grid Initiative will have the following infrastructure and functionality:

- Smart meters with large data storage capabilities and two-way communications hardware and software:
  - Electric meters with remotely-controllable switches to allow for remote service disconnect and re-connect
  - Water meters with leak detection and tamper alarm functionality

- A wide area network to allow two-way communications between the utility and each meter in its service territory.
- A communications backbone for distribution automation, direct load control, distributed generation, demand response, and new customer directed programs and service options that allow customers to take control of energy and water costs through access to real or near real time consumption information.
- Meter Data Management System to integrate meter data with the utility's billing, customer information system, outage management, load control systems, and other smart grid systems.
- A premise gateway that communicates to a Home Area Network (HAN) to promote demand response, energy and water conservation, and dynamic pricing options.
- New smart grid enabled energy efficiency, load management, and demand response programs based on innovative critical peak pricing, time of use, and dynamic pricing programs.
- Deployment and integration of distributed resources and generation, including renewable resources.
- Development and incorporation of demand response, demand-side resources, and energy-efficiency resources.
- Deployment of ‘smart’ technologies (real-time, automated, interactive technologies that optimize the physical operation of ‘smart' appliances and consumer devices) for metering, communications concerning grid operations and status, and distribution automation.
- Deployment and integration of advanced electricity storage and peak-shaving technologies, including plug-in electric and hybrid electric vehicles, and thermal-storage air conditioning.

Additionally, the Glendale City AMI-Smart Grid Initiative will provide for:

- Improve reliability, security, and efficiency of the electric grid by increased use of digital information and controls technology.
- Dynamic optimization of grid operations and resources, with full cyber-security.

Modesto Irrigation District

MID completed its initial steps toward development of the smart grid. The utility now has 100 percent AMI implemented across its service area, amounting to more than 100,000 customer meters. In addition, MID selected equipment for its distribution system automation project that is intended to control end-of-line voltage. That project received approximately $1.5 million ARRA Smart Grid Investment Grant. For 2011, MID will continue implementing the distribution automation project and is preparing a Smart Grid Deployment Plan.

SMUD

SMUD received $127.5 million from DOE, for a $308 million *Smart Sacramento* project that includes partners from the region including the California State Department of General Services, California State University, Sacramento, the County of Sacramento, and the Los Rios Community College District.

SMUD started installing advanced metering infrastructure (AMI), using Silver Spring Networks and Landis + Gyr meters, during the fourth quarter 2009. Full deployment of more than 600,000 meters is expected in early 2012. The AMI system will allow for two-way communication with all customers and will enable additional opportunities for energy efficiency and peak load reduction. In addition to AMI, SMUD will implement distribution automation, test dynamic rates, install approximately 200 electric vehicle charging stations, incorporate demand response capability with programmable thermostats and controls in up to 10,000 homes, incorporate Auto DR in many commercial facilities, test energy storage at homes, distribution transformers and substations, test the impacts of high-penetration photovoltaic systems on the grid, and a number of additional smart grid-related projects.

Other Projects

In addition to the significant attention being focused on the development of the smart grid, public power utilities also engage in other programs designed to reduce levels of peak demand. One of the more significant projects has focused on thermal energy storage, described below.

Ice Bear Project

Thermal energy storage is growing increasingly popular for public power utilities located in areas that have high summer peak demand usage. Many public power utilities are now investing in an energy storage product called Ice Bear, developed by ICE Energy. The product is designed to reduce peak electrical demand by utilizing electric energy to produce ice at night during off-peak hours and then use the ice for cooling during the day.

SCPPA and a number of its members are investing more than $100 million in smart-grid enabled advanced energy storage, while Redding Electric has allocated more than $1 million of its own budget for its initial investment in this product. Once the project is complete, approximately 1,500 units are

expected to have been installed by SCPPA utilities, providing 53 megawatts of load shifting during the height of the peak cooling season. ICE Energy will provide for the manufacturing and delivery of equipment through to installation and commissioning; including milestones, measurement, payment criteria, and all other required terms. Glendale plans to install 210 megawatts of Smart Grid-Enabled, Ice Bear units over the next three years. In addition to installing Ice Bear Units, Glendale will work with Ice Energy to replace approximately 400 tons of aging, inefficient City HVAC units on City Facilities at the same time they are installing the Ice Bear units thereby taking advantage of available preferred pricing and reduced installation costs.

Burbank has installed 17 units to date, shifting 119 kilowatts of peak energy on a daily basis. The utility is in the process of installing additional units at City facilities, focused on two megawatts of peak-shifting capability from these units. A two-year implementation plan is currently in development whereby hundreds of Ice Bear units will be installed at business customer locations.

Redding is about to complete its initial 50-unit installation program, which covers a number of facilities throughout the city. The utility has been pleased with the results and is currently discussing with Ice Energy the deployment of additional units in the later part of 2011 and 2012.

VI. Conclusions and Lessons Learned

CMUA appreciates the opportunity to provide to the CEC this fifth assessment of public power energy efficiency programs in California. This analysis reaffirms the fact that public power energy efficiency programs are continuing to produce significant energy savings for the state in the most cost-effective manner. The following bullets provide the key findings of this analysis:

- POUs continue to make major investments in energy efficiency, despite being impacted by the worst economic recession to affect California in decades. During FY09/10, POUs spent $123 million on energy efficiency programs, slightly less than spending realized in the previous year. Despite an unprecedented slowdown in the state's economy, including a foreclosure rate that is among the highest in the nation, energy efficiency spending by public power utilities are double the amount spent on programs just three years earlier.
- Reductions in electricity consumption remain strong within the public power community. In the most recent reporting year, peak demand dropped nearly 94 megawatts and more than 520 million kilowatt-hours were saved, continuing a dramatic upward trend in terms of annual increases in savings.
- California's POUs have invested nearly half a billion dollars on energy efficiency programs in the past five years, representing direct investment in local community infrastructure and the support of economic development.
- Public power energy efficiency programs provide more than three dollars of societal benefits for every dollar spent. Applying the Total Resource Cost (TRC) societal test, the weighted average cost effectiveness for all publicly owned energy efficiency programs in FY09/10 was 3.15. Any

number greater than 1.0 comes with the theoretical assumption that the program is indeed cost-effective.

- The 15 largest POUs account for nearly 97 percent of public power's total energy efficiency savings. Twelve of these utilities had annual net energy savings that exceeded 10,000 megawatt hours.
- While the trend is clearly declining, lighting programs still provide the largest share of energy efficiency savings to public power utilities. In the most recent reporting period, lighting accounted for more than a quarter of total energy savings achieved.
- California's POUs are reasonably consistent with their collective energy efficiency targets in FY09/10. Among the entire group, the utilities realized 78 percent of their savings targets last year, with the result jumping well above 100 percent when the two largest POUs are removed from the calculation.

CMUA looks forward to our continuing partnership with policymakers on energy efficiency issues and the aggressive promotion of the state's energy loading order. The sixth edition of this report will be submitted on March 15, 2012.

Appendix A: Description of Utility Programs

ALAMEDA MUNICIPAL POWER

- Established in 1887, the oldest municipal electric utility in the west
- 34,200 customers, 88% are residential, 12% commercial
- Peak demand: 74 megawatts, occurs in the early evening in the winter
- Alameda Municipal Power (AMP) load does not have large demand spikes like most of California
- There is no residential air-conditioning
- Annual energy use is 400.9 gigawatt-hours
- 91 employees

Alameda Municipal Power Energy Efficiency Program Background

- Since 1991, AMP has spent more than $2.3 million on direct customer rebates.
- The energy efficiency programs have resulted in a demand reduction of more than 8 MW, 10% of peak demand and energy use reduction of 28,000 MWh/yr, almost 6% of annual energy use.
- AMP provides energy efficiency programs and services to all customers including free energy audits, prescriptive and customized rebates, public awareness programs, and advanced technologies.

Alameda Municipal Power Energy Efficiency Highlights FY 2010

- The net energy efficiency savings for FY 2010 was 1,326 MWh, which exceeds the initial AB2021 Target savings of 760 MWh/yr.

Fiscal Year	Net MWh/yr savings	AB2021 Target Savings MWh/yr
2007	923	760
2008	2,136	760
2009	2,211	760
2010	1,326	760

- The 1,326 MWh savings achieved is equal to the annual energy use of 323 average Alameda residential customers. The resulting greenhouse gas emissions reduction from the 2010 energy-efficiency programs is 470 tons of equivalent carbon dioxide (CO2e), which is equal to the annual emissions of 59 cars.

- The projected savings for FY 2010 were 1,722 MWh and the actual savings were 1,326 MWh; or 77% achieved savings as reflected in the chart below:

Category	Projected Net Savings (MWh/yr)	Actual Net Savings (MWh/yr)
Residential Lighting	179	209
Residential Refrigeration	375	580
Residential Subtotal	**554 (32%)**	**789 (60%)**
Commercial Air-Conditioning	64	60
Commercial Lighting	974	440
Commercial Refrigeration	99	0
Commercial Customized Measures	31	37
Commercial Subtotal	**1168 (68%)**	**537 (40%)**
Total Projected Savings for FY 2010	**1,722**	**1,326**

The projections estimated residential savings to provide 32% and commercial savings to provide 68% of projected savings. However, actual net savings resulted in residential savings accounting for 60% and commercial savings accounting for 40% of the total actual net savings.

- An increase in program participation from the residential sector from 2009 to 2010 is shown in the table below:

Residential Program	Year 2009 # of units	Year 2010 # of units
Compact fluorescents	5,081	7,520
On-site energy audits	84	130
Refrigerator programs	152	296

- The shortfall in savings from the commercial sector can be contributed to the third party commercial lighting retrofit program, reAMP, which was expected to increase energy savings and run for all 12 months of 2010. The College of Alameda had planned on participating in the reAMP program and accounted for 30% of the targeted program savings, but due to budgetary constraints they delayed their project. Additionally, the reAMP program ran for only six months as a result of issues in contract negotiations and processing. This resulted in the lower energy savings.

- Another potential factor influencing the decrease is due partly to the current economic crisis that is heavily impacting California. The State of California Employment Development Department in their Oct 22, 2010 news release stated the CA unemployment rate remains steady - the CA statewide unemployment rate for September 2010 was 12.4%, and for September 2009 it was also 12.4%.

- Energy efficiency is a tough sell during these economic conditions and particularly difficult for small and medium businesses who typically lease their space. The tenant pays the electric bill, but is not responsible for capital improvements to their space such as lighting and air-conditioning equipment.

- The total energy efficiency expenditures including overhead for FY 2010 was $579,068, of which 92% ($529,068) was from public benefits and 8% ($50,000) was from the power procurement budget.

- The Total Resource Cost for FY2010 is 1.77, which exceeds the 1.00 threshold.

- The total utility cost for energy efficiency for FY2010 was $0.05/kWh, which is comparable to AMP's assumed avoided power generation cost of $0.10/kWh, a cost that includes power generation, transmission, distribution, and environmental externalities. The total utility cost of $0.05/kWh is the cost of the energy efficiency measure over the lifetime of the measure.

- An evaluation, measurement, and verification report for the fiscal year 2009 residential compact fluorescent programs was completed in 2010. The objectives of the study was to assess the role of AMP's CFL programs on customer purchases of CFLs, estimate the saturation of residential CFLs, and estimate the energy impacts of residential CFL installations in Alameda.

  The key findings of the customer survey were as follows:

  1) The CFLs distributed by AMP and actually installed by customers equaled 108,240 kWh/yr. Only 60% of the CFLs obtained in 2009 were actually installed in 2009.

  2) Penetration of CFLs is on par with the rest of California. 87% of the survey respondents report having at least one CFL in their home. Thus, there is still a healthy technical potential for CFLs in Alameda.

  3) 16% of respondents said they were familiar with AMP CFL programs, which is within the range of the general awareness rates of utility programs (9 to 32)%.

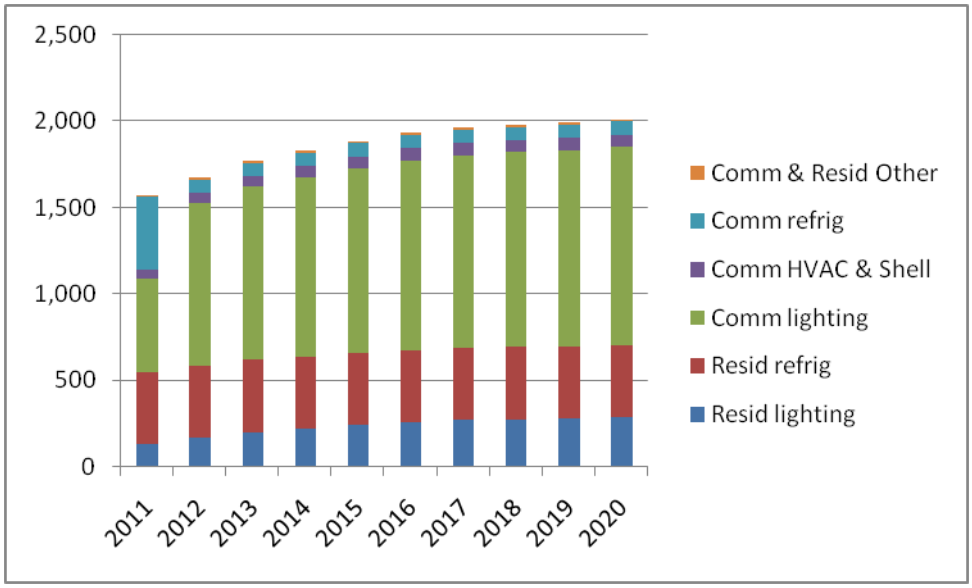
- The City of Alameda Public Utilities Board approved by resolution, at the March 15, 2010 meeting, for setting 10-year energy-efficiency targets for FY 2011 – FY 2020, as required by Assembly Bill 2021. Energy efficiency is included as a power resource in AMP's annual load forecast.

Alameda Municipal Power - Energy Efficiency Targets 2011 to 2020

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Customer Load (MWh/yr) Forecast January 2010	387,400	389,600	393,600	398,500	401,500	403,200	405,000	406,900	409,100	411,800
Energy Efficiency as a % of Load Forecast	0.41	0.43	0.45	0.46	0.47	0.48	0.485	0.487	0.488	0.489
MWh/yr Target	1,574	1,675	1,771	1,833	1,887	1,935	1,964	1,982	1,996	2,014
MWh Cumulative EE Savings	1,574	3,249	5,020	6,854	8,741	10,676	12,640	14,622	16,618	18,632

The following graph illustrates how the target will be achieved by electric end use and by customer segment over the 10-year period:

Target of Savings by End Use



Commercial lighting is projected to provide more than half of the energy efficiency savings and residential refrigeration and commercial HVAC are expected to be consistent over the 10-year period. There are uncertainties regarding energy efficiency technologies and customer acceptance, such as the full marketing potential and diversity of applications of LED lighting in Alameda over the 10-year period.

To deal with the impact of the economic crisis on AMP's energy efficiency targets, AMP expects to provide the following in the near future:

- Develop a long-term Energy Efficiency Work Plan.
- Work closely with the City of Alameda and the Alameda Unified School District to install the cost-effective energy efficiency measures identified in the Energy Efficiency Conservation Block Grant energy audits.
- Provide a third party commercial refrigeration program that will be supplemented by the State Energy Program, Energy Smart Jobs Program.
- Provide a contractor-driven Small Commercial Lighting Retrofit Program.
- Evaluate the feasibility of an on-bill financing program.
- Partner with other regional programs to promote and include AMP's energy efficiency programs.

For FY2010 AMP provided the following energy efficiency and low income programs:

Residential Energy Efficiency Programs

1. Energy Star Refrigerator Rebate & Recycle Program – Rebate for buying an Energy Star refrigerator and recycle the old refrigerator with our recycler.
2. 2nd Refrigerator Pick Up Program – Rebate for customers recycling their 2nd refrigerator with our recycler.
3. Great White Light Sale – Coupon worth $2 for a compact fluorescent that is redeemable at local retailers runs four months a year.
4. Trade-Ins for CFLs – Trade in events where customers bring in their incandescent lights and exchange those for compact fluorescents (CFL).
5. Meter Lending Program – Borrow a meter to measure the energy use of appliances.
6. Onsite Energy Audits – Residential audits at no cost.
7. Weatherization Cash Grant Program – Grant for up to 80% of the cost of weatherizing homes with electric heat.
8. On-line Energy Audit – On-line residential energy audit and associated tools such as an appliance calculator and energy library on AMP website.
9. Advanced Technologies – Promote advanced technologies such as LED down lights.

Low Income Programs

1. Energy Assistance Program – Provides energy audits, energy efficiency measures, and a 25% bill subsidy to qualifying low-income customers.
2. Energy Assistance through Supportive Efforts - Provides short-term emergency assistance based upon matching funds from the customer.
3. Temporary Assistance for Needy Families – Partnered with the County of Alameda Social Services Agency to provide up to $200 one-time assistance to qualifying low-income households of families and CalWorks.

Commercial Energy Efficiency Programs

1. Commercial Lighting and HVAC Retrofit Program – Prescriptive rebates for retrofitting existing buildings with energy efficient equipment.
2. Commercial Customized Retrofit Program – Based upon the kWh/yr reduced, rebates for energy efficiency retrofits such as motors and server virtualization.
3. Commercial On-Site audits – Free energy audits for lighting, HVAC, refrigeration, process systems, etc.
4. New Construction Design Assistance - Grants of up to $10,000 for energy efficient design work.
5. New Construction Rebates – Whole building and systems rebates for energy efficient new construction.
6. ReAMP – 3rd party administered commercial lighting retrofit program
7. Advanced Technology Program – Increased rebates to promote advanced technologies such as LED lighting.

Alameda Municipal Power Research and Development

In 2010, using an American Public Power Association Demonstration of Energy Efficiency Developments and utility energy efficiency funds, AMP completed an "Evaluation of the Energy Efficiency Potential of

Alameda Municipal Power's Electric Distribution System". AMP staff has been evaluating the costs and benefits of changing out some of the systems transformers to increase distribution system efficiency.

AMP contributes to the Center for Study of Energy Markets (CSEM) to foster top research on energy policy in order to promote better understanding of the functioning of energy markets and the impacts of deregulation in energy industries. CSEM also seeks to develop strategies and tools that can be used by regulatory agencies and policy makers for the analysis of energy markets. CSEM is a program of the University of California Energy Institute (UCEI).

Alameda Municipal Power Investment in Renewables

61% of AMP's electricity comes from CEC approved renewable resources including geothermal, landfill gas, wind, and small hydro. With the inclusion of large hydro, over 85% of AMP's resources are carbon free. New projects and contracts for biogas, small hydro, and solar are being evaluated. In 2010, AMP implemented two new landfill-gas-to-energy projects where approximately 20% of the power consumed in Alameda is from landfill-gas-to-energy projects.

Projects to extend the life and improve the efficiency of the Geysers Geothermal field are continuing. Previous efficiency projects include:

- The injection of treated wastewater from neighboring towns into steam field injection wells.
- Near-horizontal injection wells have been drilled.
- A 250 kW turbine was installed in an injection well. Based on the success of this turbine, a 750 kW turbine is planned for the future.
- Two 1-megawatt photovoltaic solar arrays were installed to pump the treated wastewater uphill from the treatment plant to the injections wells
- A 2010 project changed the turbine blades to accommodate lower steam pressure resulting in a 4% improvement in efficiency.

Federal Economic Stimulus Funds

Energy Efficiency Conservation Block Grant Program – Funds committed

1. City Facilities – Complete energy audits for all city facilities; establish benchmark for each facility to be used to evaluate measures, and prioritize all energy efficiency measures by cost, benefit, feasibility, and reliability. The study will be completed in 2011.
2. City Hall Occupancy Sensors – Install lighting occupancy sensors throughout City Hall.
3. Alameda Unified School District Facilities - Complete energy audits for all city facilities; establish benchmark for each facility to be used to evaluate measures, and prioritize all energy efficiency measures by cost, benefit, feasibility, and reliability. The study will be completed in 2011.
4. Third Party Residential Energy Audit Training Program – A non-profit consulting firm will be retained to provide a turnkey program, which will train volunteers to conduct residential energy audits and perform energy efficiency upgrades.

State Energy Program (projects under development) - AMP will partner in these State programs to enhance and supplement AMP energy efficiency program efforts.

1. Energy Upgrade California in Alameda County – A countywide program, using a whole building approach, for improving the immediate and long-term environmental performance of existing buildings. Single-family homes are the first priority, followed by multifamily and small commercial buildings. This is an effort of Alameda County, cities in Alameda County, and StopWaste.org.
2. Energy Smart Jobs Program – A statewide program that will develop new jobs and employ Californians by delivering commercial refrigeration energy efficiency measures and associated retrofit measures.

ALAMEDA MUNICIPAL POWER

Time Period for Reporting Data: Fiscal Year ending 6/30/2010

Alameda Municipal Power		Resource Savings Summary						Cost Summary			
Program Sector (Used in CEC Report)	Category	Units Installed	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers										
HVAC	Res Cooling										
Appliances	Res Dishwashers										
Consumer Electronics	Res Electronics										
HVAC	Res Heating										
Lighting	Res Lighting	7,520	279	38	208,702	1,878,314	1,003	$ 16,845		$ 57,027	$ 73,873
Pool Pump	Res Pool Pump										
Refrigeration	Res Refrigeration	544	89	89	580,349	6,585,414	3,572	$ 33,920		$ 213,619	$ 247,539
HVAC	Res Shell										
Water Heating	Res Water Heating										
Comprehensive	Res Comprehensive										
Process	Non-Res Cooking										
HVAC	Non-Res Cooling	1			59,214	710,565	395	$ 6,785		$ 23,968	$ 30,753
HVAC	Non-Res Heating										
Lighting	Non-Res Lighting	2	95	47	440,167	4,930,492	2,720	$ 57,915		$ 165,139	$ 223,053
Process	Non-Res Motors										
Process	Non-Res Pumps										
Refrigeration	Non-Res Refrigeration										
HVAC	Non-Res Shell										
Process	Non Res Process										
Comprehensive	Non Res Comprehensive										
Other	Other	130			37,253	111,758	62			$ 3,851	$ 3,851
SubTotal		8,197	463	175	1,325,684	14,216,544	7,752	$ 115,465		$ 463,603	$ 579,068
T&D	T&D										
Total		8,197	463	175	1,325,684	14,216,544	7,752	$ 115,465		$ 463,603	$ 579,068

EE Program Portfolio TRC Test	1.77

Excluding T&D

Energy Savings Targets 2011-2020

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Customer Load (MWh/yr) Forecast January 2010	387,400	389,600	393,600	398,500	401,500	403,200	405,000	406,900	409,100	411,800
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MWh/yr Target	1,574	1,675	1,771	1,833	1,887	1,935	1,964	1,982	1,996	2,014
MWh Cumulative EE Savings	1,574	3,249	5,020	6,854	8,741	10,676	12,640	14,622	16,618	18,632

ANAHEIM PUBLIC UTILITIES

ANAHEIM PUBLIC UTILITIES
www.anaheim.net

- Established in 1894, the only municipal electric utility in Orange County
- 175,004 meters, 112,548 are electric and 62,456 are water
- Consumption of energy: 74% Commercial/Industrial, 25 %residential and 1% miscellaneous
- Peak demand: 545 megawatts established September 2009
- Retail annual energy used: 2,452 gigawatt-hours.
- 377 full-time employees and 60 part-time employees

Overview of Public Benefit Programs

From January 1998 through June 2010, public benefits expenditures totaled $88,871,972 as follows: Energy Efficiency 60%; RD&D 14%; Renewable Energy Resources 19%; and Income-Qualified 7%. Energy Efficiency programs includes every residential customer, including low income. Residential customers are not required to provide income data for the Energy Efficiency programs. Therefore, the above percentage seems to over shadow the other categories. In actuality, there is a greater amount of income-qualified customers participating in the residential programs than is reflected above. Conservation of electricity and water is part of the utility's daily routine. In the long-term, conservation of energy and water, helps Anaheim Public Utilities defer the future purchase of more costly resources. In the short-term, conservation is vital in helping maintain stable rates. Anaheim offers approximately 45 value packed Advantage Services to help customers reduce electric and water use and save money.

Strategic Objectives

Develop programs and services to:

- Achieve legislatively driven goals and objectives (AB 2021)
- Meet the needs of our customers and Department
- Maximize Public Benefit Investments
- Promote New Energy/Water Technologies
- Expand Renewable Energy
- Promote Green Buildings
- Develop effective communications and marketing plans

Current Commercial Customer Programs

Total annual program cost: $2,565,265
Resulting in: 2,667 kilowatt demand reduction and 20,194,734 kilowatt-hour reduction

• **Comprehensive Energy Audits -** Customized on-site audits and recommendations designed to improve energy operating efficiency and help customers reduce costs.

• **Water Use Surveys -** Expert analysis of a facility's water use, specific water saving recommendations, and an explanation how incentives may help fund improvements.
• **Industrial Process Improvement Incentives –** Commercial and industrial water users adopting water saving processes are eligible for financial assistance.
• **Economic Development/Business Retention Rate -** Provides qualifying businesses with rate discounts with an efficiency measures installation component.
• **Permit Fee Waiver** – Waives the required permit fees for commercial customers who install high efficiency measures.
• **Customized Energy Incentives -** Customized financial incentives for installation of high-efficiency air conditioning, motors, and other production related equipment.
• **Heat Pump Incentives -** Encourage installation of high-efficiency heat pumps.
• **Exit Sign Program -** Financial incentives for up to 50 percent of the cost to retrofit incandescent bulbs or fluorescent lamps in exit signs with more efficient exit sign lighting technology.
• **Lighting Incentives –** Provides incentives to improve energy efficiency for a variety of lighting applications**.**
• **Small Business Energy Management Assistance -** Provides customers of less than 100 kilowatt demand with energy use evaluations, retrofit funding, and installation assistance; focusing on lighting upgrades, programmable thermostats, air conditioning, and refrigeration tune-ups.
• **New Construction -** Design assistance and incentives for new construction and facility expansions that install energy-efficient equipment that exceeds Title 24.
• **Commercial Water Equipment Rebates -**Businesses and companies are eligible for rebates by installing or retrofitting with qualifying water-saving devices.

Current Residential Customer Programs

Total annual Program Costs $2,029,411
Resulting in: 6,554 kilowatt demand reduction and 15,565,693 kilowatt-hour reduction.

• **Home Utility Check-Up -** A customized in-home survey of water and energy use and existing appliances; or an option to go to www.anaheim.net and click on Public Utilities to complete a detailed survey online. Either way, customers receive money saving advice, installation of up to five CFLs, water saving aerators and showerheads, and learn about incentives designed to help them be more water and energy efficient.
• **Home Incentives -** Rebates for purchase and installation of high efficiency ENERGY STAR® rated appliances and high efficiency conservation measures.
• **TreePower -** Provides complimentary shade trees and incentives for residential customers. Shade trees, when properly placed, can help reduce air conditioning costs.
• **Compact Fluorescent Lamp (CFL) Distribution Program –** Provides free CFLs to all Anaheim residents.
• **Rehabilitation Loan and Energy Efficiency Grants –** Income-qualified loans to residential customers for rehabilitation of existing single-family homes. Grants are offered in addition to installing energy efficiency measures.
• **Weatherization** - Provides weatherization measures, ensures combustion appliance safety and install Energy Star appliances for income-qualified residential homeowners and tenants.
• **Neighborhood Comprehensive Revitalization** – Provides comprehensive revitalization and retrofits to existing income-qualified neighborhood developments. Funding is provided to install high efficiency conservation measures and Energy Star appliances.
• **Lighten-Up CFL Fundraiser** - Provides free CFLs to students to sell as a fund raising activity to attend outdoor environmental camp (or other specified extracurricular activity). Schools pay $1 for each bulb

sold which is applied to the Sun Power for Schools Program.
• **Permit Fee Waiver** – Waives the required permit fees for residential customers who install high efficiency measures and Energy Star appliances qualified for the Home Incentives Program.
• **Toilet Rebate Programs -** Rebates for ultra-low-flush and high efficiency toilets.
• **Income-Qualified Senior or Disabled Energy Credit -** Provides a 10 percent reduction on the electric portion of bills to seniors or long-term disabled customers at or below 80 percent of the Orange County median income.
• **Refrigerator Recycling Program** – Provides a rebate to customers who recycle an old, operational refrigerator or freezer.

Current Procurement Expenses

Total Annual Program Expenditures $32,888
Resulting in: 76 kilowatt demand reduction

Thermal Energy Storage (TES) Program – Program provides incentives for installation of small and large scale thermal energy storage systems that permanently shift demand for electricity to provide air conditioning from peak periods to off-peak periods.

Current Evaluation, Measurement and Verification (EM&V) Activities

Anaheim Public Utility (APU) EM&V Efforts

- APU retained the services of an independent third party contractor to evaluate its energy efficiency programs. The firm has completed assessing energy efficiency projects completed in fiscal year 2008-2009 (July 1 – June 30). Projects reviewed represent a random sampling from the full spectrum of APU's energy efficiency program portfolio. The independent third party's EM&V analysis has concluded; however, the report is still in progress.

  APU's verification study will be submitted to the CEC for its review when the report has been finalized and accepted by APU. A preliminary report has been submitted by the contractor and comments returned. The findings will be made available for review as soon as the revisions are completed.

Public Facilities

Energy efficient LED lighting pilots and retrofits have been implemented in the City facilities; and all traffic sign lights and crosswalks have been retrofitted with LEDs.

City Schools

Anaheim Public Utilities rebates of $463,069 helped support the retrofit of private and public schools with energy efficient lighting and heating/cooling equipment.

Proposed Energy Efficiency Programs and Services 2010-11

• Expand existing programs and accelerate current levels of participation by targeted marketing campaigns, potentially increasing incentive levels
• Continue to evaluate the appropriateness of any new energy efficiency technologies
• Prepare request for proposal (RFP) to deliver evaluation, measurement and verification services by an independent 3rd party for FY09/10 program results.

Low Income

• Expand the low-income programs using stimulus funds
• Work closely with City Departments to ensure that all qualified customers are enrolled in the low income program

Projected Integrated Resources Program

• Provide incentives for three large scale thermal energy storage projects.

American Reinvestment and Recovery Act (ARRA) Stimulus Funds

Energy Efficiency Conservation Block Grant Program – Funds that were expended and corresponding net energy efficiency savings and demand reductions committed in FY 09/10 are depicted in the attached table.

Programs funded with stimulus funds or other funding sources

There are some programs that produce kWh savings and kW demand reductions with little or no expenditure of money. In the case of CFL Distribution, the funds were expended in the fiscal reporting period the year before all of the CFL's were distributed. In the case of Energy Efficient Incentives, two of the local city school districts applied software driven controls to achieve network wide shutdown of workstations and peripheral equipment that provided substantial savings for a fraction of the cost of other measures.

Advantage Services	Program Costs	Actual Net kW Saved	Actual Net kWh Saved	Rebates/Misc. Recov. Chrgs. Provided
Residential Services and Community Outreach				
Air Duct Sealing and Balancing-Non Stimulus	**$27,796**	**3.2**	**1,717.0**	**$27,796**
Air Duct Sealing and Balancing	$20,915	2.4	1,291.9	$20,915
Air Duct Sealing and Balancing- STIMULUS	$6,881	0.8	425.0	$6,881
Air Duct Sealing and Balancing- MATCHING	$6,881	0.8	425.1	$6,881
Air Duct Sealing and Balancing - Total	**$34,677**	**4.0**	**2,142.0**	**$34,677**
Home Incentives Program-Non Stimulus	**$508,063**	**560.9**	**869,236.7**	**$344,140**
Home Incentives Program	$392,526	433.3	671,567.5	$235,435
Home Incentives Program- STIMULUS	$115,536	127.5	197,668.8	$115,537.0
Home Incentives Program- MATCHING	$115,536	127.5	197,669.2	$108,705
Home Incentives Program-Total	**$623,599**	**688.4**	**1,066,905.5**	**$459,677**
Refrigerator Recycling-Non Stimulus	**$302,751**	**314.9**	**2,045,472.7**	**$89,350**
Refrigerator Recycling	$253,647	263.8	1,713,714.8	$64,650
Refrigerator Recycling- STIMULUS	$49,104	51.1	331,761.3	$49,104
Refrigerator Recycling- MATCHING	$49,104	51.1	331,757.9	$24,700
Refrigerator Recycling-Total	**$351,855**	**366.0**	**2,377,234.0**	**$138,454.0**
Weatherization Program-Non Stimulus	**$79,775**	**9.8**	**106,698.4**	**0**
Weatherization Program	$78,425	9.7	104,892.8	
Weatherization Program- Consol STIMULUS	$1,350	0.2	1,805.6	$1,350
Weatherization Program- Consol MATCHING	$1,350	0.2	1,805.6	
Weatherization Program-Total	**$81,125**	**10.0**	**108,504.0**	**$1,350**

Residential Services and Community Outreach-Stimulus Subtotal	$172,871	179.6	531,660.8	$172,872

Energy Efficiency Conservation Block Grant Program *(continued)*

Advantage Services	Program Costs	Actual Net kW Saved	Actual Net kWh Saved	Rebates/Misc. Recov. Chrgs. Provided
Commercial/Industrial Services				
Air/Ground Source Heat Pump Incentives-Non Stimulus	**$82,286**	**156.4**	**312,778.8**	**82,286**
Air/Ground Source Heat Pump Incentives	$59,786	113.7	227,253.7	$59,786
Air/Ground Source Heat Pump Incentives- STIMULUS	$22,500	42.8	85,525.2	$22,500
Air/Ground Source Heat Pump Incentives- MATCHING	$22,500	42.8	85,525.2	$22,500
Air/Ground Source Heat Pump Incentives-Total	**$104,786**	**199.2**	**398,304.0**	**$104,786**
Energy Efficient Incentives-Non Stimulus	**$876,916**	**825.3**	**12,278,303.1**	**860,489**
Energy Efficient Incentives-Reference		**840.8**	**12,508,308.8**	
Energy Efficient Incentives	$860,489	809.9	12,048,297.4	$844,062
Energy Efficient Incentives- STIMULUS	$16,427	15.5	230,005.7	$16,427
Energy Efficient Incentives- MATCHING	$16,427	15.5	230,005.7	$16,427
Energy Efficient Incentives-Total	**$893,343**	**840.8**	**12,508,308.8**	**$876,916**
LED Exit Signs-Non Stimulus	**$7,199**	**6.6**	**60,192.7**	**7,199**
LED Exit Signs-Reference		**7.2**	**65,460.0**	
LED Exit Signs	$6,569	6.0	54,925.3	$6,569
LED Exit Signs- STIMULUS	$630	0.6	5,267.3	$630
LED Exit Signs- MATCHING	$630	0.6	5,267.3	$630
LED Exit Signs-Total	**$7,829**	**7.2**	**65,460.0**	**$7,829**
Lighting Incentives-Non Stimulus	**$709,592**	**928.3**	**5,351,555.1**	**614,387**
Lighting Incentives-Reference		**1,052.8**	**6,069,565.6**	
Lighting Incentives	$614,387	803.7	4,633,541.3	$519,182
Lighting Incentives- STIMULUS	$95,205	124.5	718,010.5	$95,205

Lighting Incentives- MATCHING	$95,205	124.5	718,013.9	$95,205
Lighting Incentives-Total	**$804,797**	**1,052.8**	**6,069,565.6**	**$709,592**
Small/Medium Business Program-Non Stimulus	**$648,673**	**510.3**	**1,069,963.1**	**0**
Small/Medium Business Program-Reference		**550.0**	**1,153,096.0**	
Small/Medium Business Program	$598,673	471.0	987,489.9	
Small/Medium Business Program- STIMULUS	$50,400	39.7	83,132.9	$50,400
Small/Medium Business Program- MATCHING	$50,000	39.3	82,473.2	

Energy Efficiency Conservation Block Grant Program *(continued)*

Advantage Services	**Program Costs**	**Actual Net kW Saved**	**Actual Net kWh Saved**	**Rebates/Misc. Recov. Chrgs. Provided**
Small/Medium Business Program-Total	**$699,073**	**550.0**	**1,153,096.0**	**$50,400**
Commercial/Industrial Services-Stimulus Subtotal	$168,735	207.5	891,935.9	$168,735
Total Stimulus	$341,606	387.1	1,423,596.7	$341,607
Total Matching	$341,206	386.8	1,422,937.3	$258,621
Total Non Stimulus	**$2,366,135**	**2,490**	**9,817,614**	**$2,025,648**
Total	**$2,707,741**	**2,877.6**	**11,241,211.1**	**$1,506,765**

ANAHEIM PUBLIC UTILITIES

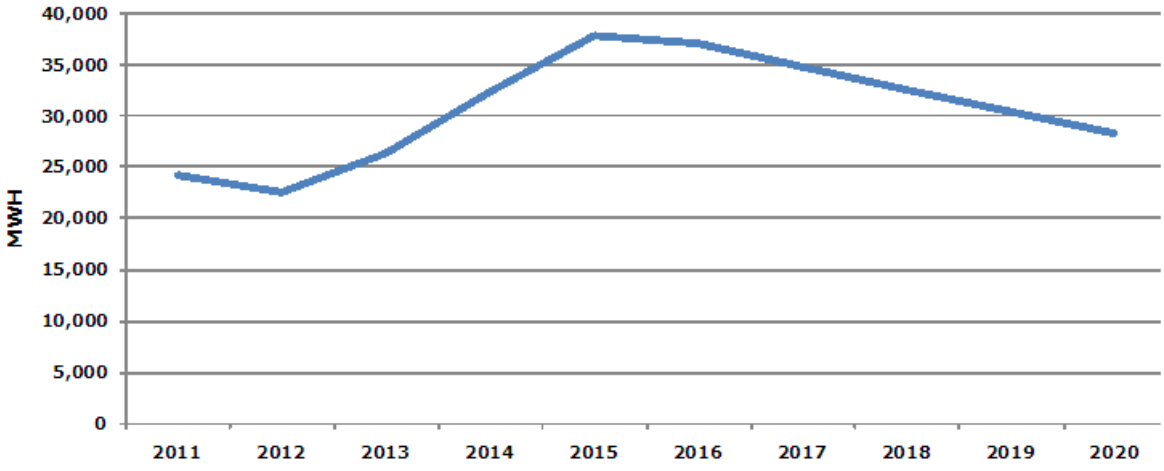
Time Period for Reporting Data: Fiscal Year ending 6/30/2010

Anaheim		Resource Savings Summary						Cost Summary			
Program Sector (Used in CEC Report)	Category	Units Installed	Net Demand Savings (kW)	Net Peak kW Savings	Gross Annual kWh Savings	Net Annual kWh Savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers										
HVAC	Res Cooling	6	1,033	141	2,542,946	2,034,356	17,889	$ 683,843	$ 613,506		$ 1,297,349
Appliances	Res Dishwashers										
Consumer Electronics	Res Electronics										
HVAC	Res Heating										
Lighting	Res Lighting	3	5,146	642	11,343,075	9,074,460	23,001		$ 138,683		$ 138,683
Pool Pump	Res Pool Pump										
Refrigeration	Res Refrigeration	5	408	398	3,171,759	2,537,407	13,701	$ 231,815	$ 293,175		$ 524,990
HVAC	Res Shell	2	4	4	2,678	2,142	22	$ 34,677			$ 34,677
Water Heating	Res Water Heating										
Comprehensive	Res Comprehensive	2	550		1,441,370	1,153,096	4,486	$ 50,400	$ 648,673		$ 699,073
Process	Non-Res Cooking										
HVAC	Non-Res Cooling	2	199		497,880	398,304	3,443	$ 104,786			$ 104,786
HVAC	Non-Res Heating										
Lighting	Non-Res Lighting	4	1,060	1,060	7,668,782	6,135,026	51,658	$ 717,421			$ 717,421
Process	Non-Res Motors										
Process	Non-Res Pumps	2			543,991	543,991	2,005				
Refrigeration	Non-Res Refrigeration										
HVAC	Non-Res Shell										
Process	Non Res Process										
Comprehensive	Non Res Comprehensive	2	841		15,635,386	12,508,309	50,452	$ 876,916	$ 16,427		$ 893,343
Other	Other	3			2,461,122	1,968,898	3,400		$ 185,871		$ 185,871
SubTotal		31	9,241	2,245	45,308,989	36,355,989	170,057	$ 2,699,858	$ 1,896,334		$ 4,596,192
T&D	T&D	1	201			1,445,000	7,609				
Total		32	9,442	2,245	45,308,989	37,800,989	177,666	$ 2,699,858	$ 1,896,334		$ 4,596,192

EE Program Portfolio TRC Test	7.36

Excluding T&D

Energy Savings Targets 2011-2020



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
MWH	24,264	22,542	26,296	32,291	37,785	36,956	34,802	32,568	30,339	28,238
% of Load Forecast	0.95%	0.87%	0.99%	1.21%	1.40%	1.34%	1.25%	1.16%	1.07%	0.99%

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 15,250 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 65 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 266,250 megawatt-hours through long-term contracts.
- Un-audited sales revenues are $38,100,000, with un-audited operating costs of $37,100,000.
- 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 $5,200,000 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: $372,100; resulting in approximately 636 kilowatts of demand reduction and over 20,218,700 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.
- Small Business Audit/Retrofit Program: Provide free utility audit, free CFL retrofit, free packaged A/C tune-ups, the first $1,500 free lighting retrofit and recommendations for further energy saving measures with a corresponding 50% rebate up to a maximum rebate of $10,000 per customer account.

Current Residential Customer Programs: (Annual program cost: $123,350; resulting in approximately 220 kilowatts of demand reduction and over 4,277,700 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.
- LED TV and Computer Monitor Program: Rebates are offered for the purchase of LED TV's and computer monitors.

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: $48,350; resulting in approximately 3.0 kilowatts of demand reduction and 548,900 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 2009-2010)

- 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 additional supplies of renewable energy to meet its 2017 requirement of 30 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.

EM&V - Azusa Light and Water has contracted with an independent third party to evaluate randomly selected programs and rebates as part of its designed measurement and verification plan. For fiscal year 08-09, projected energy savings are being verified for the Business Energy Partnership Rebate Program, the Small Business Utility Audit and Retrofit Program and the Residential Rebate Program. These programs were chosen because the majority of the funds are expended in these three programs and they provide for the majority of the corresponding savings.

ARRA Funding – Azusa Light and Water participated in the EECBG Stimulus Funding Program through the installation of new higher efficiency HVAC equipment on the Azusa Police Department at a total estimated cost of $191,600, which equates to the entire prescribed ARRA funding for the City of Azusa.

AZUSA LIGHT & WATER

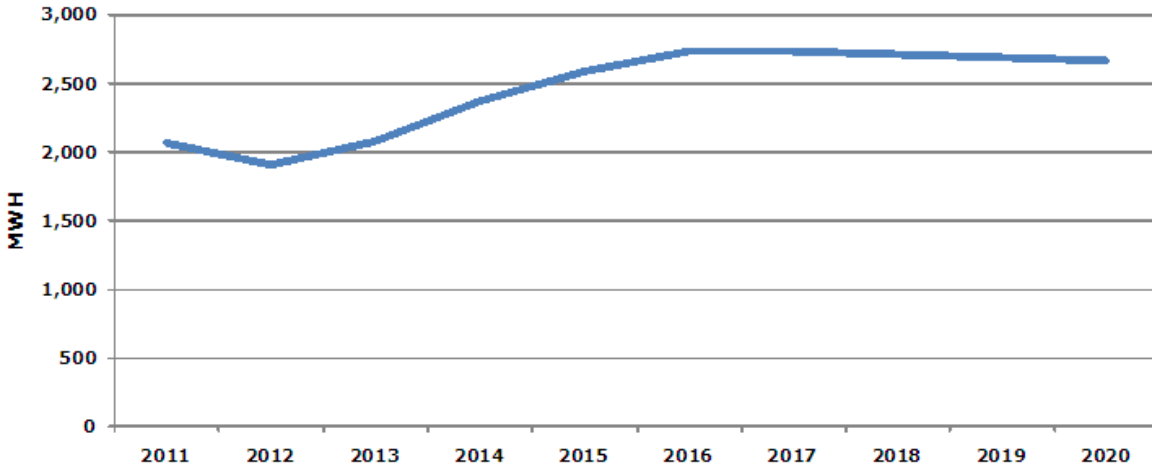
Time Period for Reporting Data: Fiscal Year ending 6/30/2010

Azusa Light and Power		Resource Savings Summary						Cost Summary			
Program Sector (Used in CEC Report)	Category	Units Installed	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers										
HVAC	Res Cooling	212	33	33	34,873	927,131	591	$ 11,955	$ 47,643	$ 6,875	$ 66,473
Appliances	Res Dishwashers	1			155	2,015	1	$ 678		$ 8	$ 686
Consumer Electronics	Res Electronics	3	2	2	5,613	50,517	24	$ 17,852	$ 2,055	$ 145	$ 20,052
HVAC	Res Heating										
Lighting	Res Lighting	3,506	170	19	111,932	990,970	502		$ 7,600	$ 3,455	$ 11,055
Pool Pump	Res Pool Pump										
Refrigeration	Res Refrigeration	97	5	5	26,861	483,494	257	$ 11,279		$ 2,000	$ 13,279
HVAC	Res Shell	46	7	7	8,847	176,912	102	$ 10,914		$ 850	$ 11,764
Water Heating	Res Water Heating										
Comprehensive	Res Comprehensive										
Process	Non-Res Cooking	4	11	11	41,501	498,012	262	$ 21,438		$ 1,860	$ 23,298
HVAC	Non-Res Cooling	11	44	44	107,603	1,296,765	747	$ 55,043	$ 14,510	$ 6,159	$ 75,712
HVAC	Non-Res Heating										
Lighting	Non-Res Lighting	23	174	174	593,192	6,534,954	3,621	$ 75,304	$ 63,614	$ 27,498	$ 166,416
Process	Non-Res Motors	1	224	224	290,000	5,800,000	3,054	$ 6,099		$ 23,873	$ 29,972
Process	Non-Res Pumps										
Refrigeration	Non-Res Refrigeration	2	1	1	6,356	76,272	40	$ 6,688		$ 285	$ 6,973
HVAC	Non-Res Shell	9	24	24	48,587	669,140	386	$ 52,798	$ 39,449	$ 3,251	$ 95,498
Process	Non Res Process	4	158	158	274,569	5,343,550	2,814	$ 40,000		$ 21,881	$ 61,881
Comprehensive	Non Res Comprehensive										
Other	Other	1,702	3	3	548,893	1,646,678	1,000	$ 36,005	$ 3,901	$ 8,444	$ 48,350
SubTotal		5,621	855	704	2,098,981	24,496,411	13,401	$ 346,051	$ 178,772	$ 106,586	$ 631,409
T&D	T&D										
Total		5,621	855	704	2,098,981	24,496,411	13,401	$ 346,051	$ 178,772	$ 106,586	$ 631,409

EE Program Portfolio TRC Test	**1.59**

Excluding T&D

Energy Savings Targets 2011-2020



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
MWH	2,068	1,904	2,071	2,367	2,591	2,736	2,738	2,715	2,692	2,669
% of Load Forecast	0.78%	0.71%	0.77%	0.87%	0.95%	0.99%	0.99%	0.97%	0.95%	0.94%

CITY OF BANNING ELECTRIC UTILITY

- Established in 1922.
- 26 employees.
- Of the 11,848 customers, 90 % are residential.
- Average demand during FY 09/10 was 16.4 MW, down 5.7% from the period prior.
- Peak demand during FY 09/10 was 41.8 MW, down 3.7% from the period prior. Peak demand is primarily due to air conditioning load during the summer.
- Retail energy sales in FY 09/10 were 135,545,265 kWh, down 6.4% from the period prior. Retail sales are broken down as 47 percent residential and 53 percent commercial/industrial.
- The reductions in demand and sales are due to Banning's Energy Efficiency and Conservation efforts, foreclosures, and continued loss of large commercial load.

Overview of Banning Energy Efficiency Programs

During FY 09/10, Banning spent $336,059 in Energy Efficiency programs, which have provided 238 kW demand and 1,890,210 kWh 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 reduced Baseline Rate for qualified customers.

Proposed Banning Energy Efficiency Programs and Services: (2010-11)

- Banning has been approved for a $165,500 grant through the Energy Efficiency and Conservation Block Grant (EECBG) for high efficiency HVAC & Lighting retrofits on its' municipal buildings. The City anticipates the retrofit work to be completed by mid-year 2011.
- Work with community organizations to further increase awareness of and overall participation in existing programs.
- 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.

Banning Investment in Renewables:

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

- The City has contracted for geothermal energy from two generating facilities. Together they supply approximately 20 percent of the City's energy need.
- The City is evaluating participating in a renewable energy project in Arizona with a 2 MW capacity interest. The expected output from the power plant would increase Banning's renewable energy supply from currently 20% renewable to an estimated 26.5% renewable.
- Banning has met its California SB1 requirements by providing $2.4million in rebates for the installation of solar photovoltaic systems in its service territory. The rebates have helped install approximately 0.75MW of customer-owned solar photovoltaic capacity in the city.

Banning Demand Reduction Programs:

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

Banning EM&V:

The City of Banning Electric Utility contracted with Lincus, Inc. to perform an EM&V study on its FY08/09 program results during the previous fiscal year. Banning Electric has not yet implemented the study recommendations and is currently evaluating when it will be able to do so. Currently, 50% of the anticipated public benefit funds will be used for low income assistance. The sustained increase in the number of participants in the program has reduced Banning Electric's capability in implementing or expanding its' energy efficiency programs. Staff is currently engaging City Council for direction on how to overcome budget shortfalls resulting from the increased participation in Banning Electric's low income assistance programs.

CITY OF BANNING ELECTRIC UTILITY

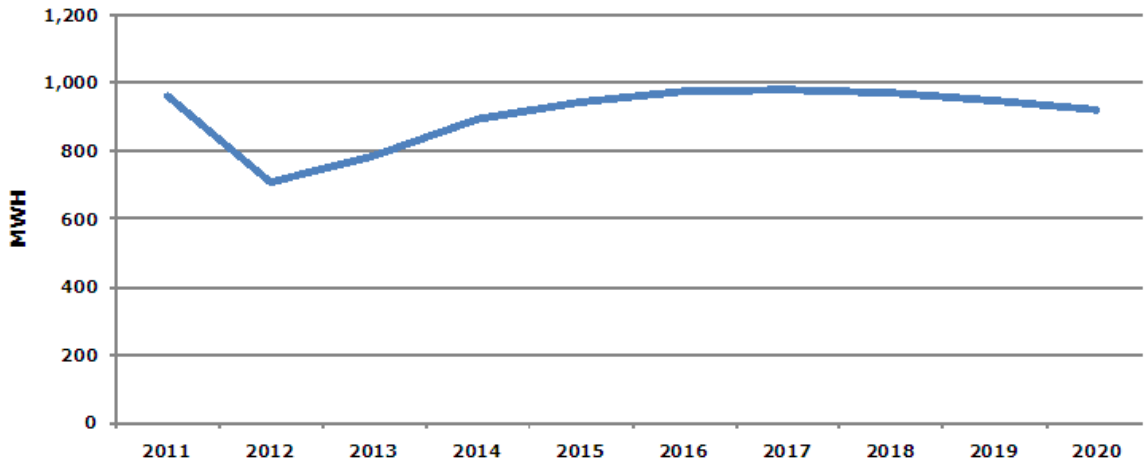
Time Period for Reporting Data: Fiscal Year ending 6/30/2010

Banning Electric Utility		Resource Savings Summary						Cost Summary			
Program Sector (Used in CEC Report)	Category	Units Installed	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	76	1	1	1,946	19,456	11	$ 7,600		$ 229	$ 7,829
HVAC	Res Cooling	378	138	84	103,390	1,923,596	1,229	$ 84,293		$ 36,487	$ 120,780
Appliances	Res Dishwashers	52	1	1	1,706	22,173	12	$ 3,900		$ 237	$ 4,137
Consumer Electronics	Res Electronics										
HVAC	Res Heating										
Lighting	Res Lighting	22,000	722	106	563,200	5,068,800	2,567	$ 37,840		$ 49,229	$ 87,069
Pool Pump	Res Pool Pump										
Refrigeration	Res Refrigeration	142	7	7	43,983	791,698	421	$ 23,729		$ 8,902	$ 32,631
HVAC	Res Shell	163	40	40	81,964	1,639,280	944	$ 23,540		$ 21,060	$ 44,600
Water Heating	Res Water Heating										
Comprehensive	Res Comprehensive										
Process	Non-Res Cooking										
HVAC	Non-Res Cooling										
HVAC	Non-Res Heating										
Lighting	Non-Res Lighting										
Process	Non-Res Motors										
Process	Non-Res Pumps										
Refrigeration	Non-Res Refrigeration										
HVAC	Non-Res Shell										
Process	Non Res Process										
Comprehensive	Non Res Comprehensive										
Other	Other	3,436			1,094,022	3,282,067	1,889			$ 39,013	$ 39,013
SubTotal		26,247	908	238	1,890,210	12,747,070	7,073	$ 180,902		$ 155,157	$ 336,059
T&D	T&D										
Total		26,247	908	238	1,890,210	12,747,070	7,073	$ 180,902		$ 155,157	$ 336,059

EE Program Portfolio TRC Test	**1.69**

Excluding T&D

Energy Savings Targets 2011-2020



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
MWH	962	706	782	894	944	975	979	970	945	918
% of Load Forecast	0.67%	0.49%	0.53%	0.60%	0.62%	0.63%	0.62%	0.60%	0.57%	0.54%

CITY OF BIGGS

- Biggs has 611 residential, 37 commercial, 12 municipal and 3 industrial customers.
- The City of Biggs projects a growth rate of 1% per year.
- Peak demand – in August 2010 was 4.0 MW
- Annual energy use: 17.3 gWh.
- Power content: Geothermal 13%, small hydro 1%, large hydro 44%, Natural Gas 22%, Coal 18% and Nuclear 2%.

CITY OF BIGGS ENERGY EFFICIENCY PROGRAM HISTORY:

- The City of Biggs implemented residential demand-side management programs in 1997 but completely remodeled our programs in mid 2005. In FY 2006-2007, our program was expanded to include commercial audits, educational programs and commercial holiday lighting. In FY 2007/2008 we again expanded our commercial program to include commercial lighting, refrigeration and HVAC rebate programs. In FY 2008/2009, the city implemented the "Keep Your Cool" program for food-service customers.

- Between fiscal year 2001 and fiscal year 2006, the City experienced a growth in Residential Demand-Side Management Program participation of 97% and a growth in Residential DSM rebate expenditures of 96%.

- The recession of the last three years adversely affected our Residential DSM Program, resulting in a drop in participation of 87%. Residential DSM measures represent only 8% of our annual kWh savings for this reporting period. Biggs was nearly able to reach its DSM goals in FY 2010 due to the final retrofit installations of lighting in Biggs Unified School District facilities. This three-year project drew to a close in FY 2010.

- Third-party Evaluation, Measurement and Verification studies performed at the close of fiscal years 2008, 2009 & 2010 confirmed an average of 97% of energy savings reported by the City of Biggs in our annual SB1037 report. Verification of demand savings averaged 96%.

- In August of 2009, Biggs indicated their intent to participate in the Energy Efficiency and Conservation Block Grant Program. A joint Application for Grant Funding was executed by Northern California Power Agency on behalf of Biggs, Ukiah & Healdsburg. The EECBG funding for the LED Streetlight Project will result in program savings that will be realized beginning in the second half of 2011.

In order to meet our demand-side management goals, Biggs is aggressively promoting commercial DSM Programs with the two largest energy consumers in town. A second custom program has been proposed for Biggs Unified School District, designed to concentrate on retrofitting aging HVAC and single-pane windows. A custom lighting retrofit program has also been proposed to SunWest Milling.

Current Demand-side Management Programs and Services

1. ***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.

2. ***Commercial Energy Rebate Program:*** The City of Biggs offers customized demand-side management 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, refrigeration, equipment and controls.

3. ***Residential Energy Rebate Program:*** The City of Biggs manages a comprehensive residential demand-side management incentive program, focusing on peak load reduction and energy savings. Generous rebates are available to residential customers for weatherization measures such as attic/wall insulation, dual pane windows, shade screens, radiant barriers and cool roof products. Biggs offers rebates for measures which reduce summer cooling load such as high efficiency HVAC, whole house fans and attic fans. Biggs also offers rebates for Energy Star refrigerators and lighting controls.

CITY OF BIGGS

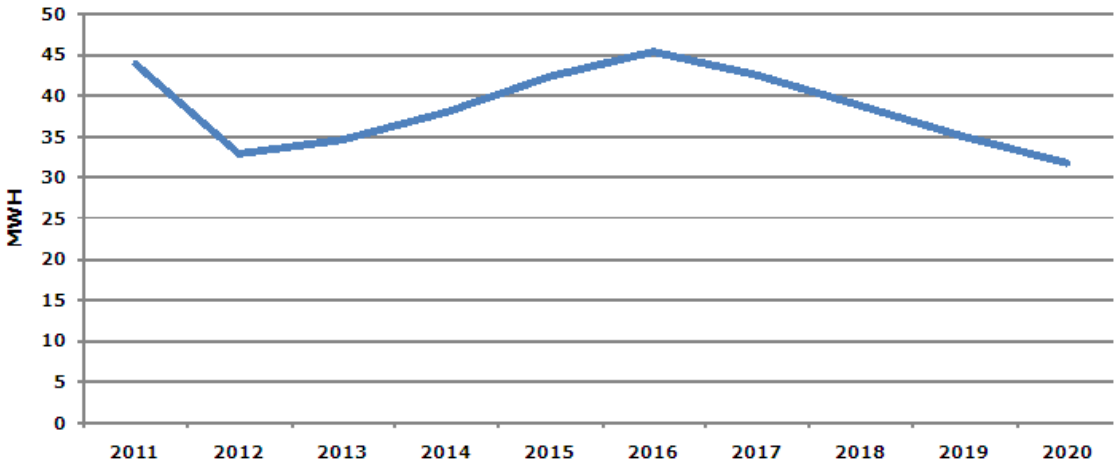
Time Period for Reporting Data: Fiscal Year ending 6/30/2010

Biggs		Resource Savings Summary						Cost Summary			
Program Sector (Used in CEC Report)	Category	Units Installed	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers										
HVAC	Res Cooling	5	1	1	326	7,099	5	$ 785		$ 439	$ 1,224
Appliances	Res Dishwashers										
Consumer Electronics	Res Electronics										
HVAC	Res Heating										
Lighting	Res Lighting										
Pool Pump	Res Pool Pump										
Refrigeration	Res Refrigeration	2			1,710	30,773	17	$ 200		$ 1,149	$ 1,349
HVAC	Res Shell	7	1	1	1,044	20,870	12	$ 1,019		$ 870	$ 1,890
Water Heating	Res Water Heating										
Comprehensive	Res Comprehensive										
Process	Non-Res Cooking										
HVAC	Non-Res Cooling										
HVAC	Non-Res Heating										
Lighting	Non-Res Lighting	227	13		33,798	412,695	222	$ 8,463		$ 14,674	$ 23,137
Process	Non-Res Motors										
Process	Non-Res Pumps										
Refrigeration	Non-Res Refrigeration										
HVAC	Non-Res Shell										
Process	Non Res Process										
Comprehensive	Non Res Comprehensive										
Other	Other										
SubTotal		241	15	2	36,878	471,437	255	$ 10,468		$ 17,132	$ 27,600
T&D	T&D										
Total		241	15	2	36,878	471,437	255	$ 10,468		$ 17,132	$ 27,600

EE Program Portfolio TRC Test	**1.68**

Excluding T&D

Energy Savings Targets 2011-2020



MWH	44	33	35	38	42	45	42	39	35	32
% of Load Forecast	0.25%	0.19%	0.19%	0.21%	0.23%	0.25%	0.23%	0.21%	0.19%	0.17%

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 321.8 megawatts on September 27, 2010
• Annual energy use is approximately 1,200 gigawatt-hours
• Burbank Water and Power employs about 330 employees

BWP's Energy Efficiency Attainment: Our Goals and How We Get There

During Fiscal Year 2009-10, BWP spent $2.5 million in Public Benefits dollars and over $4 million in non-Public Benefits funding for energy efficiency programs and initiatives. These programs resulted in net demand savings of 3,402 kilowatts, estimated peak demand savings of 2,662 kilowatts, net annual energy savings of 11 million kilowatt-hours, and an estimated net lifetime energy savings of 128 million kilowatt-hours.

Internally, our FY09/10 energy-saving goals were to reduce peak demand by 3,000 kilowatts (1%) and electrical usage by 12 million kilowatt-hours (1%). Against these goals, BWP attained 89% for peak demand reduction and 92% of the energy saving goal.

BWP's Fiscal Year 2010-11 Public Benefits budget has $3.9 million earmarked for energy-efficiency initiatives. Existing programs, as well as efficiency programs currently in development, are all well-funded and managed with decision flexibility and management dedication to best allow BWP to achieve our 1% savings goal. This remains the utility's internal target, although the Summit Blue efficiency target setting process derived a 0.77% of sales forecast target for Burbank for 2011-2020. The Summit Blue target may well be more accurate, especially given current economic woes that have hit so many households and businesses. However, BWP continues an aggressive rollout and marketing plan for our programs with every expectation that we will come extremely close, if not hit, the 1% goal.

We do anticipate achieving these energy goals during the current fiscal year with the introduction of the Home Energy Reports Program and broader applications of our most recent offering, the Green Home House Call program. Additionally, BWP will be implementing another demand and energy reduction residential program on a pilot basis with a company called TerraTrim.

These three programs are highlighted below, followed by descriptions of BWP's full program complement.

1. Green Home House Call Program: BWP's Newest and Most Ambitious Program to Date

In November 2009, BWP fully deployed our newest whole house efficiency program, Green Home House Call. This program has several components, all provided at no charge to participants:

6. In-home energy and water education: KEMA has been retained to meet with residents to discuss their energy (both electricity and natural gas) and water usage;
7. Efficiency Installations: Devices that save electricity, water and natural gas are installed for free in the residence, including showerheads, bathroom and kitchen faucet aerators, and compact fluorescent light bulbs.
8. Attic Insulation: Attic insulation levels are reviewed in homes with central air conditioning. When below a specified R-value, the homeowner is offered free insulation as part of the program's service.
9. Duct Testing and Sealing: When crews are dispatched to provide insulation services, a duct testing and sealing team is included, providing these services for free as well.
10. Irrigation System Inspection and Programming: Given the dire state of water supply in California, BWP has included irrigation system inspection and controller programming as part of this on-site program. Controllers will be programmed to comply with the City's landscape watering ordinance (no more than three proscribed days/week) and the irrigation system will be turned on and inspected for any over-spray or other problems.

BWP is heavily advertising this program in direct mail and BWP newsletter publications that go out to the community on a quarterly basis. In just one busy year, we have served 1,600 Burbank households! In addition to written and online advertising, BWP also produced a video segment with the current Mayor of Burbank participating in the efficiency program. This segment has been aired in heavy rotation on the City's popular government cable channel.

Our plans for Green Home House Call continue to grow. First, BWP is in continuing negotiations with the Southern California Gas Company to provide even more extensive services for low-income households in Burbank. Additionally, we are looking into providing air conditioning tune-up services as part of the Green Home House Call program, with the anticipation that we will recommend that this service be added at no cost to participants during the first quarter of 2011.

Green Home House Call is just our newest program. BWP offers a full complement of energy saving programs that are designed to be easy to participate in and provide recognizable benefits to customers.

2. Home Energy Reports: A New Wave of Customer Information

BWP inked the deal with OPower many months ago and has since been stalled on the implementation as we work through customer information programming issues. It's been frustrating, but it appears that the end is in sight and BWP will soon be able to start mailing out Home Energy Reports that will inform residents about how their energy use compares to similar households and offer guidance on how to best manage their usage. The anticipated program start date is April 2011 so only minor savings will be recorded during FY10-11 from this program, with big impacts occurring during FY11-12 and continuing in FY12-13. The Home Energy Reports is a two-year commitment whereby every eligible household in Burbank will receive at least six reports. Other POUs have reported energy reductions of one to three percent for program participants. Given these results, BWP anticipates that this program will be a big contributor toward our goals.

3. TerraTrim Reports: Shifting Residential Demand to Off-Peak Hours and Saving Energy
BWP was fortunate enough to receive a Department of Energy efficiency grant earlier this year. The $500,000 grant will allow BWP to test an intriguing new service with 700 Burbank households with in-ground pools over a two-year period. The TerraTrim program tracks a household's energy use on a real-time circuit basis. Patterns of energy use will be revealed and recommendations related to reducing energy use and moving energy to off-peak hours will be texted or emailed to program participants. This program will run concurrently with the OPower Home Energy Reports program to test each program's ability to impact total and time-based energy usage.

Current Customer Programs:

We're proud of the programs that we have developed over the past years and are pleased to share an update of BWP's existing efficiency programs.

Energy Solutions Business Rebates: BWP offers generous rebates to Burbank businesses who replace inefficient energy-using equipment with highly efficient equipment. All Energy Solutions rebates are tied to the energy savings of the customer's retrofit projects. Annually, about 50 Burbank businesses take advantage of this program.

Refrigerator Round- Up and Low-Income Refrigerator Exchange Programs: BWP introduced two refrigerator programs in 2007. The Refrigerator Round-Up Program targets second household refrigerators, the ones typically found in garages. While some households actually require a second refrigerator, it often is the case that a second refrigerator is a convenience and not a necessity. That luxury may be costing more than the owner realizes – nearly $300 in yearly energy costs. BWP's proposition to Burbank residents with two refrigerators is straightforward and generous: if your second refrigerator is working and you agree to relinquish it, call us and we'll pick it up, environmentally recycle it, and give you a $100 billing credit. Since 2007, we've recycled over 2,100 old refrigerators though this program. By removing an old and inefficient appliance from the home, Round-Up offers significant energy savings.

The second refrigerator program is the Refrigerator Exchange Program for low-income customers. Older refrigerators use about three times the energy of today's high efficiency models, consuming up to 40% of the home's total energy usage. BWP's Refrigerator Exchange program targets old refrigerators. This program provides a new Energy Star refrigerator in exchange for one that is at least ten years old to income-qualified residents. In addition to providing a new refrigerator, we will remove the old unit and environmentally recycle it. BWP has partnered with the Burbank Temporary Aid Center (BTAC) to help get the word out on this program. BTAC also provides program qualification services. Since 2007, BWP has provided 712 high efficiency refrigerators to income challenged customers.

Business Bucks: The majority of Burbank's 6,000 businesses are smaller organizations whose owners and managers often lack both the time and expertise to better manage their utility usage and costs. Business Bucks was specifically designed for these businesses and has been offered since May 2004. The program provides free audits of the facility's energy and water use, along with up to $2,000 in energy and water saving installations. In the six years since Business Bucks was introduced, BWP has served nearly 1,800 Burbank businesses with free energy audits of their facilities.

Home Rewards Residential Rebate Program: In terms of participation, BWP's most popular energy-saving program is Home Rewards. Home Rewards provides cash rebates to Burbank residents who purchase and install high efficiency appliances and products:

- Refrigerators
- Dishwashers
- Central air conditioners
- Whole house fans
- Solar attic fans
- Attic insulation
- Clothes washers
- Room air conditioners
- Low-E windows and sliding doors
- Pool pumps
- Ceiling fans
- Wall insulation

Rebate eligibility for most of the appliances and products includes an Energy Star designation. While Energy Star-rated products tend to be more costly to purchase, they cost less to operate and therefore save money over their lifetime compared to their less efficient counterparts. Higher rebate incentives are provided for purchases made from Burbank retailers. On an annual basis, BWP provides over 3,000 rebates to Burbank residents.

Air Conditioning Tune-Up Program: It is estimated that air conditioners account for 14% of all energy generated in the United States with most of this energy used during peak hours. One unfortunate fact about air conditioners is how inefficiently they perform – even units with high performance ratings. As much as 95% of air conditioners provide cooling at less than their rated efficiency, even among new equipment. This is due primarily to incorrect refrigerant charge, low evaporative coil airflow, and leaky duct systems. Air conditioners simply cannot operate optimally if they are not charged correctly or if the air delivery system leaks. BWP's Air Conditioning Tune-Up program offers incentives to contractors who become certified program technicians. Every time these certified technicians utilize special software that correctly identifies an air conditioning unit's efficiency, they are rewarded with cash incentives. Our goal is to ensure that air conditioning technicians bring cooling units to the highest operating efficiency possible. This in turn reduces the amount of energy needed by the unit to provide cooling, saving the customer money. This program, introduced in May 2008, has already served approximately 2,500 residents and nearly 300 commercial customers.

Compact Fluorescent Light Bulb (CFL) Distributions: CFLs use just one-fourth the energy used by traditional incandescent light bulbs and last for several years. While higher upfront cost may still be a barrier for many consumers, the lifetime cost of CFLs is much lower than that of incandescent lights due to the ongoing energy-savings. BWP provides CFLs to attendees of our annual Energy Expo event, as well as to those participating in our Refrigerator Round-Up and Refrigerator Exchange programs. BWP is currently reviewing proposals for LED lights with plans to initiate pilot programs with LEDs and provide residents with samples of this newer, more efficient lighting technology.

Made in the Shade: Introduced in 2003, BWP's Made in the Shade program remains very popular with over 6,300 trees delivered through the program since inception. The intent of the program is to provide shading, thereby reducing the need for air conditioning. Through this program, residents can receive up to three shade trees selected by and delivered to them for free, and Burbank businesses can receive up to 20 trees. Interested customers simply call our program arborist and schedule an onsite consultation. During this meeting, the arborist reviews possible building-shading locations on the property, and

together, the arborist and customer select sites and tree species from a list of about 30 trees. Within two weeks, the 15-gallon trees are delivered directly to the residence or business. BWP also provides stakes, ties and arbor guards all at no cost to the participant.

Ice Bears: In 2008, BWP began a demonstration program to install up to 20 Ice Bear units at customer locations around town. Ice Bears are peak-shifting thermal energy storage units that work with air conditioners. The Ice Bear is simply a tank containing water that is frozen during off-peak energy hours and used to provide cooling during peak hours. By employing an Ice Bear, the air conditioning unit's compressor can be turned off for several hours without any loss of cooling to the facility. Each Ice Bear unit shifts about seven kilowatts of on-peak energy use to off-peak hours, and also provides moderate energy savings as well. A total of 17 Ice Bears have been installed, shifting 119 kilowatts of peak energy on a daily basis.

Following this pilot program, BWP is now installing additional Ice Bear units at City facilities and is exploring ways to get two megawatts in peak-shifting from Ice Bear units. A two-year implementation plan is in development whereby hundreds of Ice Bear units will be installed at business customer locations.

Home Energy Analyzer and Water Calculator: In 2003, BWP introduced an on-line energy audit service for Burbank residents called the Home Energy Analyzer. This service is free, easy to use, and provides energy usage information and efficiency recommendations. In 2009, BWP rolled out the online Water Calculator to help residents understand how their household uses water and ways to save this resource. From an energy perspective, saving water has associated energy saving benefits, so both of these online resources are important for energy efficiency. A total of about 200 households annually take advantage of these services.

LivingWise Educational Program: LivingWise is a residential savings and education program for Burbank Unified School District 6th grade students. LivingWise combines classroom learning, a home audit, and minor retrofits completed by students and parents. Annually, about 1,200 students receive a LivingWise kit containing energy-and water-saving devices for their home. With their parents, students track the installation of the various items and submit that information to their science teacher.

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

Energy Saved through Water Conservation Efforts: On the water front, our goal is to reduce total water usage by 2%, or 138 million gallons. With an astounding 408 million gallons of water saved during FY09-10, BWP has nearly tripled our goal! According to the California Energy Commission, moving water accounts for 19% of all energy used in the state of California. In reducing the demand for water, energy is also conserved. In Burbank, energy savings are 0.422 kilowatt-hours for every hundred cubic feet of water (748 gallons) conserved. This results in about 230,000 kilowatt-hours saved flowing from our significant water conservation efforts.

BWP Transmission and Delivery (T&D) Efforts:

BWP has a strong history of planning for ongoing maintenance and upgrade of our electric delivery system and our stellar reliability statistics absolutely reflect this commitment. T&D efforts in FY 09/10 cost approximately $4 million and include these results:

- BWP upgraded approximately 6.5 circuit miles of primary conductors, saving approximately 900 megawatt-hours (MWh) of annual energy and 290 kilowatts (kW) of demand.
- We replaced about 200 old distribution line transformers with newer more efficient models, saving approximately 200 MWh of annual energy and 40 kW of demand.
- Approximately 100 services were upgraded, saving approximately three MWh of annual energy and two kW of demand.
- BWP also converted five MW of load from 4kV to 12kV, saving approximately 115 MWh of annual energy and 37 kW of demand.

BWP is also currently testing LED street lights in two neighborhoods and is installing LED lighting at the Lake Street frontage of our campus as part of the remodel to a more energy and water efficient site.

Target Setting:

On an annual basis, the Burbank City Council receives a written report and staff presentation on our efficiency targets and how effective our programs are in achieving those targets. In April 2010, staff last went to Burbank's Council with this information, including the market potential targets derived by Summit Blue Consulting for the City of Burbank. As described earlier in this write-up, BWP's internal energy and demand reduction goals remain 1%. We are confident that BWP will achieve reductions of at least 8,768 MWh in FY10-11, the 0.73% efficiency target set for Burbank for 2011 by Summit Blue/Navigant.

BWP Evaluation, Measurement and Verification (EM&V) Efforts:

Along with virtually every other publicly owned utility in California, Burbank Water and Power uses the KEMA/E3 Energy Efficiency Reporting Tool to ensure accurate reporting of energy and demand reductions. While measurement and verification elements are built into every program, we did want to gain full third-party evaluation of our programs.

To this end, as well as to meet the requirements of AB 2021, the Southern California Public Power Authority issued a Request for Proposal on behalf of its members, selecting two firms: Lincus, Inc. and Summit Blue Consulting. In 2009, BWP chose Lincus to conduct an independent and unbiased EM&V study on selected BWP energy efficiency programs reported through the E3 Reporting Tool.

For our first EM&V pass, we wanted to get an outside perspective on the programs producing the majority of our savings. Four BWP energy efficiency programs were selected for the 2010 EM&V study. These programs account for 82% of BWP's Fiscal Year 2008-09 reported energy savings from ongoing programs (at this point in time, FY2009-09 data was the final complete year of data available). The evaluated programs are:

- Energy Solutions: Commercial rebate program supporting high-efficiency retrofits
- Home Rewards: Residential rebate program supporting high-efficiency appliances, insulation, and windows

- Refrigerator Round-Up: Incentive program to environmentally dispose of second refrigerators in Burbank homes
- Made in the Shade: Shade tree program for residents to reduce air conditioning requirements

EM&V Findings

Lincus compared BWP's reported energy and demand savings against their verified results to obtain Realization Rates. Rates below 100% indicate over-estimated savings; rates greater than 100% indicate under-estimated savings. Lincus reports BWP Realization Rates of **97.0% for energy savings** (kWh) and **101.5% for demand savings** (kW). BWP is extremely pleased that these findings validate the KEMA/E3 estimates. Lincus also provided several process improvement suggestions that BWP staff has already implemented. The full Lincus EM&V report was shared electronically with CEC staff on July 26, 2010.

Ongoing EM&V Plan

Moving forward, BWP plans to continue third-party EM&V work, focusing on programs that provide the greatest energy-saving opportunity. With a full year's worth of data, the Green Home House Call program is a likely candidate for 2010-11 evaluation. Our plan is to evaluate at least one significant program annually.

Of course, each program will continue to have built-in measurement and evaluation elements. Here are some examples of this approach:

- In our Business Bucks program, an audit and installation program for small to mid-sized businesses, BWP uses the services of Richard Heath and Associates to verify all installed measures.
- BWP administers a business rebate program, Energy Solutions, for companies installing high efficiency energy retrofits. All installations receiving financial support through Energy Solutions are toured and verified by BWP's Key Account Representatives, all of whom are trained in electrical engineering.
- Home Rewards, BWP's residential appliance rebate program, receives over 3,000 applications annually. Each application requires receipts showing products purchased. Products are verified against the Energy Star website to ensure that energy requirements are met. This verification process is conducted in-house.
- BWP runs two refrigerator programs utilizing the services of Appliance Recycling Centers of America (ARCA). In both the Low-Income Refrigerator Exchange and Second Refrigerator Recycling programs, ARCA is in the home verifying information related to the old refrigerators.
- The HVAC Tune-Up program, offered to both residents and businesses, uses Proctor Engineering Group's "CheckMe" software. Incentives are paid to air conditioning contractors only for items verified by Proctor.

ARRA and Other Stimulus Funding:

BWP has been actively seeking grant funding for a wide variety of projects and initiatives. While not all of our grant applications have been successful, our hit rate has been high. Here are some grant-funded projects BWP is working on:

- Energy Efficiency Community Block Grant: Burbank Water and Power was awarded an ARRA Energy Efficiency Community Block Grant of $1.1 million in support of a renewable energy project. The project design specifies a 147-kilowatt solar photovoltaic carport on our campus, bordering a heavily used thoroughfare. The purposes of this project are to demonstrate how architecturally appealing solar installations can be, while producing a significant amount of

renewable energy. This project will additionally be in support of the utility's Platinum LEED application for campus-wide improvements. The solar carport is under construction now with 37% of ARRA funds expended on this project. Expected project completion is by May 2011.

- Smart Grid Grant: BWP was honored to receive a $20 million grant for a city-wide Smart Grid initiative. BWP recognizes that a number of fundamental changes are underway in the industry that will significantly increase the need for utilities to monitor and actively manage demand on their systems. BWP's Smart Grid Program includes deployment of a comprehensive, secure integration of multiple, intelligent Smart Grid infrastructure systems and control processes designed to accelerate the modernization of the local grid and address these challenges. BWP with its compact service territory, high customer density, and favorable climate is the perfect location to develop a full-scale Smart Grid deployment to serve as a model for other utilities to emulate. Its program includes the following primary projects, all of which will be initiated over the next few years:
    - Secure Wi-Fi Mesh Network.
    - Meter Data Management System
    - Advanced Metering Infrastructure for both electric and water
    - Mission-Critical Asset Protection Program
    - Outage Management System
    - Distribution Automation
    - Customer Smart Choice Programs
    - Energy Demand Management System

- Congressionally Directed Smart Grid Grant: In 2010, BWP was awarded a $500,000 smart grid grant from the Department of Energy. As detailed earlier in this write-up, this grant will fund a two-year pilot program with 700 residents with pools. The goal of the program is to compare different communication and delivery methods for energy efficiency and demand shifting against the results of the OPower Home Rewards Program that is concurrently being deployed in Burbank. This program will run through the end of 2012.

- High Concentration Solar Photovoltaic Integration Project: In September 2010, BWP was informed that it had been awarded a CEC grant of $1 million to fund a project showcasing concentrated solar photovoltaics, battery technology, and power inverter advancements.

Summary

Burbank Water and Power remains committed to providing our residential and business customers with safe, reliable and affordable services and making all reasonable efforts to reduce consumption of both electricity and water by significant levels**.**

BURBANK WATER & POWER (BWP)

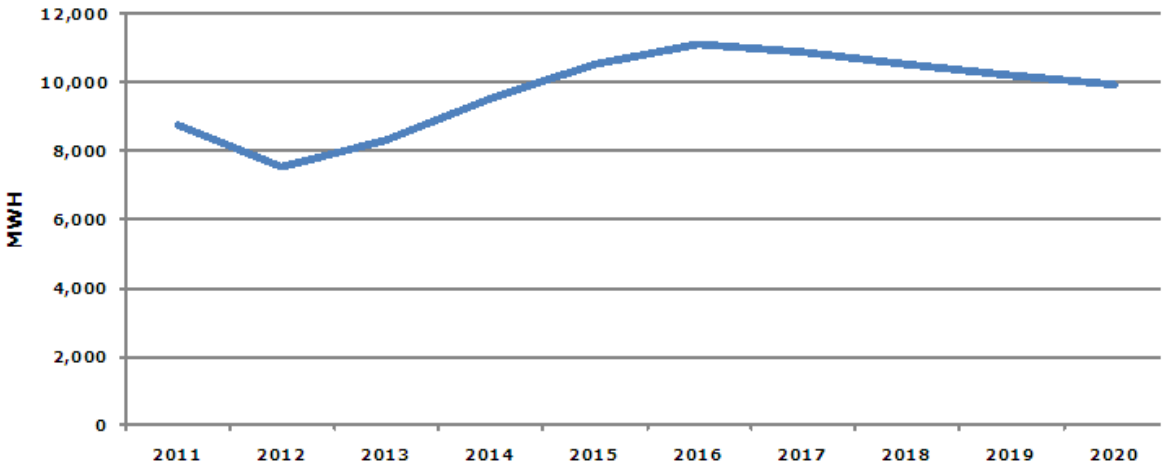
Time Period for Reporting Data: Fiscal Year ending 6/30/2010

Burbank Water & Power		Resource Savings Summary						Cost Summary			
Program Sector (Used in CEC Report)	Category	Units Installed	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers										
HVAC	Res Cooling	597	684	622	688,230	10,868,352	6,914		$ 249,265	$ 61,789	$ 311,054
Appliances	Res Dishwashers										
Consumer Electronics	Res Electronics										
HVAC	Res Heating										
Lighting	Res Lighting	5,012	221	28	156,374	1,407,370	713		$ 25,060	$ 4,117	$ 29,177
Pool Pump	Res Pool Pump										
Refrigeration	Res Refrigeration	609	96	96	760,158	13,682,851	7,277	$ 40,000	$ 157,372	$ 46,823	$ 244,195
HVAC	Res Shell										
Water Heating	Res Water Heating										
Comprehensive	Res Comprehensive	3	524	270	1,647,197	10,289,690	5,815	$ 424,293	$ 473,682	$ 38,906	$ 936,881
Process	Non-Res Cooking										
HVAC	Non-Res Cooling	1	148	148	73,884	1,477,680	851		$ 425,000	$ 6,296	$ 431,296
HVAC	Non-Res Heating										
Lighting	Non-Res Lighting										
Process	Non-Res Motors										
Process	Non-Res Pumps	1			230,189	2,301,890	1,212		$ 849,031	$ 7,055	$ 856,086
Refrigeration	Non-Res Refrigeration										
HVAC	Non-Res Shell										
Process	Non Res Process										
Comprehensive	Non Res Comprehensive	2	1,439	1,207	6,535,312	69,594,541	36,649	$ 573,403	$ 515,643	$ 214,621	$ 1,303,668
Other	Other	161			51,262	153,787	89		$ 18,998	$ 547	$ 19,545
SubTotal		6,386	3,111	2,371	10,142,608	109,776,161	59,520	$ 1,037,696	$ 2,714,051	$ 380,154	$ 4,131,901
T&D	T&D	1	291	291	904,818	18,096,360	9,530		$ 4,000,000		$ 4,000,000
Total		6,387	3,402	2,662	11,047,426	127,872,521	69,050	$ 1,037,696	$ 6,714,051	$ 380,154	$ 8,131,901

EE Program Portfolio TRC Test	**1.41**

Excluding T&D

Energy Savings Targets 2011-2020



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
MWH	8,768	7,549	8,301	9,523	10,553	11,125	10,894	10,524	10,225	9,928
% of Load Forecast	0.73%	0.62%	0.67%	0.77%	0.84%	0.88%	0.85%	0.82%	0.79%	0.76%

COLTON ELECTRIC UTILITY (CEU)

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 18,688 electric meters, with Residential making up 28 percent, Commercial 27 percent, Industrial 42 percent and 3 percent Municipal of total sales
- Peak demand for 2009 was 80 megawatts on September 2 at 3:00 p.m.
- In 2009 Colton Electric Utility sold 356,451 Megawatt-hours
- CEU has 43 employees

CEU Energy Efficiency Program Highlights

From FY 1999 through FY 2009, Colton spent $5,184,575 on Public Benefits Programs. During that time, spending for the major efficiency programs was $3,314,098, demand was reduced by 12,147 kilowatts, annual energy use was reduced by 92,074,228 kilowatt-hours and lifecycle energy use was reduced by 28,262,818 kilowatt-hours. The budget for FY 09/10 was $976,813.79.

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 starting with low and no cost measures, then do the most cost effective reliable measures beginning with lighting upgrades for all customers. As higher levels of efficiency are achieved among customers more funding will be spent on cooling and refrigeration measure to reduce peak loads and solar energy systems will be a more commonly utilized measure.

Current Commercial Customer Programs:

- The major commercial program has been lighting rebates that paid $200 per kilowatt reduced.
- From 1997 to 2005, this program cost $87,730, reducing demand by 428 kilowatts and saving approximately 1,250,000 kilowatt-hours per year.
- In 2004, CEU had a consultant perform audits for 868 businesses to identify needs and opportunities for improving energy efficiency. The audits found that lighting upgrades at these customers had a potential for reducing demand by 2,026 kilowatts and energy usage by 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 by 158 kilowatts and usage by 742,093 kilowatt-hours annually. The program cost $185,212.63.

- Our 2007-2008 free direct install lighting program expanded to cumulatively serve 572 customers and reduced peak demand by 649 kW and usage by 2,212,289 kWh. The program's cost was $505,937 and saved customers an average of $450 dollars annually.
- In FY 2009-2010, the commercial lighting program concentration was to complete the medium and small business free lighting upgrades and to provide rebates to lighting retrofits for large facilities. These large facility retrofits included retrofitting HID and 8 foot inefficient fluorescent lamps to single and multiple fixtures with high output t-5 lamps with as appropriate day lighting and occupancy sensing controls. Together these projects replace more than 10,612 fixtures and lamps at a cost of $400,659. The peak demand savings especially with the day lighting controls was conservatively calculated to be 436 kW and the annual energy savings was 61,650,096. The expected net GHG saving was calculated to be more than 266,747 tons. The benefits of the controls that reduced or turned off lights when adequate daylight was available or when an area was empty was exceptionally cost effective was extremely obvious when viewing the load profiles of the facilities when on sunny days demand suddenly dropped in the late morning and all afternoon.

Current Residential Customer Programs 2009-2010:

- All 16,000 residential customers have been provided with 2 free compact fluorescent lamps.
- One lamp uses 15 watts to provide the light of a 60 watt incandescent lamp. The other is a higher output lamp that provides the light of a 75 Watt lamp and uses less than 20 Watts. The amount spent on this program was $116,944, it reduced peak demand by 179 kilowatts, overall demand was reduced by 1408 kilowatts, and energy usage was reduced by 1,248,000 kilowatt-hours per year. The total lifecycle carbon saving is calculated to be equal to 4,550 tons of CO2.
- The CFL mailing program so far has sent out 112,000 lamps to 16,000 customers reducing demand by 4,126 kW and providing a cumulative saving of 17,977 Megawatt-hours.
- Home energy audits are available to customers with high energy bills.
- Online energy audits and information is available through Apogee Interactive.

Low Income Customer Programs 2009-2010:

- 2299 Low income customers participated in our once a year one month 100% credit on electric charges. This allowed customers who received high bills especially during summer months to not be burdened with a difficult to pay bill.
    - $346,875 was spent with an average benefit of $150 per customer.
- 220 Low income customers were assisted by a refrigerator replacement program that provided a new energy saving refrigerator and recycled the old refrigerator.
    - $39,600 was spent with a 53 kW peak demand reduction and a lifecycle savings of 6,164,928 kWh.

City Facilities to date:

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

Measurement and Verification Activities:

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

Proposed CEU Energy Efficiency Programs: for 20010-20011

Residential:

- Low-income residential refrigerator replacement will spend $320 per customer. Expected $32,000 annual budget 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 assistance will reach more customers, but will be capped at $150 per year to allow more to participate
- 1,000 of the highest energy using residence will have home surveys performed and the results of the study will be used to plan for programs in the following year to provide customers in need with the most cost effective measures to meet their needs.

Commercial:

- Specific measures for cooling and refrigeration will be funded. Some of the planned work is for markets, restaurants, and large office and school buildings. We have found measures as simple as tune-ups and improved controls to evaporatively cooled condensers can be very effective in reducing energy and peak demand loads.

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.
- Other renewable energy expenditures in 2007-2008 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. Many customers have shifted peak energy use to reduce charges and one 5 MW customer will be curtailing 4900 kW between noon and six PM on summer weekdays. Other demand reduction technologies are being investigated such as wireless internet controlled thermostats and energy storage systems.

COLTON ELECTRIC UTILITY (CEU)

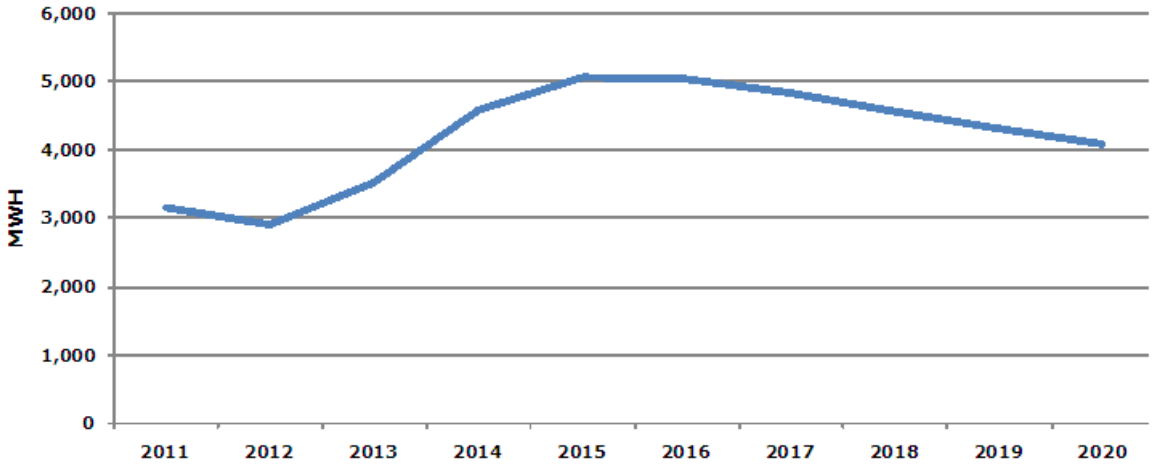
Time Period for Reporting Data: Fiscal Year ending 6/30/2010

Colton		Resource Savings Summary						Cost Summary			
Program Sector (Used in CEC Report)	Category	Units Installed	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers										
HVAC	Res Cooling										
Appliances	Res Dishwashers										
Consumer Electronics	Res Electronics										
HVAC	Res Heating										
Lighting	Res Lighting	32,000	1,408	179	998,400	8,985,600	4,550	$ 116,800			$ 116,800
Pool Pump	Res Pool Pump										
Refrigeration	Res Refrigeration	220	53	53	342,496	6,164,928	3,279	$ 83,228			$ 83,228
HVAC	Res Shell										
Water Heating	Res Water Heating										
Comprehensive	Res Comprehensive										
Process	Non-Res Cooking										
HVAC	Non-Res Cooling										
HVAC	Non-Res Heating										
Lighting	Non-Res Lighting	10,612	436	386	4,932,077	49,985,691	26,647	$ 400,649			$ 400,649
Process	Non-Res Motors										
Process	Non-Res Pumps										
Refrigeration	Non-Res Refrigeration	8,192	829	166	1,306,228	5,224,912	2,751	$ 63,324			$ 63,324
HVAC	Non-Res Shell										
Process	Non Res Process										
Comprehensive	Non Res Comprehensive										
Other	Other										
SubTotal		51,024	2,727	784	7,579,201	70,361,131	37,228	$ 664,002			$ 664,002
T&D	T&D										
Total		51,024	2,727	784	7,579,201	70,361,131	37,228	$ 664,002			$ 664,002

EE Program Portfolio TRC Test	**6.64**

Excluding T&D

Energy Savings Targets 2011-2020



MWH	3,162	2,902	3,508	4,594	5,064	5,043	4,827	4,574	4,317	4,092
% of Load Forecast	0.84%	0.76%	0.91%	1.17%	1.27%	1.25%	1.18%	1.10%	1.03%	0.96%

CORONA DEPARTMENT OF WATER AND POWER (CDWP)

- Electric utility established in 2001
- Consumption of energy: 99% commercial/industrial
- Peak Demand: 28 megawatts (12 megawatts of UDC Bundled Load subsumed within Corona's service territory and 16 megawatts of Direct Access Load)
- Annual energy use: 167 gigawatt-hours
- CDWP's self-defined mission is to "protect public health"

CDWP Energy Efficiency Program Highlights

In FY09/10, Corona spent $7,450 in rebate incentives to increase energy efficiency for the community. The High Efficiency Washer Rebate program reduced load by 4,312 kilowatt-hours per year through the use of Energy Star® appliances. CDWP collaborates with the Metropolitan Water District (MWD) who now administers a regional rebate program effective July 1, 2008 with a projected budget in excess $40,000.

Current Commercial Customer Programs:

- Solar Rebate Program: The maximum commercial rebate amount in 2009 was $62, 250 ($2.49/kW) and the maximum commercial rebate amount in 2010 was $54,750 ($2.19/kW). CDWP did not receive any requests for solar rebates in FY09/10.
- Energy Efficiency Technical Support Effort: CDWP offers technical support to facilitate installation and operation of air conditioning and lighting controls for commercial customers. CDWP performed three energy audits in FY09/10.

Current Residential Customer Programs:

- Solar Rebate Program: The maximum residential rebate amount in 2009 was $7,470 ($2.49/kW) and $6,570 ($2.19/kW) in 2010. CDWP did not receive any requests for solar rebates in FY09/10.
- Residential High Efficiency Washer Rebate Program: Rebates are provided to customers who purchase and install Energy Star® clothes washing machines. CDWP provided 149 rebates in FY09/10.

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: (2010-2011)

- The City of Corona will continue to offer its existing programs at their current funding levels. The City of Corona will also explore ways to expand and improve upon its existing energy efficiency programs.

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)

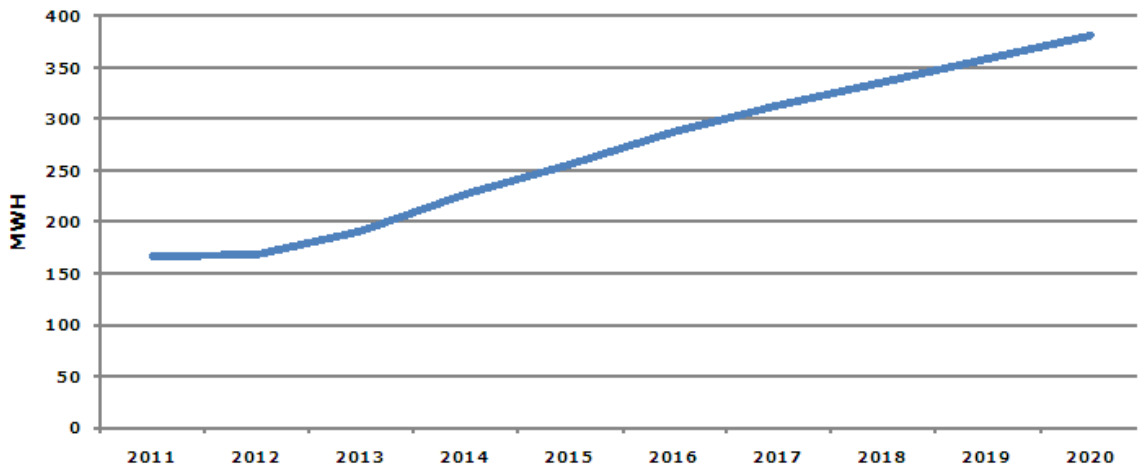
Time Period for Reporting Data: Fiscal Year ending 6/30/2010

Corona Dept. of Water & Power		Resource Savings Summary						Cost Summary			
Program Sector (Used in CEC Report)	Category	Units Installed	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	149	1	1	3,457	34,568	20	$ 7,450		$ 11,344	$ 18,794
HVAC	Res Cooling										
Appliances	Res Dishwashers										
Consumer Electronics	Res Electronics										
HVAC	Res Heating										
Lighting	Res Lighting										
Pool Pump	Res Pool Pump										
Refrigeration	Res Refrigeration										
HVAC	Res Shell										
Water Heating	Res Water Heating										
Comprehensive	Res Comprehensive										
Process	Non-Res Cooking										
HVAC	Non-Res Cooling										
HVAC	Non-Res Heating										
Lighting	Non-Res Lighting										
Process	Non-Res Motors										
Process	Non-Res Pumps										
Refrigeration	Non-Res Refrigeration										
HVAC	Non-Res Shell										
Process	Non Res Process										
Comprehensive	Non Res Comprehensive										
Other	Other										
SubTotal		149	1	1	3,457	34,568	20	$ 7,450		$ 11,344	$ 18,794
T&D	T&D										
Total		149	1	1	3,457	34,568	20	$ 7,450		$ 11,344	$ 18,794

EE Program Portfolio TRC Test	**0.11**

Excluding T&D

Energy Savings Targets 2011-2020



MWH	166	167	190	227	256	288	312	335	358	381
% ofLoad Forecast	0.23%	0.23%	0.26%	0.30%	0.33%	0.37%	0.39%	0.42%	0.44%	0.47%

GLENDALE WATER AND POWER (GWP)

GLENDALE WATER & POWER UTILITY SUMMARY

GWP manages a service territory with 83,000 customer meters and an all time peak load of 343 MW in September 2010. GWP owns 249 MW of onsite, natural gas and landfill gas fired generation. GWP also has a 40 MW share of Magnolia Power Plant, a 20 MW share of Hoover Dam generation, 36 MW of Intermountain Power Project, 10 MW of Palo Verde Nuclear Generating Station, 20 MW of San Juan Unit 3, and approximately 80 MW of other power through power purchase agreements. Approximately 22 percent of GWP retail sales come from renewable resources, including wind, geothermal, local landfill, and hydroelectric. Our official goal set by City Council is 20 percent to 23 percent renewable resources by 2017. This will increase depending on state legislation. 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 and in customer owned photovoltaic generation through its generous incentive program.

Glendale City AMI-SMART GRID Initiative

The CEC supports the adoption of new technologies to support automated load control, demand response, dynamic rates, and other Smart Grid enabled programs to reduced electricity load in the State. The adoption of these technologies is slow due to the high cost of entry and lack of successful implementations to serve as models for others to follow. This is particularly true in municipal utility service territories.

GWP has been selected by the U.S. Department of Energy for a $20 million smart grid grant. GWP was 1 of 33 public power utilities to be selected. The total value of the Glendale City AMI-Smart Grid Initiative is over $70 million. GWP began the project in August 2009. One of the goals of the Glendale City AMI-Smart Grid Initiative is to serve as a model for other municipal utilities to follow in the state and across the nation. It will be completed over the next three years.

Glendale Water and Power (GWP) defines smart grid as an electric system that:

- Will enable active participation by consumers. The Smart Grid will provide the tools necessary to transform our customers into informed, involved, and active consumers. These tools will include access to in home displays, web portals, demand response, electric vehicles, and distributed energy resource options.
- Will accommodate all generation and storage options. The Smart Grid will integrate new sources of electrical generation, electric vehicles, and storage systems using simplified interconnection processes and universal interoperability standards to support a “plug-and-play” level of convenience.
- Will enable new products, services, and markets. The Smart Grid will support a new mature, well-integrated wholesale market as the market grows to meet the needs for our customers.

- Will optimize asset utilization and operate efficiently. The Smart Grid will greatly expand data acquisition and data sharing across business units with an eye toward improving load factors, lowering system losses, preventing energy theft, and dramatically improving outage and asset management, reducing maintenance and capital costs with the goal of keeping downward pressure on consumer prices.
- Will anticipate and respond to system disturbances. The Smart Grid will heal itself by automatically detecting and responding to problems thereby minimizing adverse impacts on customers.
- Will operate resiliently against attack and natural disaster. The Smart Grid will incorporate the latest in cyber security standards to make the system resilient to attack and natural disasters and provide for rapid restoration capabilities.

The Glendale City AMI-Smart Grid Initiative will have the following infrastructure and functionality:

- Smart meters with large data storage capabilities and two-way communications hardware and software:
  - Electric meters with remotely-controllable switches to allow for remote service disconnect and re-connect
  - Water meters with leak detection and tamper alarm functionality.
- A wide area network to allow two-way communications between the utility and each meter in its service territory.
- A communications backbone for distribution automation, direct load control, distributed generation, demand response, and new customer directed programs and service options that allow customers to take control of energy and water costs through access to real or near real time consumption information.
- Meter Data Management System to integrate meter data with the utility's billing, customer information system, outage management, load control systems, and other smart grid systems.
- A premise gateway that communicates to a Home Area Network (HAN) to promote demand response, energy and water conservation, and dynamic pricing options.
- New smart grid enabled energy efficiency, load management, and demand response programs based on innovative critical peak pricing, time of use, and dynamic pricing programs.
- Deployment and integration of distributed resources and generation, including renewable resources.
- Development and incorporation of demand response, demand-side resources, and energy-efficiency resources.
- Deployment of ‘smart’ technologies (real-time, automated, interactive technologies that optimize the physical operation of ‘smart' appliances and consumer devices) for metering, communications concerning grid operations and status, and distribution automation.
- Deployment and integration of advanced electricity storage and peak-shaving technologies, including plug-in electric and hybrid electric vehicles, and thermal-storage air conditioning.

Additionally, the Glendale City AMI-Smart Grid Initiative will provide for:

- Improve reliability, security, and efficiency of the electric grid by increased use of digital information and controls technology.
- Dynamic optimization of grid operations and resources, with full cyber-security.

PROGRESS TOWARD AB 2021 TARGETS

GWP has set a minimum energy efficiency target equal to approximately 1.0 percent of annual retail sales, and reported such to the CEC along with other public owned utilities in the June 2007 CMUA AB 2021 report, and recently updated in the March 2010 report. In 2007, our cumulative energy savings target through June 2010 was 45,229 MWH. As reported in the March 2010 CMUA SB 1037 report to the CEC, GWP achieved 33,860 MWH through June 2009, and our goal for FY 2009-2010 was 11,819 MWH. This year we exceeded that goal with net energy savings of 16,135 MWH bringing our four year cumulative savings total to 49,995 MWH ten percent higher than the target we established in 2007.

DEMAND SIDE MANAGEMENT (DSM) HIGHLIGHTS

TOTAL DSM INVESTMENTS

- $3,692,134 invested in FY 2009-2010.
- Over $31 million invested since January 2000.

TOTAL DEMAND AND ENERGY SAVINGS – FY 2009-2010

- Incremental demand reductions of 6,444 KW.
- Incremental coincident peak demand reductions of 4,637 KW.
- Incremental net energy savings of 16,135 MWH.
- Incremental energy savings as a percent of GWP annual load of reached 1.46%.
- Estimated cumulative demand reductions since January 2000 of over 32,000 KW.
- Estimated cumulative energy savings since January 2000 of over 98,000 MWH.

SUMMARY OF ACTIVE DSM PROGRAMS – FY 2009-2010

- Low-Income Customer DSM Programs
    - Cool Care provides long-term electric bill discounts for low-income customers encouraging the replacement and recycling of old, energy inefficient refrigerators. Program replaced and recycled 4,572 refrigerators with new ENERGY STAR models since July 2003.
    - Smart Home Peak Hogs is our 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 2,379 tons of energy inefficient Peak Hogs in Glendale apartments.

- General Residential DSM Programs
    - Smart Home Refrigerator Recycling targets secondary refrigerators for early retirement by offering free CFLs and a onetime discount off the electric bill. The retired refrigerators are recycled in an environmentally sensitive manner. Since 2006, 193 refrigerators have been recycled and 1,158 energy efficient light bulbs were distributed.
    - 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 tests. Since July 2001, this program has

provided over 12,101 in home audits and energy education sessions, installed over 49,000 CFLs, 4,300 water heater blankets, and conducted 4,100 blower door tests.
    - Smart Home Energy and Water Savings Rebates provides rebates to promote the early retirement of eligible energy and water saving appliances and devices. Over 33,900 rebates have been processed since July 2001.
    - 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 9,400 tons of HVAC have been tuned since February 2000.
    - Livingwise® provides energy and water conservation education materials for Glendale public and private school students. These materials support 10 hours of intensive energy education as well as installation of energy saving devices including compact florescent light bulbs. Over 12,600 students have participated in this program since July 2001.
    - Tree Power provides up to three free shade trees and arborist services to ensure that the trees are planted correctly. When properly sited and cared for, a healthy, mature shade tree helps provide shade that cools the home and helps reduce air conditioning use. This program has planted over 2,290 trees since July 2004.

- Small Business DSM Programs
    - Small Business Peak Hogs is modeled after the GWP's CMUA award winning residential program. It reduces peak demand and customer energy consumption, and provides bill relief for small business customers by providing incentives for small businesses and small business landlords to replace old, inefficient HVAC units. Since July 2006, this program has replaced 2,100 tons of energy inefficient Peak Hogs in Glendale small businesses.
    - Smart Business Energy Saving Upgrades is our CMUA award winning program that provides small business customers with comprehensive no-cost energy surveys, customized written reports, energy education, and directly installs as much as $2,000 worth of cost-effective energy conservation measures. This program has conducted 3,600 energy audits and retrofits since July 2001.
    - Smart Business AC Tune-Ups and Duct Sealing Services, provided by Proctor Engineering, helps small business 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.
    - Vending Miser is our CMUA award winning program installs "EnergyMiser®" intelligent energy controllers that use passive infrared sensors to power-down refrigerated vending machines, glass door coolers or snack machines when the area around the machine is not occupied. If there is no foot traffic in front of the machine for 15 minutes the machine is shut down. If someone walks by the machine, the sensor will sense the movement and send power back to the machine, keeping the product cold while significantly reducing energy use and costs. As a result, the technology produces an average energy savings of 46 percent.

- Large Business DSM Programs
    - Business Energy Solutions (BES) provides incentives to complete pre-approved energy audits and retrofit projects. Incentives are limited to the lesser of 25% total project costs

for retrofit projects, 100 percent of the above Title 24 remodeling and/or new construction investments, or $0.06 per kWh saved over the life of the installed measures. Audit incentives are limited to $0.065 per square foot. This program has supported 219 retrofit projects since January 1999.

- City Building/School Retrofits
    - Working with Glendale Public Works Department, Glendale Unified School District, Private Schools, and GWP, this program implements energy and water savings retrofits in government and school buildings. Since 1999, this program has invested $8.4 million in energy efficiency programs, including replacement of all city traffic signals with LED lighting, lighting retrofits for city and school buildings, and major HVAC retrofits in city and school facilities.

TIME PERIOD FOR PROGRAM PERFORMANCE DATA

- Fiscal Year Ending June 30, 2010

LOAD MANAGEMENT PROGRAMS FOR FY 2010-2011

- GWP plans to enter into an agreement with SCPPA and Ice Energy to develop the specific designs for the SCPPA utilities, and other agreements for the purchase, installation, and maintenance of smart grid enabled Ice Energy thermal storage systems, and the replacement of HVAC units on City Facilities. Ice Energy provides a unique small scale, packaged Thermal Energy Storage product called an Ice Bear. The Ice Bear reduces peak electrical demand by utilizing electric energy to produce ice at night during off-peak hours and then use the ice for cooling during the day. The City has previously installed two Ice Bear units and has found them to work satisfactorily. The project will install 210 Ice Bear units on local small and medium sized business in Glendale as well as on city facilities. As an added benefit, GWP would use PBC funds and to the extent possible, U.S. Department of Energy, Energy Efficiency Conservation Block Grant (EECBG) funds to have Ice Energy replace 401 tons of aging, inefficient City HVAC and 29 furnace units at the same time they are installing the Ice Bear units thereby taking advantage of available preferred pricing and reduced installation costs. Replacing the HVAC units will save the City an estimated $82,000 in annual energy costs and $30,000 in annual maintenance fees for 15 years or more.
- GWP is in the process of implementing two demand response pilot programs through SCPPA and North American Power Partners (NAPP) to test the effectiveness of demand response in emergency and other situations as part of GWP's U.S. Department of Energy (DOE) supported Smart Grid initiative. SCPPA has a contract with NAPP to deliver such services for its members, and GWP included these programs in its application for DOE Smart Grid funding. NAPP was selected by SCPPA through a Request for Proposal (RFP) process to provide demand response services for its members. The two NAPP demand response programs would be offered over the next five years. The first program would be a price responsive customer directed program that would be a non-firm resource and economic-based demand response program that pays participating customers a market-based rate for demand response. The second program would be a reserves program where reserves would be available "on call" firm demand response resource program with relatively short customer notices and relatively short curtailment durations. These resources would be firm, fully dispatchable resources that are controlled by the utility or the customer but are typically automated.

MEASUREMENT AND VERIFICATION

- In 2010, Lincus has completed GWP's EM&V plan and has received GWP's approval to proceed with the detailed study of GWP's selected energy efficiency programs. This independent evaluation entails randomly selecting a sample size of applications within those programs that meet 90%+/- 10% confidence level, verifying the installation of particular units, and measuring/monitoring those units to verify the demand and energy savings calculated by Glendale Water and Power. Measuring/monitoring the units can vary between an hour and a week depending on the measure. Currently, Lincus is in the last stages of the EM&V study. The initial draft study report was sent to GWP on January 10, 2011. The report is composed of both process and impact evaluations of selected GWP energy efficiency programs including verification of installations, numbers of sizes of installations, review of selected energy savings calculations.
- The existing EM&V Plan evaluating GWP's selected energy efficiency programs based on the kWh savings. This Plan describes the programs, not only in what they do, but how much energy and demand is saved, and costs expanded during the 2008/2009 fiscal year. The purpose of this EM&V study is to ensure that measures are installed as claimed by GWP and to lend credibility to GWP's savings reports as compared to the industry standards that were available at the time of GWP's program processing and implementation. In addition to meeting regulatory compliance requirements, EM&V studies are essential for a number of other reasons, namely: 1) to measure the effectiveness of existing programs and 2) to educate the program implementer on ways to improve existing and future programs. In the months to come, with GWP's authorization to proceed, Lincus will develop this EM&V study review it with the GWP's representatives prior to GWP filing the study with the California Energy Commission.

GLENDALE WATER AND POWER (GWP)

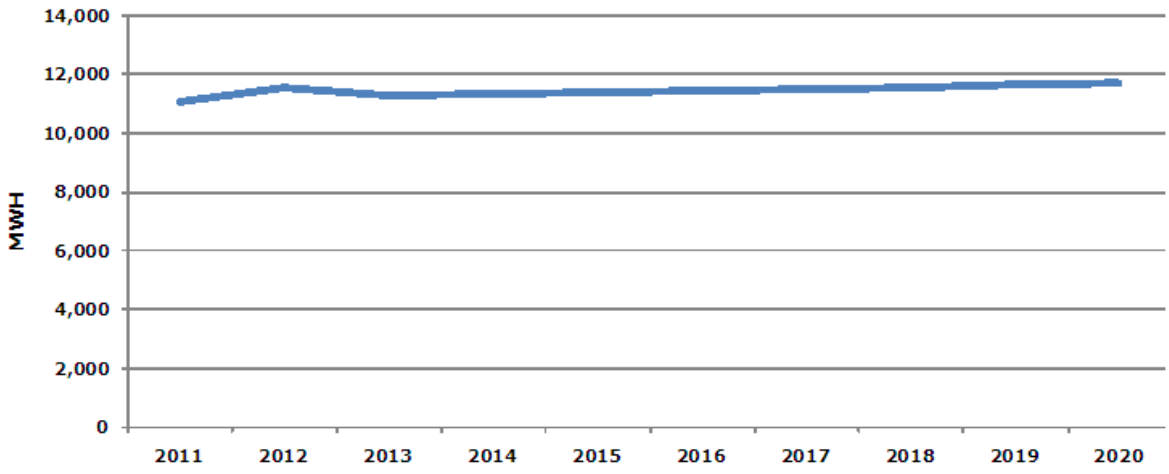
Time Period for Reporting Data: Fiscal Year ending 6/30/2010

Glendale		Resource Savings Summary						Cost Summary			
Program Sector (Used in CEC Report)	Category	Units Installed	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	718	22	22	51,558	515,584	297	$ 25,350		$ 668	$ 26,019
HVAC	Res Cooling	857	197	153	228,901	4,423,144	2,829	$ 103,937	$ 214,768	$ 7,670	$ 326,375
Appliances	Res Dishwashers	394	5	4	16,210	210,725	115	$ 27,651		$ 261	$ 27,912
Consumer Electronics	Res Electronics										
HVAC	Res Heating										
Lighting	Res Lighting	9,428	519	66	367,692	3,309,228	1,676		$ 80,233	$ 3,664	$ 83,897
Pool Pump	Res Pool Pump	22	8	2	11,440	114,400	67	$ 3,127		$ 154	$ 3,281
Refrigeration	Res Refrigeration	2,038	171	171	1,051,161	18,920,902	10,063	$ 547,632	$ 61,544	$ 23,531	$ 632,707
HVAC	Res Shell	1,111	298	298	282,870	3,716,267	2,139	$ 100,152	$ 38,217	$ 5,013	$ 143,381
Water Heating	Res Water Heating	414	8	8	31,464	471,960	272		$ 6,164	$ 631	$ 6,795
Comprehensive	Res Comprehensive										
Process	Non-Res Cooking										
HVAC	Non-Res Cooling	42	4,160	3,120	4,178,721	75,099,521	43,273	$ 519,482	$ 18,888	$ 106,276	$ 644,646
HVAC	Non-Res Heating										
Lighting	Non-Res Lighting	547	900	675	4,751,739	52,794,729	29,340	$ 240,526	$ 730,312	$ 67,090	$ 1,037,928
Process	Non-Res Motors										
Process	Non-Res Pumps										
Refrigeration	Non-Res Refrigeration	675			948,906	17,080,308	8,995		$ 72,475	$ 20,839	$ 93,314
HVAC	Non-Res Shell	539	156	117	90,649	906,494	522	$ 46,850		$ 1,175	$ 48,025
Process	Non Res Process										
Comprehensive	Non Res Comprehensive										
Other	Other	3,329			4,124,664	7,039,992	3,911		$ 608,495	$ 9,359	$ 617,855
SubTotal		20,114	6,444	4,637	16,135,976	184,603,254	103,499	$ 1,614,707	$ 1,831,096	$ 246,331	$ 3,692,134
T&D	T&D										
Total		20,114	6,444	4,637	16,135,976	184,603,254	103,499	$ 1,614,707	$ 1,831,096	$ 246,331	$ 3,692,134

EE Program Portfolio TRC Test	**2.74**

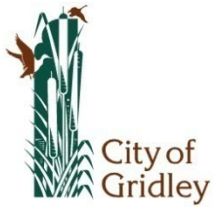
Excluding T&D

Energy Savings Targets 2011-2020



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
MWH	11,060	11,520	11,280	11,320	11,380	11,430	11,490	11,550	11,620	11,680
% of Load Forecast	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%

GRIDLEY MUNICIPAL UTILITY (GMU)



History and Load Data

The City of Gridley's electric utility was established in 1910. Currently in Gridley, the electric utility serves 2,792 customers, 2,300 which are residential (82 percent). The City of Gridley projects a growth rate of 5 percent for the next 5-10 years. Peak demand is 10.6 megawatts is usually experienced on a July or August afternoon. Annual energy use for GMU between July 1, 2009 and June 30, 2010 was 36.0 megawatt-hours

Overview of Gridley Energy Efficiency Programs

Gridley Municipal Utilities (GMU) manages a comprehensive energy efficiency incentive program for residential & commercial customers focusing on peak load reduction and energy conservation. For residential customers, rebates are offered for the installation of various energy efficiency measures. For commercial customers, rebates are available for upgraded lighting, HVAC equipment, and in cases where an analysis is performed rebates can be offered for additional equipment that reduces energy use and/or demand.

Residential Energy Efficiency Programs:

- Energy Efficiency Hotline: A toll free line is available for GMU 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 upon request, the customer is provided a written report summarizing findings and recommendations and/or additional visits to answer questions.
- Appliance Rebates: GMU provides rebates for the purchase of several ENERGY STAR® qualified appliances
- Residential Heat Pump and Efficient Air Conditioning Rebates: GMU offers rebates for residential and small business customers who install high performance heat pumps or air-conditioners that exceed current state requirements.
- Residential Lighting and Ceiling Fan Rebates: GMU offers rebates to homeowners who install compact florescent lamps (CFLs) and/or ceiling fans to replace more energy intensive cooling options (AC).
- Residential Electric Water Heaters: GMU offers customers a rebate toward the installation of a new, energy efficiency electric water heater.
- Weatherization Incentives: GMU provides financial incentives for homeowners who invest in weatherization measures, including insulation, window treatments/replacement and duct sealing.

Commercial and Industrial Energy Efficiency Programs:

- Energy Audits and Rebates: On-site energy audits by GMU energy specialists are available to commercial customers. Energy efficiency measures are recommended based on each audit and follow up visits support implementation of recommended measures. Energy efficiency rebates are available for upgrades identified during these audits.
- Commercial Lighting: A commercial lighting retrofit program is offered to businesses in the city's electric service territory. There is a prevalence of T-12 lighting throughout the city and most high bay lighting uses high intensity discharge fixtures instead of more efficient florescent fixtures. GMU provides technical assistance and financial incentives for the installation of energy efficient lighting upgrades.
- Commercial Refrigeration: A commercial refrigeration retrofit program, Keep Your Cool (KYC), is offered to businesses in the city's electric service territory. The KYC contractor audits the age and condition of existing refrigeration equipment and makes recommendations to improve the energy efficiency of equipment. Efficiency measures installed in the KYC program include programmable EC motors, motor controllers, anti-sweat heater control units, LED case lighting, door gaskets, auto door closers and strip curtains.
- Custom Energy Efficiency Projects: GMU financial incentives for commercial customers are based on site-specific consumption. Incentives are tailored to the individual customer needs based on the audit and the potential energy savings.

Performance Results for FY2010

The City of Gridley's AB2021 Energy Reduction Target for FY2010 was 91,700 kWh. In FY2010, the city exceeded their target by 315%, with a total net energy reduction of 380,860 kWh.

The City of Gridley's AB2021 Demand Reduction Target for FY2010 was 11.2 kW. In FY2010, the city surpassed their target, with a total demand reduction of 103.27 kW.

Two program offers contributed the bulk of kWh savings and demand savings in FY2010: Direct Installation Commercial Lighting and KYC. The Direct Installation Commercial Lighting offer served 25 commercial businesses, yielding a net savings of 196,536 kWh. The KYC program served 6 small commercial businesses, yielding a net savings of 154,686 kWh.

Performance Results for FY2010

The City of Gridley's 3-year AB2021 Energy Reduction Target for FY2008-FY2010 was 275,100 kWh. Energy efficiency program activity during this period resulted in a total net energy reduction of 474,795 kWh, exceeding the cumulative target by 73%.

The City of Gridley's 3-year AB2021 Demand Reduction Target for FY2008-FY2010 was 33.6 kW. Energy efficiency program activity during this period resulted in a total net demand reduction of 133.27 kW.

Revision AB2021 Targets for FY2011 – FY2020

A recent assessment of energy savings potential in the city's electric service territory indicated that appropriate 10-year targets (spanning July, 2010 to June, 2020) for the city's energy efficiency programs would be 979 MWh and 283 kW. The proposed targets were adopted by Gridley City Council with a ramp up over the 10-year period. The annual Energy Reduction Target for FY2011-FY2013 is 75,000 kWh, representing a decrease of 18% compared to the previous annual target.

FY2011 Forecast

The City of Gridley is forecasting that it will meet the revised AB2021 targets by continuing to offer a comprehensive suite of energy efficiency rebates and other program offers, with the commercial sector contributing the vast majority of the energy savings.

The city's energy efficiency rebates were revised for FY2011 based on the Measure Quantification Report issued by KEMA in December 2009. The FY2011 energy efficiency program reflects a comprehensive suite of measures that are cost-effective based on the rebate level offered and the quantified savings in the KEMA report. The city's forecast indicates that the AB2021 target of 75,000 kWh will be met with a funding level of $78,000 for rebates and administration.

Evaluation, Measurement and Verification for 2009/2010

GMU undertook its first EM&V report in early 2010. The report focused on the commercial lighting program operated in Gridley from July 1, 2008 through June 30, 2009 because it produced the largest savings during that year. It can be found on the NCPA website.

As noted above, the vast majority of energy savings for Gridley in 2009/2010 was a result of two efforts; a direct-install lighting program and the Keep Your Cool, direct-install refrigeration program. Consequently, an EM&V study will be done for Gridley for the 2009/2010 period, focused on one or both of these programs. The results of that report will be available on the NCPA website upon completion.

ARRA Activity

In the fall of 2009, the City of Gridley joined in a coordinated proposal that included Biggs, Gridley, Healdsburg and Ukiah to install LED street lighting as a demonstration project to test their efficacy and energy savings. The proposal was coordinated by the Northern California Power Agency (NCPA) and submitted as an Energy Efficiency Conservation Block Grant to the California Energy Commission (CEC) under the federal stimulus - ARRA program. The proposal received CEC approval in the fall of 2010. By early 2011, an RFP for the program will be released and completed installation of the lighting in all four cities is expected by August of 2011.

GRIDLEY MUNICIPAL UTILITY (GMU)

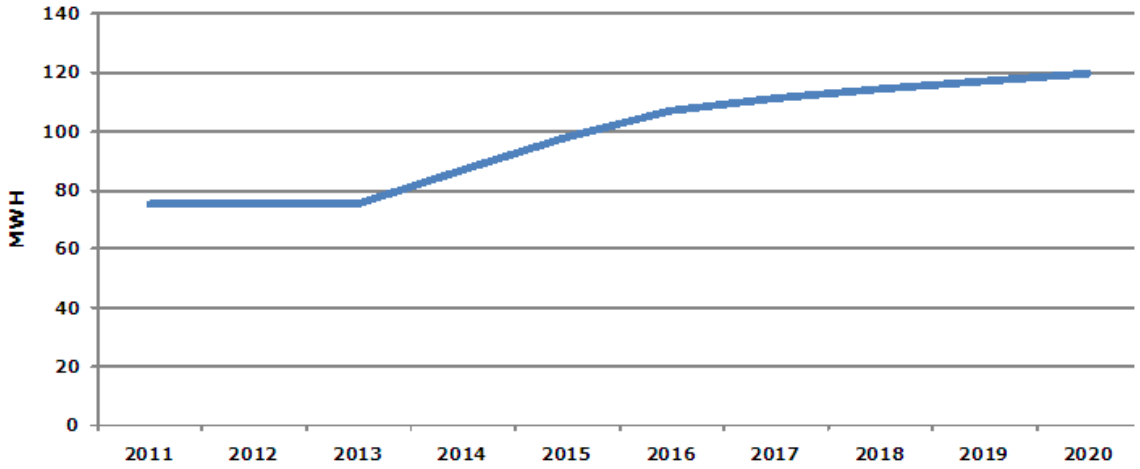
Time Period for Reporting Data: Fiscal Year ending 6/30/2010

Gridley		Resource Savings Summary						Cost Summary			
Program Sector (Used in CEC Report)	Category	Units Installed	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	1			242	2,424	1	$ 75		$ 547	$ 622
HVAC	Res Cooling	16	3		3,699	65,463	41	$ 3,038		$ 3,972	$ 7,009
Appliances	Res Dishwashers	3			198	2,574	1	$ 75		$ 596	$ 671
Consumer Electronics	Res Electronics										
HVAC	Res Heating										
Lighting	Res Lighting	12			352	3,168	2	$ 24		$ 974	$ 998
Pool Pump	Res Pool Pump										
Refrigeration	Res Refrigeration	8			1,280	23,040	12	$ 600		$ 5,286	$ 5,886
HVAC	Res Shell	9	1	1	1,191	23,828	13	$ 2,175		$ 3,413	$ 5,588
Water Heating	Res Water Heating										
Comprehensive	Res Comprehensive										
Process	Non-Res Cooking										
HVAC	Non-Res Cooling										
HVAC	Non-Res Heating										
Lighting	Non-Res Lighting	26	73	73	219,211	2,229,708	1,236	$ 9,398	$ 49,761	$ 52,495	$ 111,654
Process	Non-Res Motors										
Process	Non-Res Pumps										
Refrigeration	Non-Res Refrigeration	8	26	26	154,686	985,886	520		$ 17,762	$ 3,322	$ 21,084
HVAC	Non-Res Shell										
Process	Non Res Process										
Comprehensive	Non Res Comprehensive										
Other	Other										
SubTotal		83	103	100	380,860	3,336,090	1,827	$ 15,385	$ 67,523	$ 70,607	$ 153,515
T&D	T&D										
Total		83	103	100	380,860	3,336,090	1,827	$ 15,385	$ 67,523	$ 70,607	$ 153,515

EE Program Portfolio TRC Test	**2.12**

Excluding T&D

Energy Savings Targets 2011-2020



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
MWH	75	75	75	87	98	107	111	114	117	120
% of Load Forecast	0.20%	0.19%	0.19%	0.21%	0.24%	0.25%	0.26%	0.26%	0.27%	0.27%

CITY OF HEALDSBURG

Demographics and Load Data

The City of Healdsburg's Electric Department provides electric service to population of just over 11,000 people through 5,563 individual electric services. The electric services are predominantly residential (4,565 meters) with the remaining portion ranging from small commercial through large industrial facilities. While the city does continue to experience small increases in commercial development, the forecasted growth rate for electric consumption continues to center around 1 percent per year. The 2009-2010 fiscal year energy use was 78,269 megawatt-hours. The City's historical peak coincidental demand was 21.1 megawatts in July 2006. In 2009, the City's power content is as follows: Geothermal 40 percent, small hydro 7 percent, large hydro 5 percent, and undefined market purchase totaling 47 percent.

City of Healdsburg Energy Efficiency Program Overview

Healdsburg's Electric Department manages a comprehensive energy efficiency program for residential and commercial customers focusing on peak load reduction as well as energy conservation. For residential customers, rebates incentivize the installation of a variety of energy efficiency measures. For commercial customers, rebates are available for upgrading lighting, HVAC equipment, and custom programs where detailed analysis shows a benefit to cost ratio consistent with the Electric Department's existing programs.

Coordination with the City of Healdsburg's Green City Committee will continue in facilitation of a greater community focus on energy-efficiency. The Green City Committee's goal is to: "Provide leadership to implement community actions that promote environmentally-sound practices and expand public outreach to promote conservation and sustainability."

Residential Programs:

- Energy Efficiency Hotline: A toll free line is available for the city's electrical customers to answer questions and provide information on energy efficiency related matters.
- Energy Audits: On-site energy audits by energy specialists are available to residential customers. Energy efficiency measures are recommended based on each audit and upon request, the customer is provided a written report summarizing findings and recommendations and/or additional visits to answer questions.
- Appliance Rebates: The city provides rebates for the purchase of several ENERGY STAR® rated appliances.

- Residential Heat Pump and Efficient Air Conditioning Rebates: The city offers rebates for residential and small business customers who install high performance heat pumps or air-conditioners that exceed current state requirements.
- Residential Lighting Rebates: The city offers rebates to homeowners who install compact fluorescent lamps (CFLs) and ENERGY STAR rated fixtures.
- Residential Electric Water Heater: The city offers customers a rebate toward the installation of new, energy efficient electric water heaters.
- Weatherization/Window Incentives: The city provides financial incentives for homeowners who invest in home weatherization and window replacement projects.

Commercial and Industrial Programs:

- Energy Audits and Rebates: This program offers complementary, on-site energy audits for both commercial and industrial customers. Energy efficiency recommendations and follow up visits support implementation of recommended energy efficiency measures. Energy Efficiency Rebates are available for upgrades identified through these audits.
- Commercial Lighting: This program engages local lighting and electrical contractors to promote and install energy efficient lighting upgrades through technical assistance and financial incentives available from Healdsburg's Electric Department.
- Commercial Refrigeration: Castrovilla, the Keep Your Cool (KYC) contractor, looks at the age and condition of existing walk-in and reach-in coolers and freezers, door gaskets, strip curtains and door closers. After evaluating the existing equipment, Castrovilla makes recommendations to improve the energy efficiency of these commercial refrigeration units. Efficiency measures installed in the KYC program include programmable EC motors, motor controllers, anti-sweat heater control units, LED case lighting, door gaskets, auto door closers, and strip curtains.
- Custom Energy Efficiency Programs: The Healdsburg Electric Department will consider custom energy efficiency programs for site-specific consumption. The Electric Department will require that the city's contractor review and endorse all custom programs. This review may result in a small cost adder to the proposed project but validates the benefit to cost ratio of the program. The Healdsburg Electric Department retains the sole right to approve or deny custom projects.

Additional Programs:

- Time Based and Seasonal Rates: The City of Healdsburg has implemented Time Based (Time of Use) and seasonal rates for both residential and commercial customers. The time based and seasonal rates offer customers a better understanding of market pricing and the need to conserve when the electric system is approaching peak capacity. Time based and seasonal rates reward customers that shift their electrical loads to off-peak or partial-peak periods.
- 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.

Performance Results for FY2010

The City of Healdsburg's AB2021 Energy Savings Target for FY2010 was 198,400 kWh. In FY2010, the city exceeded their annual target by 154%, with a total net energy reduction of 504,025 kWh.

The City of Healdsburg's AB2021 Demand Reduction Target for FY2010 was 22 kW. In FY2010, the city surpassed their annual target, with a total demand reduction of 98 kW.

Due to the success and popularity of the Keep Your Cool pilot, Healdsburg participated in the second phase of the Keep Your Cool (KYC) program. The KYC program initiated in 2009 as a pilot for utilities in Northern California, many of which participated. The pilot offered commercial customers, typically small to mid-sized businesses, with free upgrades to their refrigeration equipment, including door gaskets, strip curtains, and auto door closers. The KYC pilot was a very popular offer that resulted in highly cost-effective results for the utilities who participated. The second phase of KYC included additional measures, such as programmable EC motors and controllers, ASH controllers and LED case lighting, and was implemented in June 2010. KYC activity yielded net annual savings of 276,325 kWh and 22 kW in FY2010.

Performance Results for FY2008-FY2010

The City of Healdsburg's 3-year AB2021 Energy Savings Target for FY2008-FY2010 was 595,200 kWh. Energy efficiency program activity during this period resulted in a total net energy reduction of 1,100,892 kWh, exceeding the cumulative target by 85%.

The City of Healdsburg's 3-year AB2021 Demand Reduction Target for FY2008-FY2010 was 66 kW. Energy efficiency program activity during this period resulted in a total net demand reduction of 289 kW.

Revision to Annual Energy Savings Targets for FY2011-FY2020

A recent assessment of energy savings potential in the city's electric service territory indicated that an appropriate 10-year target (spanning July, 2010 to June 2020) for the city's energy-efficiency programs would be 5,396 MWh. In April of 2010, the City of Healdsburg City Council adopted the proposed AB2021 targets with a ramp up over the 10-year period. The annual target for FY2011 – FY2012 is 420,000 kWh, representing an increase of 112% compared to the previous three-year targets.

FY2011 Forecast

The City of Healdsburg is forecasting that it will meet their revised AB2021 targets by continuing to offer a comprehensive suite of energy efficiency rebates and other program offers to their customers, with commercial lighting, the KYC program, and commercial custom projects for the city contributing the vast majority of the energy savings.

The city's energy efficiency rebates were revised for FY2011 based on the Measure Quantification Report issued by KEMA in December 2009. The FY2011 energy efficiency program reflects a comprehensive suite of measures that are cost-effective based on the rebate level offered and the quantified savings in the KEMA report. The city's forecast indicates that the AB2021 target of 420,000 kWh will be met with a funding level of $125,000 for rebates and $47,000 for administration. The city has also set aside $106,000 for custom project rebates to upgrade pumps at the city's water district facilities (with $15,000 for administration costs). These custom projects will begin in FY2011 and should be completed in FY2012. The pumps installed in FY2011 will yield additional savings and help city's targets; however, the cost and savings associated with FY2011 installations is unknown at this time.

ARRA Activity

In the fall of 2009, the City of Healdsburg joined in a coordinated proposal that included Biggs, Gridley, Healdsburg and Ukiah to install LED street lighting as a demonstration project to test their efficacy and energy savings. The proposal was coordinated by the Northern California Power Agency (NCPA) and submitted as an Energy Efficiency Conservation Block Grant to the California Energy Commission (CEC) under the federal stimulus - ARRA program. The proposal received CEC approval in the fall of 2010. By early 2011, an RFP for the program will be released and completed installation of the lighting in all four cities is expected by August of 2011.

CITY OF HEALDSBURG

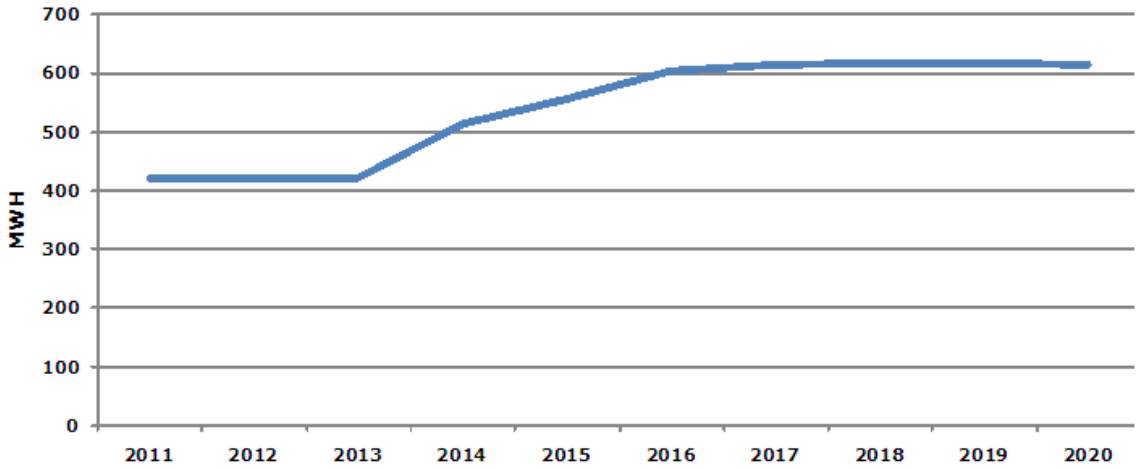
Time Period for Reporting Data: Fiscal year ending 6/30/2010

Healdsburg		Resource Savings Summary						Cost Summary			
Program Sector (Used in CEC Report)	Category	Units Installed	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	16	2	2	3,878	38,784	21	$ 1,600		$ 6,039	$ 7,639
HVAC	Res Cooling	39	10	2	3,461	61,203	38	$ 4,481		$ 4,662	$ 9,143
Appliances	Res Dishwashers	6			396	5,148	3	$ 300		$ 822	$ 1,122
Consumer Electronics	Res Electronics										
HVAC	Res Heating										
Lighting	Res Lighting	33	1		845	7,603	4	$ 83		$ 964	$ 1,046
Pool Pump	Res Pool Pump										
Refrigeration	Res Refrigeration	24	1	1	4,167	75,002	41	$ 1,800		$ 11,928	$ 13,728
HVAC	Res Shell	5	1	1	836	16,721	9	$ 1,239		$ 2,586	$ 3,825
Water Heating	Res Water Heating										
Comprehensive	Res Comprehensive										
Process	Non-Res Cooking										
HVAC	Non-Res Cooling										
HVAC	Non-Res Heating										
Lighting	Non-Res Lighting	13	62	62	214,117	2,270,898	1,258	$ 60,283		$ 8,995	$ 69,278
Process	Non-Res Motors										
Process	Non-Res Pumps										
Refrigeration	Non-Res Refrigeration	13	22	22	276,325	1,578,527	832		$ 37,512	$ 7,151	$ 44,662
HVAC	Non-Res Shell										
Process	Non Res Process										
Comprehensive	Non Res Comprehensive										
Other	Other										
SubTotal		149	98	90	504,025	4,053,886	2,208	$ 69,785	$ 37,512	$ 43,147	$ 150,444
T&D	T&D										
Total		149	98	90	504,025	4,053,886	2,208	$ 69,785	$ 37,512	$ 43,147	$ 150,444

EE Program Portfolio TRC Test	1.80

Excluding T&D

Energy Savings Targets 2011-2020



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
MWH	420	420	420	515	557	603	614	617	617	614
% of Load Forecast	0.51%	0.45%	0.40%	0.49%	0.52%	0.56%	0.57%	0.57%	0.57%	0.56%

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. Hercules Municipal Utility serves in a territory where all buildings are less than 10 years old. The utility has added more rebates in response to customer inquiries. Most customers inquire and request appliance rebates, lighting rebates and solar rebates. There has been no demand for other programs to date.

Hercules Municipal Utility encourages residential customers to increase the efficiency of their homes by offering incentives for the following energy efficiency measures:

- High Performance Windows
- Increased Insulation
- Sunscreens
- EnergyStar® Refrigerators, Clothes Washers and Dishwashers

Hercules Municipal also offers residential customers free compact fluorescent lights.

For business customers HMU offers rebates for:

INTERIOR FIXTURES REPLACEMENTS

- Linear to T8 or T5 or High Output (HO) T5 fixtures
- T8 or T5 To electronic ballast
- Compact fluorescent fixtures
- Interior pulse start metal halide fixtures
- Occupancy sensors
- De-lamping

EXTERIOR FIXTURES

- Pulse-start metal halide fixtures

OTHER CONSERVATION

- The goal of the HMU is to encourage energy conservation. In order to further energy conservation, the HMU will provide a rebate of 12 cents per kWh for energy savings in the first year up to a maximum of 30 percent of installed cost for retrofits of existing facilities with energy saving devices not covered under specific programs.

Hercules Municipal Utility also provides solar rebates to both residential and business customers.

CITY OF HERCULES MUNICIPAL UTILITY (HMU)

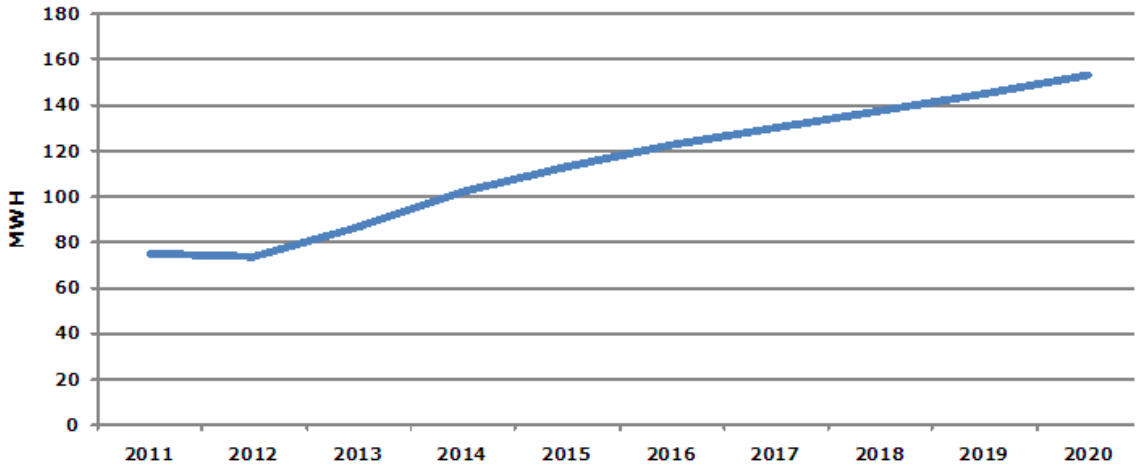
Time Period for Reporting Data: Fiscal Year ending 6/30/2010

Hercules		Resource Savings Summary						Cost Summary			
Program Sector (Used in CEC Report)	Category	Units Installed	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	6	1	1	1,373	13,728	8	$ 450			$ 450
HVAC	Res Cooling										
Appliances	Res Dishwashers										
Consumer Electronics	Res Electronics										
HVAC	Res Heating										
Lighting	Res Lighting										
Pool Pump	Res Pool Pump										
Refrigeration	Res Refrigeration	2			139	2,506	1	$ 200			$ 200
HVAC	Res Shell										
Water Heating	Res Water Heating										
Comprehensive	Res Comprehensive										
Process	Non-Res Cooking										
HVAC	Non-Res Cooling										
HVAC	Non-Res Heating										
Lighting	Non-Res Lighting										
Process	Non-Res Motors										
Process	Non-Res Pumps										
Refrigeration	Non-Res Refrigeration										
HVAC	Non-Res Shell										
Process	Non Res Process										
Comprehensive	Non Res Comprehensive										
Other	Other										
SubTotal		8	1	1	1,512	16,234	9	$ 650			$ 650
T&D	T&D										
Total		8	1	1	1,512	16,234	9	$ 650			$ 650

EE Program Portfolio TRC Test	**1.32**

Excluding T&D

Energy Savings Targets 2011-2020



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
MWH	75	74	86	102	113	122	130	137	145	153
% of Load Forecast	0.48%	0.44%	0.49%	0.54%	0.55%	0.56%	0.55%	0.54%	0.53%	0.52%

Overview

- The City of Industry established a municipal utility, Industry Public Utility Commission (IPUC), in 2001. IPUC began delivering electricity to retail customers in May 2002 and currently serves commercial and industrial customers through its electric distribution system;
- IPUC developed and installed a 2 MW combined heat and power project in 2002 that supplies a large hotel with electricity and hot water;
- IPUC has supplied electric power to its retail distribution customers at rates that on average have been 25% lower than Southern California Edison's (SCE)
- Mission: IPUC strives to provide reliable and cost effective electric power to help the competitiveness of local businesses.

City of Industry Program Highlights

- Pacific Palms Combined Heat and Power Project: The Project currently provides IPUC with 2 MW of local area capacity resources and supplies heat and power to the Pacific Palms resort. The Project uses both landfill and pipeline gas and continues to explore maximizing landfill gas from the nearby landfill to reduce methane emissions.

Proposed Renewable Projects and Services:

- IPUC has a photovoltaic power generation program, which facilitates their projects in the LA Basin.
- IPUC has investigated a pumped storage electric project located in the LA basin.

Demand Reduction Programs:

- IPUC does not currently have any demand reduction management programs in place.

ISLAND ENERGY

- Doing business as Island Energy, the Pittsburg Power Company owns, operates and manages the electrical and gas distribution systems located at Mare Island in the City of Vallejo, California.
- Island Energy supplies electric and gas to residential, commercial and industrial customers within its service territory.
- Island Energy serves 85 commercial and 261 residential customers with 447 electric and 328 gas meters.
- Customers on Mare Island are served through our looped 12-kilovolt underground facilities with a peak demand of 4.5 megawatts.
- Commercial and industrial electric loads consist of approximately 92 percent of the total electrical load and approximately 70 percent of the gas load.
- Island Energy procures electricity through Western Area Power Administration. Hydroelectricity accounts for more than 35 percent of Island Energy's retail electric sales.
- Island Energy's Public Benefits Fund sponsors all Energy Efficiency Programs, Low Income Assistance Program, Medical Support Baseline Program and Solar Incentive Program on Mare Island.

Island Energy Efficiency Program Highlights

Electrical Substation Upgrade: Island Energy has committed $3,000,000 to upgrade its main electrical substation and backbone distribution system to improve system efficiency and to accommodate future developments. The project consists of three phases. The first phase involved replacing a 60-year-old transformer with a newer, more efficient and reliable transformer and installation of a new SF6 circuit to replace an old oil circuit breaker. The first phase was completed in February 2010. Island Energy has begun the second phase of this project in May 2010 and finished installing the second 120 kV SF6 Circuit breaker at the main substation. This multiple-phased project will continue through the years 2011 and 2012.

Mare Island Lighting: Island Energy has worked closely with the City of Vallejo to promote the installation of energy efficient lighting throughout Mare Island. The plan has been implemented through all residential area. Island Energy is also working with City of Vallejo to retrofit street lights with LED light bulbs on the Mare Island causeway bridge.

Commercial Energy Efficiency Programs: Island Energy's Commercial Energy Efficiency Programs are designed to provide rebates for designated energy conservation measures to commercial customers. Based on studies of existing businesses and load profile on the island, several energy efficiency programs

were developed to improve the energy efficiency of existing customer equipment and to maximize energy savings on Mare Island.

- **Energy Efficiency Advisory Services:** Island Energy will team up with energy solution companies to provide free feasibility analysis of energy conservation measures upon a commercial customer's request. Customers who wish to pursue recommended measures will commission an energy solution company to produce an investment grade energy audit at the customer's expense. Island Energy offers rebates to cover up to 30% of the cost of producing the audit report.
- **Commercial Lighting Fixture:** Island Energy offers rebates up to $10,000 for installation of energy efficient lighting fixtures and lamps in existing commercial used buildings. Qualified fixtures include interior linear fluorescent fixtures, compact fluorescent fixtures, interior & exterior pulse-start metal halide fixtures and interior induction fixtures. Island Energy also offers rebate for installation of linear fluorescent lamps with electronic ballasts and de-laming of un-efficient lamps/ballast and removal of unused lamp holders from existing fixtures.
- **Motors & Process Improvement:** Island Energy offers rebates up to $15,000 for installation of new, NEMA premium efficiency motors ranging in size of 5 to 200 hp. Commercial customers can either replace their old motors with a new motor or add a new motor to their facilities. The rebate for this program is $0.07/kWh of the first year's energy savings based on the investment grade energy audit.
- **Compressed Air System:** Island Energy offers rebates up to $35,000 for installation of a new compress air system or redesigning and retrofitting an existing system. So far, this program is the most successful and effective energy conservation program implemented on Mare Island. It has demonstrated significant energy savings in the industrial/commercial sector. The rebate for this program is $0.07/kWh of the first year's energy savings based on the investment grade energy audit.
    - The rebate amount was calculated based on anticipated annual energy savings from May 2009 to May 2010. The rebate, administrative cost associated with this program and energy savings that were realized in 2009 were reported in last year's SB 1037 Energy Efficiency Report of Year 2009. However, the energy savings realized in 2010 are reported in this year's SB1037 EE Report with no incentive/overhead costs to associate with the energy savings , which contributed to a unusually high TRC.
- **Solar Incentive Program:** Island Energy provides rebates of $2.12 per installed watt towards the purchase and installation of new solar energy systems by commercial customers. A solar carport project is being constructed at the parking lot of the Veteran Hospital on Mare Island. A 7.2 kW roof-top solar project for a non-profit organization is also in discussion. The Solar Incentive Program is also available to residents for installation of solar panels on their roofs.

Residential Energy Efficiency Programs: Residential energy efficiency programs have been a continuous effort by Island Energy. The programs are funded by the Public Benefits Fund which is incorporated into monthly bills based on energy usage.

- **Energy Education:** Island Energy educates its customers on energy saving tips, sources of energy and new technologies for renewable energy through its website and newsletters. Energy-related magazines are available at Island Energy's office.
- **Home Energy Audit Service:** On-site free Energy Advisory service is available upon resident's request. Trained electrical and gas technicians can provide help by pointing out what areas are not energy efficient in residential homes and offer specific strategies to help residents to reduce their energy bills.
- **Residential Retail Lighting:** Year 2010 was the fourth year in which Island Energy provided free energy efficient light bulbs to its residential customers. Island Energy is committed to providing up to five CFL light bulbs per year to each home on the island. Coupons for the CFL light bulbs can be redeemed in a local lumber yard store (this program also has the benefit of attracting additional foot traffic to a local business). Coupons for two extra light bulbs will be given to residential customers if they register themselves with Island Energy's website to learn more about Island Energy's energy efficiency program.
- **Appliance Efficiency Program:** Island Energy offers residential customers rebates for installation of Energy Star-rated appliances, including dishwashers, clothes washers, refrigerators and air conditioners. This has been the most popular program in the residential sector its inception in 2008.

Proposed Energy Efficiency Programs and Services (2011-2012):

- **Customer-Directed Program:** Provide funding to allow commercial and industrial electric customers to plan and develop their own energy efficiency programs in any of the public interest categories.
- **Solar Summer Camp Project:** Island Energy is seeking to host a 3-week summer camp to provide an opportunity for high school students to learn to build a portable solar PV trailer. The portable trailer will have a 1kW array that can produce 12 kWh worth of battery storage for cloudy days. The trailer will be available for rent for special events and programs in the community to encourage clean power solution.

Island Energy Demand Reduction Programs:

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

ISLAND ENERGY

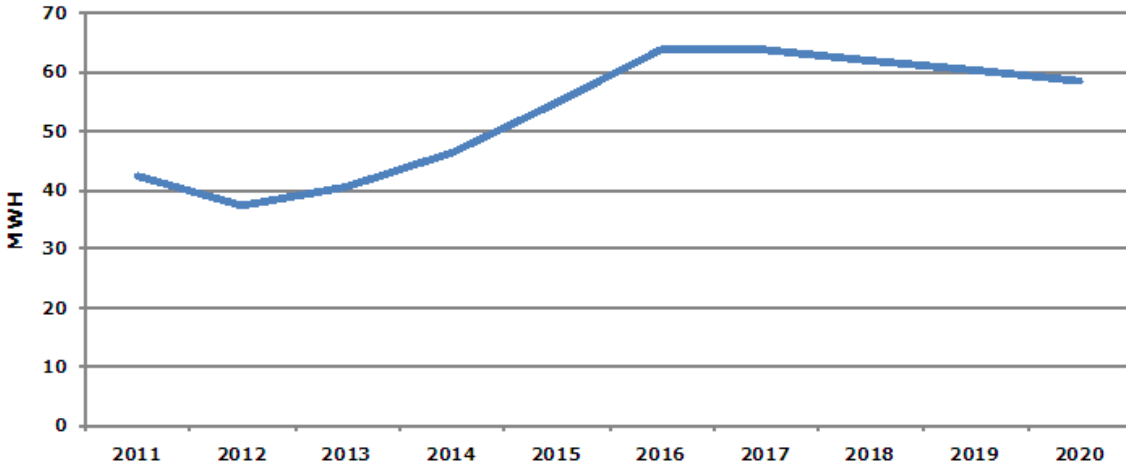
Time Period for Reporting Data: Calendar Year ending 12/31/2010

Island Energy		Resource Savings Summary						Cost Summary			
Program Sector (Used in CEC Report)	Category	Units Installed	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	4			194	2,326	1	$ 300		$ 834	$ 1,134
HVAC	Res Cooling										
Appliances	Res Dishwashers	2			48	528		$ 100		$ 270	$ 370
Consumer Electronics	Res Electronics										
HVAC	Res Heating										
Lighting	Res Lighting	11			202	1,012	1	$ 33		$ 167	$ 200
Pool Pump	Res Pool Pump										
Refrigeration	Res Refrigeration	3			290	4,066	2	$ 150		$ 1,119	$ 1,269
HVAC	Res Shell										
Water Heating	Res Water Heating										
Comprehensive	Res Comprehensive										
Process	Non-Res Cooking										
HVAC	Non-Res Cooling										
HVAC	Non-Res Heating										
Lighting	Non-Res Lighting										
Process	Non-Res Motors										
Process	Non-Res Pumps										
Refrigeration	Non-Res Refrigeration										
HVAC	Non-Res Shell										
Process	Non Res Process										
Comprehensive	Non Res Comprehensive										
Other	Other	1	89	89	99,744	1,895,136	1,008			$ 441	$ 441
SubTotal		21	90	90	100,479	1,903,067	1,012	$ 583		$ 2,832	$ 3,415
T&D	T&D										
Total		21	90	90	100,479	1,903,067	1,012	$ 583		$ 2,832	$ 3,415

EE Program Portfolio TRC Test	**9.05**

Excluding T&D

Energy Savings Targets 2011-2020



MWH	42	37	40	46	55	64	64	62	60	59
% of Load Forecast	0.23%	0.21%	0.22%	0.26%	0.30%	0.35%	0.35%	0.34%	0.33%	0.32%

IMPERIAL IRRIGATION DISTRICT (IID)

- Established in 1936
- IID serves 146,646 customers (as of January 2011)
- Peak demand: 1,004 MW, on August 24, 2010
- Annual energy sales are 3,218 GWh in 2010

IID's Energy Efficiency Program Highlights

Total program expenditures of $4,282,477 in calendar year 2010 will result in savings of 16,917,473 kilowatt-hours annually. This investment in efficiency will reduce peak purchases by 2,410 kilowatts. The IID service area, with consists of Imperial County and the Coachella Valley in Riverside County, has been especially hard hit by the current economic recession. The area has a historically high unemployment rate and some cities within the service territory have climbed to the highest in the nation. Current economic conditions and revamped program marketing have resulted in an increase in program participation.

IID's Energy Efficiency Program Objectives:

- Provide a positive impact on utility cost by stabilizing energy consumption and reducing purchases of expensive peak power.
- Insure the program portfolio is cost effective thereby relieving some of the upward pressure on rates.
- Assist customers by providing an opportunity to take charge of their energy utilization and by doing so, reduce their electricity cost.
- Provide customers the opportunity to improve the environment by conserving energy and/or acquiring renewable energy.
- Provide income qualified residential customers with rate assistance and positively impact their families by providing energy efficiency measures that reduce their dependency on subsidies.
- 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.

2010 Commercial Customer Programs:

- **Custom Energy Solutions Program (CESP)** – offers financial incentives for annual energy savings to medium and large commercial customers. The financial incentives are intended for the customer's use in the purchase and installation of qualifying lighting, refrigeration, air conditioning, food service, agricultural, and/or controls equipment. Qualifying EEMs must retrofit or upgrade old equipment with new, energy efficient technologies that exceed the applicable Title 24 energy efficiency requirements established by the California Energy Commission or, in some cases, current industry standards using IID-approved project baselines.
- **New Construction Energy Efficiency Program (NCEEP)** – is a non-residential new construction and renovation energy efficiency program that combines an integrated design process with financial incentives for energy saving design of at least 10% over current Title 24 requirements. The NCEEP assists customers in moving beyond initial cost considerations toward the realization of long-term energy cost savings and avoidance of lost opportunities as new non-residential buildings are designed and constructed. The NCEEP is designed for commercial, agricultural and industrial new construction and renovation/remodel projects.
- **Pumping Efficiency Program (PEP)** – is an educational and financial incentive program intended to improve overall water pumping efficiency and encourage energy conservation in the Imperial Irrigation District service area. Rebates are available to encourage the retrofit or replacement of eligible electrically powered water pumps to improve overall pumping efficiency.
- **Quality AC Maintenance Program (QAMP)** – is an efficiency program for existing central air conditioner units designed to ensure that both refrigerant charge and airflow through the evaporator are properly tested and correctly adjusted, and also that duct leakage is detected and properly sealed. Early Retirement rebates for replacement of inefficient systems are also covered under this program. **Note: Program available up to second quarter 2010**.
- **Small Commercial Energy Audits** - is the first step to assess how much energy the commercial customer consumes and to evaluate what measures can be applied to make a facility more energy efficient. An assessment will show problems that may, when corrected, save the customer significant amounts of money over time. IID offers energy audits and customized reports to customers.
- **Energy Rewards Rebate Program** - IID offers customer rebates for qualified energy efficient products. The 2010 qualifying equipment for nonresidential customers must retrofit, replace or upgrade old equipment with new, energy-efficient technologies that meet and exceed Title 24 standards in effect at the time of installation. The program offers rebates for the following product categories:
    - ENERGY STAR qualified programmable thermostats
    - Packaged terminal air conditioners and heat pumps
    - Commercial and Industrial HVAC equipment
    - Lighting
    - Energy efficient motors
- **Rates** - IID offers interruptible and high voltage rates for its large commercial and industrial customers.

2010 Residential Customer Programs:

- **Residential Energy Audits** - is the first step to assess how much energy the residential customer consumes and to evaluate what measures can be applied to make customer's home more

energy efficient. An assessment will identify conditions that may, when corrected, save the customer significant amounts of money over time. IID offers energy audits and customized reports to customers.

- **Energy Rewards Rebate Program** - IID offers customer rebates for qualified energy efficient products. The 2010 qualifying product categories for residential customer include:
    - Energy-efficient central air conditioners/heat pumps
    - ENERGY STAR qualified room air conditioners
    - ENERGY STAR qualified dual pane windows
    - Variable Speed Pool Pumps
- **Low Income AC (LIEE)** – For 2010, IID administered a Low Income Energy Efficiency program that replaced qualifying air conditioners of existing REAP customer who met minimum qualifications such as home ownership and specific budget billing levels. **Note: This was not a customer-initiated program. Potential candidates were identified internally through a review process of the IID's REAP program based on specific qualifications.**
- **Weatherization** - IID and The Gas Company have partnered with community-based organizations and licensed contractors to offer no-cost energy-saving home improvements to eligible renters and homeowners (restrictions apply).
- **Payment Assistance -** IID Energy offers several income-qualified assistance programs designed to help our customers meet their energy needs.
    - Residential Energy Assistance Program (REAP) offers income-qualified customers up to 30 percent discount on their electric billing rate.
    - Emergency Energy Assistance Program (EEAP) provides financial assistance to customers facing a financial crisis and disconnection for nonpayment. IID Energy, along with agencies in Imperial and Riverside counties, has partnered to offer this service.
    - Medical Equipment Energy Assistance Program (MEEAP) is an assistance program that reduces the electrical rate for a defined quantity of electricity used to operate medical equipment by a household that has a full-time resident who requires specific medically necessary electric equipment to sustain life or prevent deterioration of a person's medical condition.

Other Programs

- **CFL Recycling Events** – throughout the year, IID hosted various events where customers were allowed to recycle up to five incandescent light bulbs for CFLs. Approximately 3,500 CFLs were distributed in 2010.

Proposed IID Energy Efficiency Programs and Services: (2011)

The 2011 program portfolio will allow IID to meet their annual target of 19,743 megawatt hours. There are several programs from 2010 that will continue into 2011, some with revised guidelines. Those programs are:

- Custom Energy Solutions Program
- New Construction Energy Efficiency Program
- Pumping Efficiency Program
- Residential and Small Commercial Energy Audits
- Energy Rewards
- Weatherization
- Payment Assistance

New Programs for 2011 include:

- **Community Lighting** – IID will install dusk to dawn energy efficiency lighting targeting small to mid-size businesses as well as municipalities. Installation will be free of charge and will serve as a partnership with local law enforcement agencies and city representatives that will assist in identifying ideal participants.
- **Open For Business** – IID will offer a direct-install program for small commercial customers with significant focus on lighting retrofits but includes installation of refrigeration and other miscellaneous low-cost energy efficiency measures.
- **Traffic Lights** – IID will partner with various cities throughout the service territory to retrofit existing traffic lights to LEDs.
- **Vending Misers** – IID will provide a direct-install vending miser program for commercial customers.
- **AC Replacement Program** – IID will target low SEER units, providing a higher incentive for eight to 10 SEER HVAC units.
- **Ice Bear Thermal Storage Project** – In conjunction with SCPPA, IID will install, contingent upon Board approval, 25 thermal energy storage units throughout its facilities, combined with replacement of 81 HVAC units, compatible with Ice Bear technology.
- **Headquarters Lighting Retrofit Project** – IID is performing a lighting retrofit at the La Quinta headquarters facilities. Existing T12 fluorescent lighting is being replaced with T8 fixtures and occupancy sensors are being installed.

Distributed Generation Demonstration Projects – IID proposes to install distributive generation projects in an effort to promote renewable energy and awareness. The demonstration projects will include a 1-1.5 kilowatt vertical axis wind turbine, 20 kilowatt solar energy system and educational display at the El Centro Division Office and the La Quinta headquarters.

IMPERIAL IRRIGATION DISTRICT (IID)

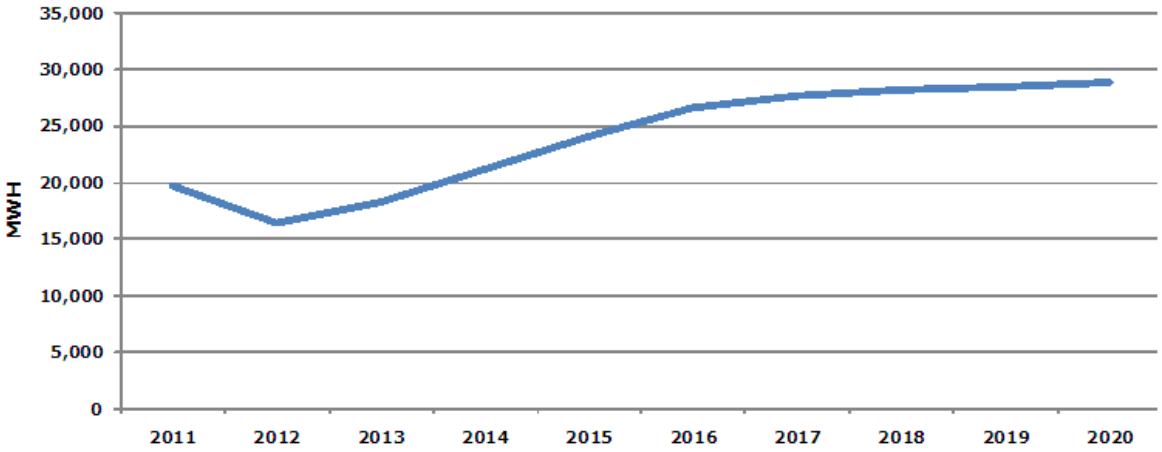
Time Period for Reporting Data: Calendar Year ending 12/31/2010

Imperial ID		Resource Savings Summary						Cost Summary			
Program Sector (Used in CEC Report)	Category	Units Installed	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers										
HVAC	Res Cooling	4,950	2,127	1,735	7,315,036	84,579,598	53,828	$ 1,289,282		$ 1,067,676	$ 2,356,958
Appliances	Res Dishwashers										
Consumer Electronics	Res Electronics	157	1	1	5,401	48,607	28	$ 11,304		$ 829	$ 12,133
HVAC	Res Heating										
Lighting	Res Lighting	3,881	151	21	110,912	998,208	506	$ 33,520		$ 40,772	$ 74,292
Pool Pump	Res Pool Pump	187	29	29	196,126	1,961,256	1,149	$ 45,200		$ 35,076	$ 80,276
Refrigeration	Res Refrigeration	1,227	17	17	90,626	1,631,275	868	$ 91,400		$ 27,338	$ 118,738
HVAC	Res Shell	368	41	41	48,752	889,174	512	$ 33,699		$ 23,798	$ 57,497
Water Heating	Res Water Heating										
Comprehensive	Res Comprehensive										
Process	Non-Res Cooking										
HVAC	Non-Res Cooling	461	1,177	529	4,524,793	88,844,727	50,487	$ 496,704		$ 319,842	$ 816,546
HVAC	Non-Res Heating										
Lighting	Non-Res Lighting	1,507	278	37	1,207,519	15,772,233	8,014	$ 69,097		$ 35,285	$ 104,381
Process	Non-Res Motors	1	6		30,738	614,752	324	$ 3,458		$ 931	$ 4,389
Process	Non-Res Pumps	1			41,522	830,432	489	$ 4,931		$ 11,453	$ 16,384
Refrigeration	Non-Res Refrigeration										
HVAC	Non-Res Shell										
Process	Non Res Process	1	415		3,224,421	64,488,416	33,960	$ 349,406		$ 97,690	$ 447,097
Comprehensive	Non Res Comprehensive										
Other	Other	382			121,629	364,886	210	$ 55,240		$ 138,546	$ 193,786
SubTotal		13,123	4,242	2,410	16,917,473	261,023,565	150,375	$ 2,483,240		$ 1,799,237	$ 4,282,477
T&D	T&D										
Total		13,123	4,242	2,410	16,917,473	261,023,565	150,375	$ 2,483,240		$ 1,799,237	$ 4,282,477

EE Program Portfolio TRC Test	1.47

Excluding T&D

Energy Savings Targets 2011-2020



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
MWH	19,743	16,480	18,381	21,281	24,147	26,614	27,674	28,234	28,576	28,910
% of Load Forecast	0.51%	0.42%	0.46%	0.52%	0.58%	0.63%	0.64%	0.64%	0.63%	0.63%

LASSEN MUNICIPAL UTILITY DISTRICT (LMUD)

History and Load Data

Lassen Municipal Utility District (LMUD) was established in 1988. It serves 12,500 customers. Fifty 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. There is little or no difference in load demands for LMUD between winter and summer. Its annual energy use is 131 gigawatt-hours. LMUD's annual power content is largely hydroelectric (depending on the time of year) due to the utility's power purchase contract with Western Area Power Administration and its base resource allocation from the Central Valley Project. The remaining power is mixed between various renewable and non-renewable power. 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.

Overview of Lassen MUD Energy Efficiency Programs

LMUD manages a comprehensive energy efficiency incentive program for residential & commercial customers focusing on peak load reduction and energy conservation. For residential customers, rebates are offered for the installation of various energy efficiency measures. For commercial customers, rebates are available for upgraded lighting, HVAC equipment, and in cases where an analysis is performed rebates can be offered for additional equipment that reduces energy use and/or demand.

Current Programs/Services:

- Residential Rebate Program: LMUD provides rebates to customers who purchase and install ENERYGSTAR® appliances and energy efficient electric water heaters. LMUD also provides a residential lighting program, providing rebates for replacing incandescent bulbs with CFL's along with a variety of other lighting incentives. LMUD also offers rebates for the installation of energy efficiency heat pumps and air conditioning. Finally, LMUD incentivizes homeowners to invest in home weatherization (insulation, window treatments/replacements and duct sealing) through the residential rebate program.
- Custom Energy Projects: LMUD offers customized rebate programs to larger customers who have special projects that do not fit into existing rebate categories.
- "Smart*Built*" "SmartBuilt Retro": SmartBuilt 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 HSPF/SEER heating and cooling units.
- Energy Audits: Commercial customers may request an onsite energy audit, provided free of charge by LMUD.
- "Smart*Light*": Smart*Light* was introduced in 2008 and is LMUD's commercial lighting retrofit program. The program offers commercial customers rebates for replacing inefficient lighting

with new technology, such as removing existing T-12 fluorescent bulbs and replacing them with T-8s.

- **"**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).
- Energy Conservation Assistance Program "ECAP": ECAP is LMUD's low-income rate assistance program. The program is income based and allows between a 50% and 20% discount on customers first 1,000 kWh. The program also works with local service agencies to provide energy conservation classes to participating customers.
- 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.

Performance Results for FY2010

LMUD's energy reduction target for 2009-2010 was 375,000 kWh. They exceeded their annual goal by 41%, with a total net energy reduction of 528,080 kWh.

Performance Results for FY2008-FY2010

LMUD's 3-year energy reduction target for FY2008-FY2010 was 1,125,000 kWh. Energy efficiency program activity during this period resulted in a total net energy reduction of 1,096,218 kWh, achieving 97.4% of the cumulative target.

Revision to Annual Energy Savings Targets for 2011- 2020

A recent assessment of energy savings potential for LMUD conducted by Summit Blue indicated that an appropriate 10 year goal (2011-2020) for their energy-efficiency programs would be 7,767 MWh. Taking into account current economic conditions and the demographics of the City, staff has decided to target 375 MWh per year over the next three years as a start towards achieving that target.

FY2011 Forecast

LMUD's energy efficiency rebates were revised for FY2011 based on the Measure Quantification Report issued by KEMA in December 2009. The FY2011 energy efficiency program reflects a comprehensive suite of measures that are cost-effective based on the rebate level offered and the quantified savings in the KEMA report. LMUD's forecast indicates that the AB2021 target of 375,000 kWh will be met with a funding level of $310,000 for rebates and administration.

LMUD Evaluation, Measurement and Verification

LMUD undertook its first EM&V report in 2009/2010. The report focused on the program that produced the largest amount of savings during the year, the Keep Your Cool program. Keep Your Cool provided LMUD customer's refrigeration door gaskets, strip curtains and door closers at no cost to the customers. The evaluation indicated that the program was well received overall and that most demand and consumption savings figures were reasonable and close. The one exception was glass reach-in freezer auto-closers which appeared to indicate a discrepancy between kW demand reduction, kWh savings and reasonable hours of operation. That issue is under consideration for the upcoming year.

LASSEN MUNICIPAL UTILITY DISTRICT (LMUD)

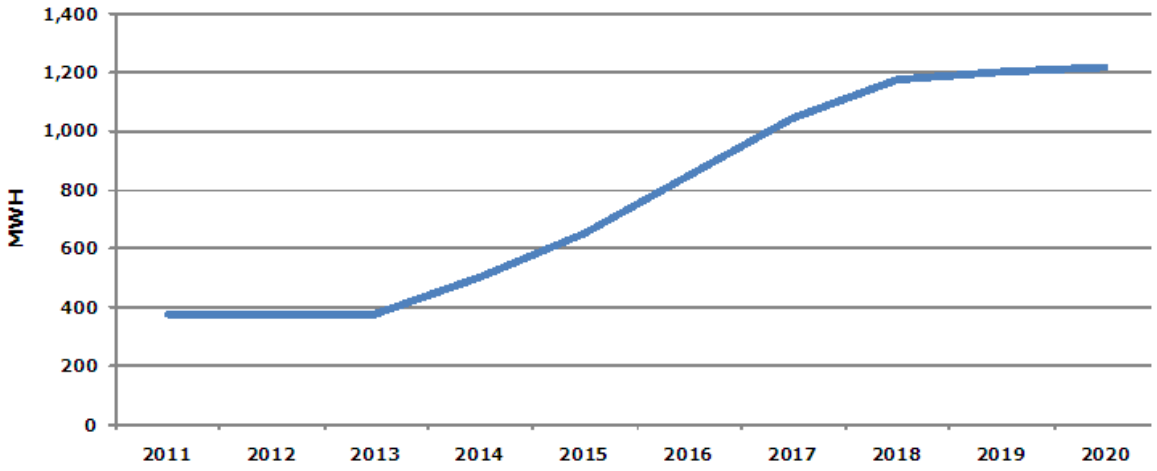
Time Period for Reporting Data: Fiscal Year ending 6/30/2010

Lassen Municipal Utility District		Resource Savings Summary						Cost Summary			
Program Sector (Used in CEC Report)	Category	Units Installed	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	54	5	5	13,090	130,896	72	$1,890.00		$ 8,739	$ 10,629
HVAC	Res Cooling	52	12	8	8,648	156,501	97	$10,607.50		$ 3,950	$ 14,557
Appliances	Res Dishwashers	25	1		1,650	21,450	12	$875.00		$ 1,469	$ 2,344
Consumer Electronics	Res Electronics							$0.00			
HVAC	Res Heating	50			19,296	373,064	188	$15,240.00		$ 5,562	$ 20,802
Lighting	Res Lighting	66	2		1,701	15,307	8	$538.00		$ 544	$ 1,082
Pool Pump	Res Pool Pump							$0.00			
Refrigeration	Res Refrigeration	76	2	2	12,428	223,704	121	$3,800.00		$ 15,207	$ 19,007
HVAC	Res Shell	5,536	9	9	14,524	290,472	164	$11,894.40		$ 6,856	$ 18,750
Water Heating	Res Water Heating	16	2	2	9,690	145,344	78	$3,900.00		$ 9,117	$ 13,017
Comprehensive	Res Comprehensive							$0.00			
Process	Non-Res Cooking							$0.00			
HVAC	Non-Res Cooling							$0.00			
HVAC	Non-Res Heating							$0.00			
Lighting	Non-Res Lighting	35	61	61	304,734	3,209,611	1,779	$159,451.50		$ 43,866	$ 203,318
Process	Non-Res Motors							$0.00			
Process	Non-Res Pumps	1	7	7	77,392	773,917	408	$6,000.00		$ 6,515	$ 12,515
Refrigeration	Non-Res Refrigeration	1	8	8	64,929	277,246	146	$0.00	$2,893.05	$ 2,535	$ 5,428
HVAC	Non-Res Shell							$0.00			
Process	Non Res Process							$0.00			
Comprehensive	Non Res Comprehensive							$0.00			
Other	Other							$0.00			
SubTotal		5,912	110	104	528,080	5,617,513	3,073	$ 214,196	$ 2,893	$ 104,360	$ 321,450
T&D	T&D										
Total		5,912	110	104	528,080	5,617,513	3,073	$ 214,196	$ 2,893	$ 104,360	$ 321,450

EE Program Portfolio TRC Test	**1.35**

Excluding T&D

Energy Savings Targets 2011-2020



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
MWH	375	375	375	501	650	849	1,043	1,177	1,203	1,219
% of Load Forecast	0.25%	0.25%	0.24%	0.32%	0.41%	0.54%	0.65%	0.73%	0.74%	0.74%

LODI ELECTRIC UTILITY (LEU)

- Established in 1910
- 28,925 customers (23,920 residential; 5,000 commercial/industrial; FY 09-10)
- Peak demand: 119.6 megawatts; occurs in: summer daytime (FY 09-10)
- Annual Energy Use: 434,020,987 kilowatt hours (FY 09-10)

LEU Energy Efficiency Program Highlights

Since 1998, LEU has spent more than $7.8 million on demand-side management rebates and programs designed to increase energy efficiency for the community, resulting in a 16 percent peak demand reduction and a 14 percent energy reduction.

Current (FY 09-10) Commercial/Industrial Customer Programs:

- *Lodi Commercial (G-1 & G-2) Rebate Program:* Provides rebates for small and medium-sized commercial customers who install designated energy efficiency measures, such as: attic insulation, window tinting/shade screens, programmable thermostats, ceiling fans, appliances, high efficiency lighting retrofits, and maintenance of refrigeration/HVAC equipment.
- *Lodi Commercial/Industrial (G-*3 *to I-1) Rebate Program:* Provides rebates of up to $22,000 to large commercial and industrial customers; the rebate is for pumps/motors, process equipment improvements, building envelope improvements, HVAC/chiller replacements, and high efficiency lighting retrofits.

Current (FY 09-10) Residential Customer Programs:

- *Lodi Appliance Rebate Program:* Provides rebates to all customers who purchase an EnergyStar ® refrigerator, dishwasher and or front-loading clothes washer.
- *Lodi Energy Efficient Home Improvement Rebate Program:* Provides rebates to customers for installing attic/wall insulation, attic fans, whole house fans, shade screens/window tinting, radiant barriers, as well as for repairing/replacing HVAC duct systems, and for installing high efficiency (15+ SEER) air conditioning units.
- *HVAC System Performance Test:* Provides a rebate for customers who utilize a select list of HVAC contractors capable of performing a high-end duct system performance test (the test measures air flow, air return and system balance).

Current (FY 09-10) Commercial and Residential Programs:

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

Current (FY 09-10) School/In-Classroom Programs:

- *Lodi LivingWise Program:* Provides energy efficiency "kits" and manuals to 445 6th grade students in Lodi schools; the program is designed to teach the students the basics of energy and water conservation.
- *Lodi Solar Schoolhouse Program:* Provides teacher mini-grants and teacher training regarding solar/renewable energy resources; also via this program, we sponsor various solar fairs and events at individual school (students and teachers build solar-powered fountains, model race cars, houses, ovens, etc.).
- *Youth Energy Summit:* Provides scholarship opportunities for juniors and seniors in high school; the eligible students must participate in a two-day workshop (known as the Youth Energy Summit), then complete a community service learning project, based upon the information they garner from the Summit/training. After completing their "project," the student teams then present their findings and projects to a panel of judges, who in turn award the scholarship funds.

Current (FY 09-10) Low-Income Residential Programs:

- *Lodi C.A.R.E. Package Program:* Provides grants to very low-income customers in need of assistance paying their electric utility account; the program coordination/customer screening is performed by the Lodi Salvation Army. In order to secure a grant payment, customers must consent to in an in-home energy audit.
- *Lodi SHARE Discount Rate:* LEU provides a rate discount of 30% for qualifying residential customers on their electric utility monthly billing statement; $400,000 annually is budgeted for this rate discount from the Lodi Public Benefits Program fund.

Measurement Methodology:

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

In addition, LEU has implemented an Evaluation, Measurement & Verification (EM & V) Plan, and has completed its first, second and third year assessments of randomly selected programs and large rebates as part of the designed EM & V Plan. For the FY 09-10, projected energy savings were verified for nine (9) large customer rebates, and were assessed in August of 2010. Note: LEU retained the services of Summit Blue/Navigant Consulting to assist in the creation of the aforementioned Lodi EM & V Plan, as well as the on-site, first, second and third year kWh savings verification processes. LEU intends to utilize The Cadmus Group, ERS and Navigant (formerly Summit Blue) for similar kWh and kW verification savings in 2011.

Proposed LEU Energy Efficiency Programs and Services: (for 2010-2011)

Maintain existing programs, while possibly expending additional Public Benefit Program funds on demand-side management rebates/incentives.

LEU Demand Reduction Programs:

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

Economic Impacts on LEU Energy Efficiency Programs:

Based upon conversations with numerous large energy users in Lodi, it was again apparent that during this reporting period, the state of the global economy (as well as the United States and California economies) had an impact on the implementation of large energy efficiency projects in Lodi. Although some projects were pursued during this time-frame, some large customers opted to wait on installing energy conservation measures; instead, choosing to maintain the status quo and to "ride out the current economic storm." Projects involving the "low-hanging fruit," such as a lighting retrofit, were still popular. However, projects involving process equipment upgrades, where significant energy savings can be achieved, were held back.

LODI ELECTRIC UTILITY (LEU)

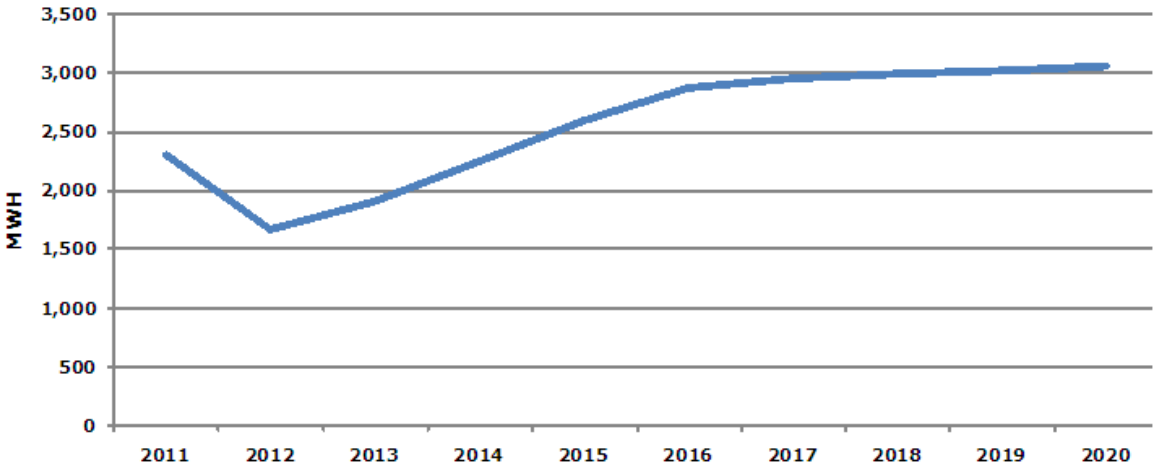
Time Period for Reporting Data: Fiscal Year ending 6/30/2010

Lodi Electric Utility		Resource Savings Summary						Cost Summary			
Program Sector (Used in CEC Report)	Category	Units Installed	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	89	4	4	8,710	87,104	48	$ 4,450		$ 490	$ 4,940
HVAC	Res Cooling	121	21	17	9,203	156,401	100	$ 132,643		$ 1,344	$ 133,987
Appliances	Res Dishwashers	141	2	2	5,176	67,288	37	$ 3,525		$ 388	$ 3,913
Consumer Electronics	Res Electronics										
HVAC	Res Heating										
Lighting	Res Lighting	96	28		6,305	31,526	17	$ 384		$ 157	$ 541
Pool Pump	Res Pool Pump	5	4	2	5,600	56,000	31	$ 2,050		$ 315	$ 2,365
Refrigeration	Res Refrigeration	163	4	4	34,189	615,398	334	$ 17,900		$ 3,524	$ 21,424
HVAC	Res Shell	755	64	64	42,198	869,759	491	$ 42,493		$ 5,809	$ 48,302
Water Heating	Res Water Heating										
Comprehensive	Res Comprehensive										
Process	Non-Res Cooking	1	9	9	48,534	582,413	319	$ 6,000		$ 3,273	$ 9,273
HVAC	Non-Res Cooling										
HVAC	Non-Res Heating										
Lighting	Non-Res Lighting	27	446	400	1,151,781	11,973,589	6,655	$ 128,369		$ 68,871	$ 197,240
Process	Non-Res Motors	1	53	39	11,338	226,768	121	$ 22,000		$ 1,282	$ 23,282
Process	Non-Res Pumps										
Refrigeration	Non-Res Refrigeration	255	70	13	525,956	6,109,464	3,399	$ 227,175		$ 34,883	$ 262,059
HVAC	Non-Res Shell	656	6	6	79,977	822,314	458	$ 13,916		$ 4,663	$ 18,579
Process	Non Res Process										
Comprehensive	Non Res Comprehensive										
Other	Other	2						$ 893			$ 893
SubTotal		2,312	710	560	1,928,969	21,598,024	12,010	$ 601,798		$ 125,000	$ 726,798
T&D	T&D										
Total		2,312	710	560	1,928,969	21,598,024	12,010	$ 601,798		$ 125,000	$ 726,798

EE Program Portfolio TRC Test	**1.52**

Excluding T&D

Energy Savings Targets 2011-2020



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
MWH	2,296	1,667	1,905	2,242	2,587	2,873	2,948	2,985	3,019	3,053
% of Load Forecast	0.49%	0.35%	0.39%	0.46%	0.52%	0.58%	0.59%	0.59%	0.59%	0.59%

CITY OF LOMPOC

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**: Provides a rebate to commercial customers who retrofit T12 to T8 fluorescent lighting that, for most businesses, will realize a 1.75 year payback. Or who replace incandescent lamps with hard-wired fluorescent fixtures with T-8 systems.
• **Exit Sign Rebate**: rebate of $15 to replace existing incandescent or fluorescent lit exit signs with LED lit signs, or $30 the replace same signs with electro-luminescence signs. This rebate was first offered in 2002.

Current Commercial and Residential Customer Programs:

• **Refrigerator Rebate**: A $144 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 energy-efficient model. The old appliance must be recycled at the City's landfill
• **Refrigerator BuyBack Program**: $35 is paid to customers who recycle, at the City's 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 City's landfill. This program was first offered in March 2003.
• **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 City's landfill. This program was first offered in March of 2003.
• **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 City's 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 2005.
• **Renewable Resource Rebate**: A rebate of $3.00 per watt is paid to electric customers who install a grid-tied photovoltaic system of 1Kw or larger in size. (Non profit customers will receive a rebate of $3.50 per watt.) This program was first offered in February 2004.
•***Customized Rebate***: a rebate of $.15 per watt saved is offered for any energy efficient improvement not offered by other rebate programs.

• **Energy Audits**: Lompoc offers on-site energy and water audits for all customers or mail-in audit for residential customers. Customers receive money saving advice, a conservation kit that includes a CFL, refrigerator thermometer, water saving aerators and showerheads, a positive shut-off nozzle for outside watering, and learn about incentives designed wave water and electricity.
• **Equipment Loan**: The City has energy monitoring devices that can be borrowed to monitor energy usage of most appliances found in the average home.

Current Low Income Customer Programs:

• **Rate and Energy Assistance Programs**: Lompoc offers a rate discount for low-income customers and a special medical needs rate. Current subsidy is $8.00 per month not to exceed electric charges.
• **Income Qualifying Refrigerator Purchase Program**: For low-income customers, a payment of up to $600 is made toward the purchase of a new refrigerator. The old refrigerator must be in working order; must have been manufactured before 1992; and will be recycled at the City's landfill. The customer is required to repay the City $240 over a one-year.

Current Community Program:

• Education Programs: Lompoc encourages energy conservation through school and community education programs and presentations.
• The City offers electric safety programs through classroom presentations and community functions.

Proposed City of Lompoc Energy Efficiency Programs and Services:

• Evaluate existing programs to determine if incentives are attractive to customers and increase incentive levels if necessary to assure continued participation in all programs.
• Ensure that energy efficiency is part of integrated resource planning by determining and implementing the most cost-effective, reliable, and feasible energy efficiency measures.
• Measure and evaluate the impact of energy efficiency programs.
• Lompoc is currently working with Santa Barbara County and cities in our area to develop and provide an AB811 financing program for residential and business owners .

Energy Efficient Upgrades to City Facilities:
The City has contracted with the Chevron Energy Solutions Company to perform various energy efficient upgrades to City facilities that include lighting upgrades, HVAC system improvements, high efficiency pump installation at the water treatment plant and 141 Kw solar. These projects are currently 75% complete.

System Upgrades:
Lompoc will continue the upgrade of all 4 kilovolts lines to 12 kilovolts distribution lines and continues to purchase 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 KW during each of the last six summer months may apply for this 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.

ARRA Stimulus Funding:
Lompoc has received $165,000.00 of ARRA large city stimulus funding. One hundred thousand dollars ($100,000) will be used to retrofit existing street lighting from HPS to LED lighting. Sixty-five thousand dollars ($65,600) plus $30,000 from other funding is being used to offer a rebate to commercial businesses to retrofit existing T12 lighting to more energy efficient lighting. Installation of occupancy sensors will be included in this program.

Economic impact:
The downturn in the economy has affected customer willingness to spend money on energy efficient appliances. Even if the old appliance 'breaks down' and it is evident that they will not purchase the most energy efficient appliance or the type of first choice, but the least expensive model that will meet minimum needs. Since Lompoc offers rebates to replace working appliances, the number of willing customers to participate in our programs has decreased over the past two years.

This is also evident when approaching commercial customers to discuss the retrofit of the lighting. The rebate for the retrofit of lighting will pay for 85 to 95% of the cost to retrofit the existing fixtures to more energy efficiency lamps and ballasts, but still the City and contractors must convince the customer that the City will actually rebate to them what is proposed. Even though this will make the payback within 6 months or less, the business owner is reluctant to participate in the program. It is extremely more and more difficult to convince a customer that they will save money by making the suggested changes.

The only positive note is that customers are willing to install solar photovoltaic systems. The City is encouraging these systems by participating in a Santa Barbara County AB811 loan plan for energy efficiency improvements and renewable energy systems installed on owner properties.

CITY OF LOMPOC

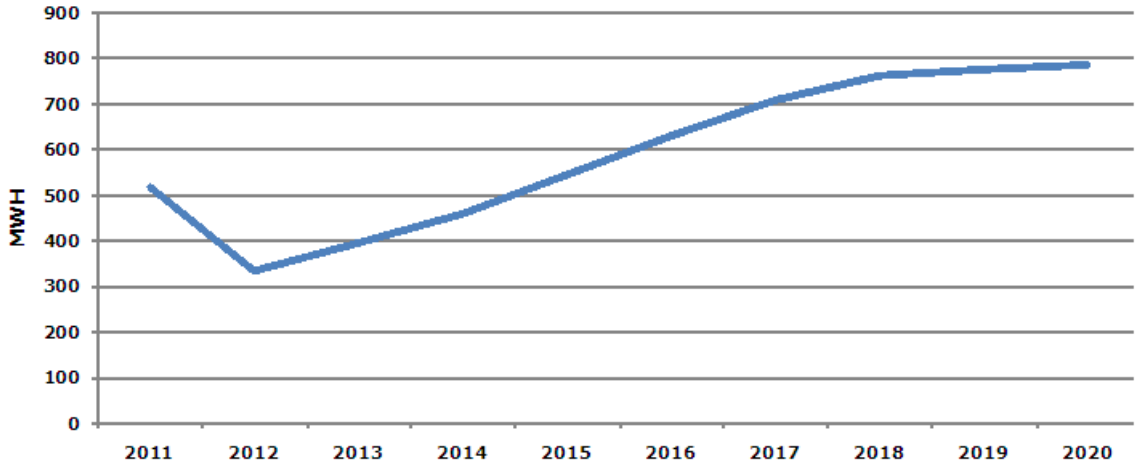
Time Period for Reporting Data: Fiscal Year ending 6/30/2010

Lompoc		Resource Savings Summary						Cost Summary			
Program Sector (Used in CEC Report)	Category	Units Installed	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	55	1	1	1,613	16,128	9	$ 6,600		$ 51	$ 6,651
HVAC	Res Cooling										
Appliances	Res Dishwashers	11			138	1,797	1	$ 550	$ 55	$ 6	$ 611
Consumer Electronics	Res Electronics										
HVAC	Res Heating										
Lighting	Res Lighting	244	71		16,026	80,130	43	$ 1,952		$ 242	$ 2,194
Pool Pump	Res Pool Pump										
Refrigeration	Res Refrigeration	125	8	8	75,509	1,359,164	737	$ 21,381	$ 895	$ 4,475	$ 26,751
HVAC	Res Shell										
Water Heating	Res Water Heating										
Comprehensive	Res Comprehensive										
Process	Non-Res Cooking										
HVAC	Non-Res Cooling										
HVAC	Non-Res Heating										
Lighting	Non-Res Lighting	1,422	13	10	51,148	561,085	311	$ 34,259	$ 1,408	$ 1,806	$ 37,473
Process	Non-Res Motors										
Process	Non-Res Pumps										
Refrigeration	Non-Res Refrigeration										
HVAC	Non-Res Shell										
Process	Non Res Process										
Comprehensive	Non Res Comprehensive										
Other	Other				21,651	64,954	36		$ 1,700	$ 216	$ 1,916
SubTotal		1,857	93	18	166,086	2,083,257	1,137	$ 64,742	$ 4,058	$ 6,795	$ 75,595
T&D	T&D										
Total		1,857	93	18	166,086	2,083,257	1,137	$ 64,742	$ 4,058	$ 6,795	$ 75,595

EE Program Portfolio TRC Test	**2.15**

Excluding T&D

Energy Savings Targets 2011-2020



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
MWH	517	336	395	459	544	630	708	760	776	785
% of Load Forecast	0.36%	0.23%	0.27%	0.31%	0.37%	0.43%	0.48%	0.51%	0.52%	0.52%

LOS ANGELES DEPT OF WATER & POWER (LADWP)

GENERAL DESCRIPTION OF UTILITY

- Established in 1902 to deliver water to the City of Los Angeles. Electricity distribution began in 1916.
- Serves 4.1 million people via 1.46 million electric and 680,000 water connections. Nearly 70% of electricity usage is by the commercial/industrial sectors and over 30% by residential customers.
- A peak demand of 6177 MW was registered in the summer of 2010.
- Annual energy use is 24.6 million megawatt-hours.
- 9,232 employees.
- The largest municipal utility in the nation.

LADWP Energy Efficiency Program Highlights

- LADWP Energy Efficiency Program expenditures during the period beginning FY 2000-2001 through FY 2009-2010 totaled $238.8 million.
- These programs achieved peak demand reduction of 290.6 MW and 971.0 GWh of energy savings during this period.
- The average life cycle cost of these savings was $0.024/kWh.
- The savings are based upon estimation methodologies approved for use by both Investor Owned Utilities (IOU) and Publicly Owned Utilities (POU) for energy efficiency program reporting purposes. Savings have been adjusted annually since FY 2003-04 based on measurement and verification performed by an independent third party.

LADWP Energy Efficiency Measurement & Verification (M&V) Activities

LADWP has retained the services of an independent third party to evaluate its energy efficiency programs. During 2010, the firm completed assessments of energy efficiency projects done in fiscal years 2007-2008 and 2008-2009 (July 1 – June 30). Projects reviewed represent a random sampling from the LADWP's energy efficiency program portfolio, with a focus on non-residential programs.

LADWP plans to continue measurement and verification activities through 2011, with an emphasis on non-residential projects completed in the 2009-2010 fiscal year.

Overview of LADWP's FY 2009-2010 Energy Efficiency Programs

Commercial Customer Programs: Total Non-Residential Program expenditures: $34.5 million resulting in 25.3 MW of peak demand reduction and 133.1 GWh of annual energy savings. The rebates and rebate levels assist LADWP customers in lowering energy consumption and energy expenses while benefiting

the environment. Program enhancements were made to encourage maximum achievable program participation.

- Commercial Lighting Efficiency Offer: Provides rebates for a wide variety of high efficiency lighting measures to retrofit existing buildings. Program is largely vendor-driven.

- Chiller Efficiency Program: Provides rebates to retrofit existing buildings with high-efficiency electric chillers. Rebates are available for all types of chillers (air-cooled and water-cooled). In addition, water-cooled centrifugal chillers now can be tested at either standard ARI or non-standard ARI conditions provided the cooling tower meets specified performance criteria. Higher rebate levels are based on the percentage that the chiller's Integrated Part-Load Value (IPLV) performance exceeds California's Current Title 24 requirements for chillers.

- Refrigeration Program: Provides incentives for a variety of energy efficient refrigeration measures. Rebate measures include ice machines, solid and glass refrigerator doors, door gaskets, night covers, strip curtains, vending machine controllers, etc. To be eligible for rebates, participating customers must reserve funds and receive approval to proceed prior to purchasing and installing the qualifying refrigeration equipment.

- Custom Performance Program: Provides incentives for cost-effective energy-saving opportunities not served by existing prescriptive offerings. Program includes equipment controls, CO sensors, high efficiency technologies, and other innovative strategies. LADWP engineers evaluate the energy-saving benefits (quantity, reliability, persistence) of each submitted measure and calculate savings-based financial incentives for participating customers. Energy saving measures, equipment or systems must exceed Title 24 or minimum industry standards.

- Small Business Direct Install: Program pays 100% of the installed cost, up to a maximum of $2,500, for lighting retrofits in small business customers' facilities. Program operates using SCPPA Direct Install Program contractors made available to LADWP through a participation agreement with SCPPA. Program services deliver energy savings from typically hard-to-reach small business sector.

- New Construction Incentive Program: Provides incentives and technical assistance for new construction and major remodel projects; uses prescriptive incentives for standard new construction, and more aggressive energy points-based incentives for projects receiving LEED certification.

- Financing Program: Provides low-interest loans for the installation of energy efficient equipment in existing buildings (including city facilities).

- Energy Use Assessments: On-site energy assessments for existing non-residential buildings, available free-of-charge.

- Technical Assistance: Provides technical assistance and design review for retrofit projects in existing building and new construction projects.

Residential Customer Programs: Total Residential Program expenditures: $9.9 million resulting in 2.75 MW of peak demand reduction and 14.8 GWh of annual energy savings.

- Consumer Rebate Program: Provides rebates for the purchase and installation of Energy Star rated appliances and other high-efficiency equipment, including refrigerators, air-conditioners, windows, pool pumps, etc.

- Refrigerator Recycling Program: LADWP provides free pick-up and recycling of old, inefficient refrigerators, along with free CFLs and a rebate of $35 for each recycled refrigerator.

- Low-Income Refrigerator Exchange Program: Provides new energy-efficient refrigerators to low-income customers in exchange for their existing inefficient older models.

- Compact Fluorescent Lamp Distribution: One-time distribution of two free CFLs to each residence in Los Angeles, distribution of free CFLs to residential customers through community and City events, via community groups, and in conjunction with other energy efficiency programs.

- Home Energy Saver On-Line Audit: Web-based energy audit analyzes energy use and makes recommendations for efficiency opportunities.

Proposed FY 2010-2011 LADWP Energy Efficiency Programs and Services

Commercial Customer Programs: Total Non-Residential Program budget: $32.3 million resulting in a projected 26.1 MW of peak demand reduction and 135.5 GWH of annual energy savings.

- Commercial Lighting Efficiency Offer (CLEO): LADWP anticipates continued increase in program participation from customers seeking the higher rebates offered for "Super T8" High Performance and Reduced Wattage systems ($30/fixture), and qualifying T8 and T5 high bay fixtures ($100/fixture). Eligible measures and rebate amounts (increased by as much as 25 percent in prior years) under review for possible refinement.

- Chiller Efficiency Program (CEP): Rebates are available for all types of chillers (air-cooled and water-cooled). In addition, water-cooled centrifugal chillers now can be tested at either standard ARI or non-standard ARI conditions provided the cooling tower meets specified performance criteria. Higher rebate levels are based on the percentage that the chiller's Integrated Part-Load Value (IPLV) performance exceeds California's Current Title 24 requirements for chillers.

- Refrigeration Program: This program continues to offer generous rebates for the purchase and installation of high efficiency refrigeration equipment and measures. Program planning includes improved outreach to equipment vendors.

- Custom Performance Program (CPP): This program continues offering savings-based incentives for the installation of energy saving measures, equipment or systems that exceed Title 24 or

minimum industry standards, with differing incentive rates established for three categories of efficiency measures (lighting, HVAC, other).

- Small Business Direct Install (SBDI) Program: Continuation of the three-year program launched in February 2008, assisting small businesses (A1 rate customers) in the City of Los Angeles to become more energy efficient. Small businesses that reduce their energy load can save money and apply that savings to grow their business and create new jobs. Qualifying customers receive a FREE lighting assessment and FREE lighting upgrade and installation (up to $2,500 in cost) from one of three authorized contractors.

- New Construction Incentive Program: Continuation of a program offering two tiers of incentives to owners who build to levels that exceed required standards of energy efficiency. These incentives are being offered to encourage property owners to build to higher levels of energy efficiency and environment responsibility. Anticipated increase in program participation due to the implementation of a new Green Building Ordinance in the City of Los Angeles.

- Financing Program: Ongoing low-interest loan program for the installation of energy efficient equipment in City facilities.

- Energy Use Assessments: Continued offering of free on-site energy assessments for existing non-residential buildings.

- Technical Assistance: Continued offering of technical assistance and design review for retrofit projects in existing building and new construction projects.

Residential Customer Programs: Total Residential Program budget: $26.8 million resulting in a projected 6.8 MW of peak demand reduction and 38.6 GWH of annual energy savings.

- Consumer Rebate Program: Continued offering of rebates for the purchase and installation of Energy Star appliances and other high-efficiency equipment (refrigerators, air-conditioners, windows, etc.).

- Refrigerator Recycling: Ongoing program provides free pick-up and recycling of old, inefficient refrigerators, along with free CFLs and a new cash incentive of $50 for each recycled refrigerator.

- Low-Income Refrigerator Exchange: Ongoing program provides new energy-efficient refrigerators to low-income customers in exchange for existing inefficient older models. Program planning includes improved outreach and expansion to apartment owners.

- Home Energy Saver Online Audit: Ongoing availability of web-based energy audit; analyzes energy use and makes recommendations for efficiency opportunities.

Note: FY09/10 figures have not been audited and reporting includes previous year expenditures for projects concluded during FY09/10

Demand Side Management Programs Update

Background

Assembly Bill 2021 became law in 2007 requiring the Investor Owned Utilities (IOUs) and Publicly Owned Utilities (POUs) to identify energy efficiency potential and establish annual efficiency targets that would result in the state meeting its goal of reducing total forecasted electricity consumption by 10 percent over the next 10 years. Pursuant to the requirements of AB 2021, the Los Angeles Department of Water and Power (LADWP) developed and submitted its first set of Board-approved energy efficiency savings goals to the state (California Energy Commission), as follows:

FY	**06-07**	**07-08**	**08-09**	**09-10**	**10-11**	**11-12**	**12-13**	**13-14**	**14-15**	**15-16**
GWH	**58**	**275**	**315**	**300**	**280**	**255**	**252**	**252**	**252**	**252**
MW	**12**	**50**	**58**	**57**	**55**	**53**	**53**	**53**	**53**	**53**

Updated goals, based on the findings of the new Energy Efficiency Potential Study (see information below), will be submitted to the state upon approval by the LADWP Board.

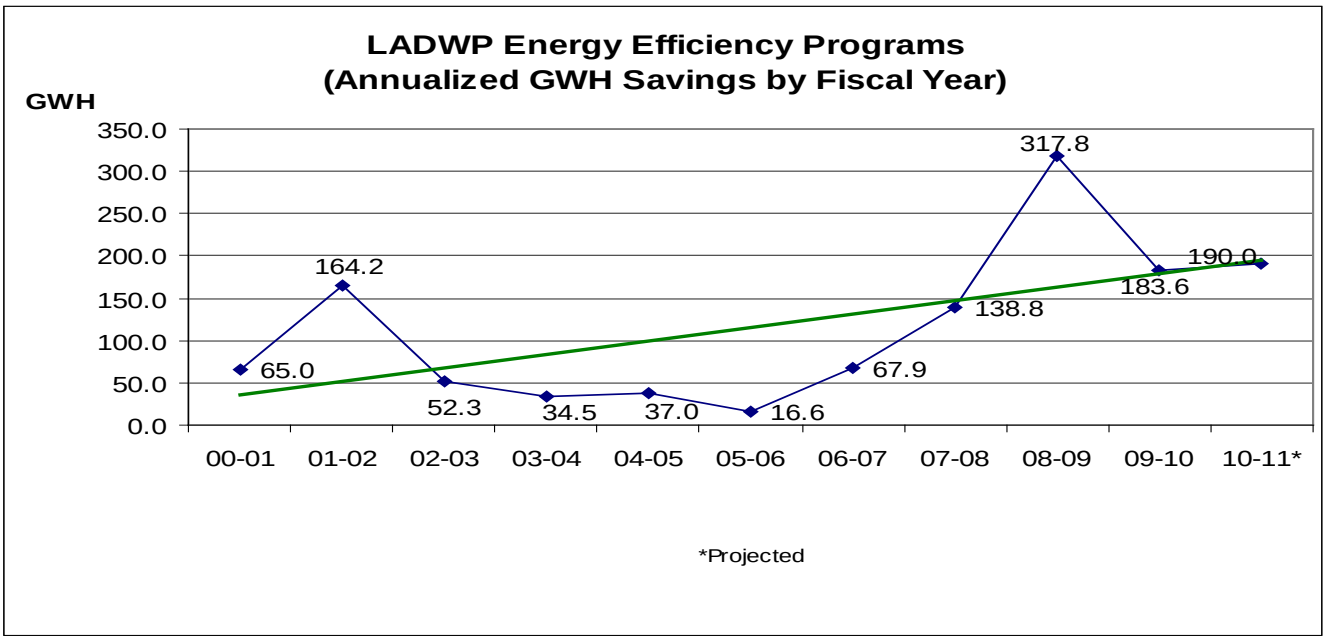
Potential Study 2010

As required by AB2021, load serving utilities must assess achievable, cost-effective efficiency potential every three years and establish annual targets based on the assessment results. The LADWP is completing a new Energy Efficiency Potential Study that will provide the basis for an update of energy efficiency targets and identify programs for implementation to achieve these goals.

Achievements and Results – A Historical Trend and Perspective

Tracking of the energy efficiency program results starting with Fiscal Year 2000-2001 is shown by the following gross savings achievement impacts in GWH savings as well as the corresponding expenditures (in millions of dollars):

	FY 00-01	FY 01-02	FY 02-03	FY 03-04	FY 04-05	FY 05-06	FY 06-07	FY 07-08	FY 08-09	FY 09-10
Annual GWh Savings	65.0	164.2	52.3	34.5	37.0	16.6	67.9	138.8	317.8	183.6



Energy Efficiency Programs	FY 00-01	FY 01-02	FY 02-03	FY 03-04	FY 04-05	FY 05-06	FY 06-07	FY 07-08	FY 08-09	FY 09-10
Expenditures ($M)	$12	$19	$13	$11	$10	$8	$13	$36	$67	$44

As illustrated by the charts, the LADWP has achieved significant increases in annual energy savings over the last several years. Savings achieved in FY 06-07 were about four times more than the previous fiscal year. FY 07-08 more than doubled results reported for 06-07 at 140 GWH. FY 08-09 savings amount of 318 GWH represents an all-time high energy efficiency savings achievement while keeping the program expenditures well below the cost-effectiveness benchmark of 3 cents per kWh on a levelized cost basis. During FY 09-10, 183 GWH of energy savings were achieved on expenditures of $44 million.

LADWP ARRA Grant Activities

LADWP received an allocation of $8 million from the City's $ 37 million Energy Efficiency and Conservation Block Grant, to be used for energy efficiency programs and measures. These include:

- Incentives for commercial building retro-commissioning
- Rebates for residential whole house fans and cool roofs
- Energy efficiency audit/retrofit program for non-profit agencies
- Community outreach by non-profit agencies
- Rebates for residential whole-house retrofit measures (Energy Upgrade California)

LADWP also received ARRA grant funds through the California Department of Community Services and Development for the development and implementation of a low income residence weatherization assistance program.

LOS ANGELES DEPT OF WATER & POWER (LADWP)

Time Period for Reporting Data: Fiscal Year ending 6/30/2010

LADWP		Resource Savings Summary						Cost Summary			
Program Sector (Used in CEC Report)	Category	Units Installed	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers										
HVAC	Res Cooling	5,973	473	366	511,196	8,096,139	5,151	$ 488,642		$ 797,419	$ 1,286,061
Appliances	Res Dishwashers										
Consumer Electronics	Res Electronics										
HVAC	Res Heating										
Lighting	Res Lighting	49,221	2,198	345	1,597,430	14,376,867	7,281	$ 478,967	$ 48,218	$ 191,129	$ 718,314
Pool Pump	Res Pool Pump	103	79	45	115,432	1,154,323	680	$ 30,919		$ 79,104	$ 110,023
Refrigeration	Res Refrigeration	21,552	1,991	1,991	12,584,358	149,343,577	79,429	$ 826,604	$ 5,882,160	$ 1,111,642	$ 7,820,406
HVAC	Res Shell	121	7	7	4,272	85,446	49	$ 12,137		$ 6,193	$ 18,330
Water Heating	Res Water Heating										
Comprehensive	Res Comprehensive										
Process	Non-Res Cooking										
HVAC	Non-Res Cooling	28	2,138	2,138	5,134,046	102,680,918	59,166	$ 3,376,419		$ 261,570	$ 3,637,988
HVAC	Non-Res Heating										
Lighting	Non-Res Lighting	773,752	14,798	12,351	74,352,385	768,232,891	425,103	$ 12,415,254	$ 4,842,247	$ 4,859,365	$ 22,116,866
Process	Non-Res Motors										
Process	Non-Res Pumps										
Refrigeration	Non-Res Refrigeration	15,760	4,127	1,340	11,379,613	133,965,370	70,793	$ 1,158,652		$ 1,386,507	$ 2,545,159
HVAC	Non-Res Shell	9,029	1,004	1,004	2,152,444	32,286,656	18,604	$ 379,206		$ 50,249	$ 429,455
Process	Non Res Process										
Comprehensive	Non Res Comprehensive										
Other	Other	527,442	8,503	8,503	40,132,091	601,981,360	339,610	$ 3,915,628		$ 1,852,370	$ 5,767,998
SubTotal		1,402,981	35,319	28,090	147,963,267	1,812,203,547	1,005,865	$ 23,082,428	$ 10,772,625	$ 10,595,548	$ 44,450,600
T&D	T&D										
Total		1,402,981	35,319	28,090	147,963,267	1,812,203,547	1,005,865	$ 23,082,428	$ 10,772,625	$ 10,595,548	$ 44,450,600

EE Program Portfolio TRC Test	**3.12**

Excluding T&D

Period for Forecast Data: Fiscal Year ending 6/30/2011

LADWP 1011		Resource Savings Summary					Cost Summary			
Program Sector (Used in CEC Report)	Category	Units Installed	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers									
HVAC	Res Cooling	3,043	92,263	195	120,153	1,790,338	$ 401,499		$ 57,209	$ 458,708
Appliances	Res Dishwashers									
Consumer Electronics	Res Electronics									
HVAC	Res Heating									
Lighting	Res Lighting	1							$ 1,000,000	$ 1,000,000
Pool Pump	Res Pool Pump	452	29	29	116,101	1,161,009	$ 226,053		$ 30,994	$ 257,048
Refrigeration	Res Refrigeration	56,241	6,283	6,283	37,636,562	497,872,540	$ 1,441,068	$ 14,953,707	$ 1,866,969	$ 18,261,744
HVAC	Res Shell	1,198,443	139	297	752,204	11,579,944	$ 5,406,374		$ 1,464,528	$ 6,870,902
Water Heating	Res Water Heating									
Comprehensive	Res Comprehensive									
Process	Non-Res Cooking									
HVAC	Non-Res Cooling	12,028	1,399	1,574	7,665,330	130,338,807	$ 4,330,199		$ 239,484	$ 4,569,683
HVAC	Non-Res Heating									
Lighting	Non-Res Lighting	1,168,685	15,746	15,176	83,097,779	853,888,255	$ 11,517,800	$ 4,720,300	$ 2,191,300	$ 18,429,400
Process	Non-Res Motors	95,848	8,471	8,471	36,298,480	544,477,196	$ 7,322,502		$ 368,897	$ 7,691,399
Process	Non-Res Pumps									
Refrigeration	Non-Res Refrigeration	13,490	2,336	841	8,457,316	90,001,382	$ 991,400		$ 616,600	$ 1,608,000
HVAC	Non-Res Shell									
Process	Non Res Process									
Comprehensive	Non Res Comprehensive									
Other	Other	3,590,761	2,404	2,404	59,954,301	641,037,544	$ 7,280,399		$ 636,619	$ 7,917,018
SubTotal		6,138,993	129,070	35,269	234,098,225	2,772,147,016	$ 38,917,294	$ 19,674,007	$ 8,472,600	$ 67,063,900
T&D	T&D									
Total		6,138,993	129,070	35,269	234,098,225	2,772,147,016	$ 38,917,294	$ 19,674,007	$ 8,472,600	$ 67,063,900

MERCED IRRIGATION DISTRICT

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

MID Energy Efficiency Program Highlights

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

The District offers customized and flexible programs to support our customers' interests in energy efficiency and in developing renewable energy projects. Our rebate programs are designed to be easily accessible to customers through our website and convenient to apply and to qualify for. Programs are available to qualifying commercial/industrial, residential, institutional and low income customers.

Current commercial, industrial and institutional programs:

Commercial/Industrial Lighting Program

The commercial lighting program is a turnkey lighting retrofit rebate program with a financial rebate menu for energy-saving lighting equipment retrofits. The program menu includes generous rebates for the replacement of T-12 lamps, metal halide fixtures, incandescent lighting and exit signs. The program menu also provides rebates for the addition of lighting controls including photocells and occupancy sensors.

Commercial/Industrial Mechanical Equipment Retrofit Program

The commercial/industrial mechanical retrofit program is a turnkey mechanical equipment rebate program with a financial rebate menu for energy-saving mechanical equipment retrofits. The program menu includes generous rebates for the replacement of mechanical equipment with more energy-efficient equipment including: refrigeration equipment, air conditioning equipment, chillers, motors and pumps. The program menu also provides rebates for variable frequency drives on pumps, motors and fans. Rebates are also available for cooling load reduction measures including duct sealing, cool roofs, window film and programmable thermostats.

Customized Commercial/Industrial Retrofit Program
The customized commercial/industrial retrofit program enables qualifying energy-saving projects that are more specialized and do not fall under the menu programs to also be evaluated and considered for rebates. Applications for this program are evaluated on an individual basis. Rebates on approved custom projects are calculated on kWh savings in a one year period. The District also offers incentives for customers who exceed Title 24 requirements on new buildings. Please contact the District for additional information.

Solar Incentive Program
The solar incentive program provides financial incentives to qualifying customers to support the buydown of installed solar generation projects. The rebate incentive is equal to the estimated performance of the installed solar system multiplied by $2.80/watt.

Applications for the Districts energy efficiency programs must be approved prior to the installation of the new equipment.
Please visit http://www.mercedid.org/energyefficientrebates for additional information.

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.
- Appliance Recycle Program: Implemented in 2009, this program allows residential customers to receive a $35.00 rebate for recycling qualified refrigerators or freezers.
- Spruce Up Your Home Shade Tree Program: The Merced Irrigation District did not implement its tree program for 2010. However, there are plans to move forward with this program in 2011.
- 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

MID Investment in Renewables:

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

- Since 2003, MID has purchased 5 megawatts of Wind-Power annually towards that goal.
- In 2008, the Merced Irrigation District launched its Solar PV Buydown Program. The amount of the rebate is based on the Estimated Performance (kilowatt-hour production) of the system, and converted to the effective annual AC generating capacity of the PV system measured inn AC watts. The rebate amount for 2008 is $2.80 per AC watt for systems up to a maximum size of 3 kilowatts (residential) and 25 kilowatts (commercial). Currently, the total amount available for rebates the first year is approximately $450,000 for all installations. Rebates are available on a first come, first served basis and are limited to $8,400/ residence and $70,000/commercial installation. Customers may apply for one incentive over the 9-year lifetime of the program.

MID Demand Reduction Programs:

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

Evaluation, Measurement, and Verification (EM&V) Activities

In 2009, MID contracted Summit Blue to develop our EM&V plan. MID contracted with Compression Engineering to evaluate a compressed air project in 2010. MID plans to select additional projects in 2011 to continue our efforts in EM&V activities.

MERCED IRRIGATION DISTRICT

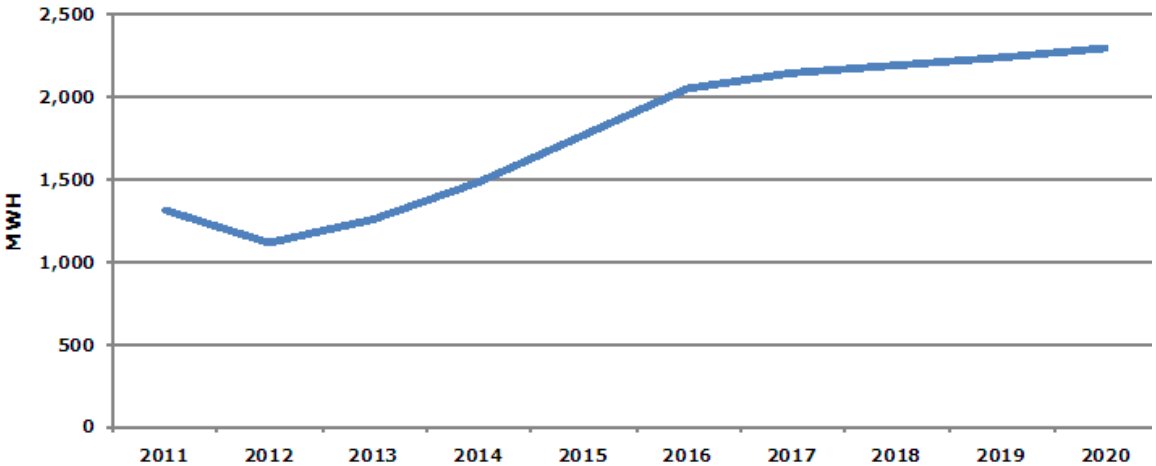
Time Period for Reporting Data: Calendar Year ending 12/31/2010

Merced		Resource Savings Summary						Cost Summary			
Program Sector (Used in CEC Report)	Category	Units Installed	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	76	7	7	17,389	173,888	96	$ 5,700		$ 1,335	$ 7,035
HVAC	Res Cooling	18	3		2,992	43,391	27	$ 3,535		$ 458	$ 3,993
Appliances	Res Dishwashers	17			734	9,547	5	$ 1,275		$ 75	$ 1,350
Consumer Electronics	Res Electronics										
HVAC	Res Heating										
Lighting	Res Lighting	116	4	1	3,404	30,636	16	$ 128		$ 207	$ 335
Pool Pump	Res Pool Pump										
Refrigeration	Res Refrigeration	64	4	4	25,539	459,706	249	$ 6,281		$ 3,594	$ 9,875
HVAC	Res Shell										
Water Heating	Res Water Heating										
Comprehensive	Res Comprehensive										
Process	Non-Res Cooking										
HVAC	Non-Res Cooling	8	1	1	738	11,070	6	$ 675		$ 89	$ 764
HVAC	Non-Res Heating										
Lighting	Non-Res Lighting	1,015	7	6	421,267	4,602,427	2,550	$ 42,901		$ 36,169	$ 79,070
Process	Non-Res Motors	3	6	5	82,538	1,238,076	658	$ 18,750		$ 8,993	$ 27,743
Process	Non-Res Pumps										
Refrigeration	Non-Res Refrigeration	370	42	7	62,824	251,295	136	$ 1,737		$ 1,848	$ 3,585
HVAC	Non-Res Shell										
Process	Non Res Process										
Comprehensive	Non Res Comprehensive										
Other	Other	1,196	314	314	2,476,861	28,104,429	14,839	$ 216,587		$ 196,663	$ 413,250
SubTotal		2,883	390	345	3,094,287	34,924,465	18,583	$ 297,569		$ 249,431	$ 547,000
T&D	T&D										
Total		2,883	390	345	3,094,287	34,924,465	18,583	$ 297,569		$ 249,431	$ 547,000

EE Program Portfolio TRC Test	**4.55**

Excluding T&D

Energy Savings Targets 2011-2020



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
MWH	1,316	1,117	1,258	1,483	1,765	2,054	2,143	2,191	2,242	2,297
% of Load Forecast	0.27%	0.22%	0.25%	0.29%	0.33%	0.38%	0.38%	0.38%	0.38%	0.38%

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 110,000 customers, 60 percent of energy sales are commercial/industrial; the remaining 40 percent are primarily residential.
- System Peak Demand: 698 MW in July 2006.
- MID's mission is to deliver superior value to irrigation, electric and domestic water customers through teamwork, technology, and innovation.
- MID can be accessed at the following web address: www.mid.org

Energy Efficiency Program Highlights

2010 Residential Customer Programs

- Overall: Paid over $1.1 million in customer rebates and contractor costs for the installation of energy efficiency measures in homes. The net peak load reduction was over 500 kW and net annual energy savings was over 1,600 MWH.
- MPower Home: Eligible measures included air conditioners, duct sealing, whole house fans, CFLs, washers, radiant barriers, insulation, and window film/screen.
- LIEE / Weatherization: Eligible measures included low flow showerheads, CFLs, shade screens, minor home repair and refrigerator replacement. The program also provides education, information and community outreach for low-income customers.

2010 Non-Residential Customer Programs

- Overall: Paid over $1 million in rebates for the installation of energy efficiency measures in businesses. The net peak load reduction was over 1,500 kW and net annual energy savings was over 15,100 MWH.
- MPower Business: Eligible measures included air conditioners, lighting, refrigeration, window film/screen, motors and computing.
- MPower Custom: Eligible measures included air compressors, chiller, cooling towers, VFDs, insulation and EMS.
- MPower Commercial New Construction: Eligible measures included air conditioning, lighting, insulation, cooking, skylights and process cooling.

2011+ Planned MID Energy Efficiency Programs and Services

- Evaluate the appropriateness for rebate of new, energy efficiency technologies
- Ensure that energy efficiency is part of integrated resource planning by determining and implementing the most cost-effective, reliable, and feasible energy efficiency

Demand Reduction Program Highlights

Since the early 1980's, MID has continuously operated demand reduction programs. Their purpose is to reduce electricity demand during peak use periods, May through September, when necessitated by operational constraints or supply shortages. Bill discounts are given for both direct load control and curtailable load reduction mechanisms. Following are program highlights for 2010:

- STEP: Bill discounts of over $347,000 for residential and commercial customers participating in the "Shave the Energy Peak" (STEP) program. STEP allows MID operators to reduce electricity demand by cycling over 14,000 air conditioners. The available peak load reduction was 13 MW.
- Interruptible Rate: Bill discounts of over $330,000 for commercial and industrial customer participants. This program allows MID operators, upon customer notification, to reduce electricity demand by requiring cessation of the curtailable portion of customer load. The available peak load reduction was 19 MW.

Energy Efficiency (EE) Funding Sources

MID presently exceeds the required annual funding level for public benefit programs (2.85% of revenue - AB1890/AB995) and has for several years. Over time, low income and renewable energy programs have grown significantly and now comprise the majority of public benefit expenditures, which has led MID to fund EE from both public benefit and procurement sources. MID's 2010 EE funding from public benefits and procurement was approximately $1,723,000 and $1,935,000, respectively. Essentially, MID uses public benefit dollars for the non-incentive components of EE program costs and procurement dollars for the customer incentive component of EE program costs.

Evaluation, Measurement & Verification (EM&V) Activities

In 2010, MID made continued efforts to obtain independent, third-party review of its EE programs. MID hired Navigant to perform EM&V on its 2009 programs. Overall, the verified savings exceeded claimed savings (realization rate was 103%). That report is posted on the POU EM&V website hosted by NCPA. In addition, MID hired Power Services, Inc. (CVMP qualified) to perform M&V on selected 2010 projects, the scope of which encompassed process cooling, insulation, lighting, duct sealing and compressed air. For 2011, MID will conduct EM&V of its 2010 programs and will solicit bids for performing that work.

Smart Grid Activities

MID completed its initial steps toward development of the smart grid. MID now has 100% advanced metering infrastructure (AMI) implemented across its service area, which exceeds 100,000 meters. In addition, MID selected equipment for its distribution system automation project that is intended to control end-of-line voltage. That project received approx. $1.5 million ARRA Smart Grid Investment Grant. For 2011, MID will continue implementing the distribution automation project as well as prepare and adopt a Smart Grid Deployment Plan (per SB17).

MODESTO IRRIGATION DISTRICT

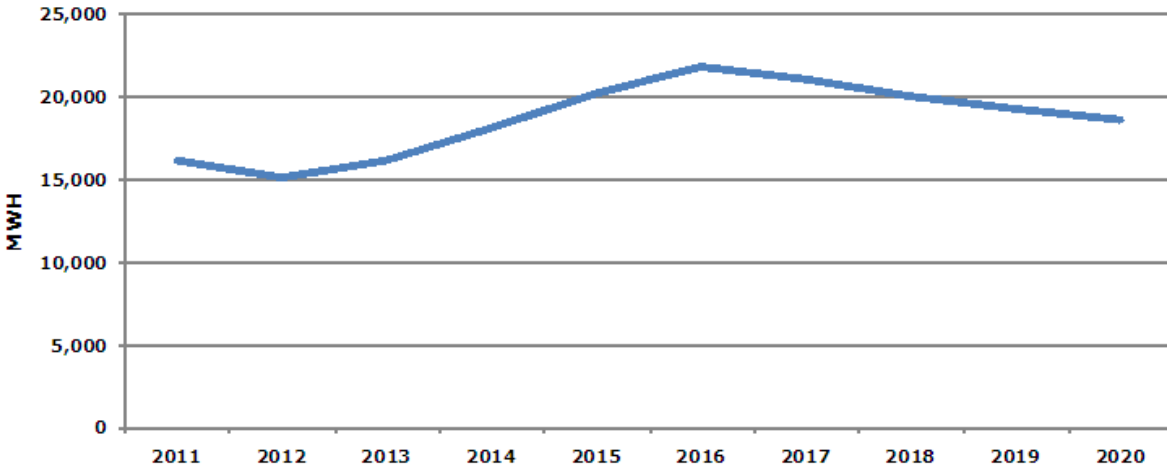
Time Period for Reporting Data: Calendar Year ending 12/31/2010

Modesto Irrigation District		Resource Savings Summary						Cost Summary			
Program Sector (Used in CEC Report)	Category	Units Installed	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	911	9	9	21,135	211,352	117	$ 31,885		$ 2,614	$ 34,499
HVAC	Res Cooling	991	191	116	152,139	2,600,643	1,663	$ 230,100	$ 51,266	$ 42,929	$ 324,295
Appliances	Res Dishwashers										
Consumer Electronics	Res Electronics	25			1,875	28,125	16		$ 5,447	$ 398	$ 5,845
HVAC	Res Heating										
Lighting	Res Lighting	7,612	323	45	255,767	2,301,905	1,229	$ 6,480	$ 65,285	$ 11,762	$ 83,527
Pool Pump	Res Pool Pump										
Refrigeration	Res Refrigeration	589	124	124	848,106	15,265,901	8,281	$ 18,585	$ 110,817	$ 197,388	$ 326,790
HVAC	Res Shell	4,133	241	246	164,058	2,759,097	1,559	$ 204,140	$ 402,013	$ 39,258	$ 645,411
Water Heating	Res Water Heating	74			4,008	35,179	19	$ 25	$ 1,547	$ 454	$ 2,026
Comprehensive	Res Comprehensive	10			2,177	32,661	20		$ 5,000	$ 495	$ 5,495
Process	Non-Res Cooking	11	2	2	14,617	175,402	92	$ 605		$ 1,040	$ 1,645
HVAC	Non-Res Cooling	406	85	74	267,455	4,011,828	2,226	$ 56,625		$ 26,668	$ 83,292
HVAC	Non-Res Heating	1	3	3	37,086	556,295	293	$ 2,884		$ 3,443	$ 6,327
Lighting	Non-Res Lighting	9,540	863	601	4,287,688	48,803,941	26,686	$ 251,444		$ 306,689	$ 558,133
Process	Non-Res Motors	1	9	9	81,973	1,229,594	654	$ 6,376		$ 7,696	$ 14,072
Process	Non-Res Pumps	4	18	18	133,183	1,997,744	1,082	$ 9,608		$ 11,181	$ 20,788
Refrigeration	Non-Res Refrigeration	23,537	1,445	614	8,288,660	95,974,285	50,849	$ 556,984		$ 596,295	$ 1,153,279
HVAC	Non-Res Shell	13,020	21	21	177,069	1,770,686	985	$ 9,765		$ 11,176	$ 20,941
Process	Non Res Process	4	221	221	1,815,981	27,239,720	14,486	$ 145,675		$ 170,478	$ 316,153
Comprehensive	Non Res Comprehensive										
Other	Other	863	4	4	247,099	813,298	443	$ 2,000	$ 34,020	$ 8,587	$ 44,607
SubTotal		61,731	3,559	2,107	16,800,076	205,807,653	110,698	$ 1,533,180	$ 675,395	$ 1,438,551	$ 3,647,126
T&D	T&D										
Total		61,731	3,559	2,107	16,800,076	205,807,653	110,698	$ 1,533,180	$ 675,395	$ 1,438,551	$ 3,647,126

EE Program Portfolio TRC Test	**2.88**

Excluding T&D

Energy Savings Targets 2011-2020



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
MWH	16,207	15,136	16,154	18,161	20,252	21,857	21,102	20,074	19,258	18,623
% of Load Forecast	0.63%	0.58%	0.61%	0.67%	0.74%	0.78%	0.74%	0.69%	0.65%	0.62%

MORENO VALLEY UTILITY

- The City of Moreno Valley incorporated in 1984 and established a municipal utility in 2001. Moreno Valley Utility (MVU) began serving its first customers in February 2004. MVU serves residential, commercial, and industrial customers.
- Moreno Valley Utility currently serves approximately 5,400 customers. Residential customers have historically comprised the majority of the energy sales for MVU, however residential energy sales now account for approximately 37% of total sales.
- All customers' facilities are six years old or less, occupying buildings that meet Title 24 requirements. This results in a lower Energy Efficiency Potential.
- Peak Demand: 25.8 megawatts
- Annual Energy Use: 90 gigawatt-hours
- Mission: Moreno Valley Utility strives to provide reliable, economical, and safe electric distribution service to benefit the community and the City.

Moreno Valley Utility Energy Efficiency Program Highlights

In FY 09/10, Moreno Valley spent approximately $34,000 in incentives to increase energy efficiency for the community. Approximately $32,000 was spent in a major customer incentive payments, and energy audits. The recommended HVAC, lighting and building envelope upgrades from the audit reports for the municipal facilities will be funded by Energy Efficiency and Conservation Block Grant (EECBG) the city received in late 2009.

Current Customer Programs and Projects:

- Energy Efficiency Program: Moreno Valley Electric Utility offers incentives to developers for buildings that exceed California Title 24 requirements by more than 10 percent.
- Energy Audits**:** Provided customers with a variety of recommendations for reducing energy consumption, when requested. Some of these audits were provided by community organizations that increase awareness of existing energy efficiency programs.
- Val Verde Unified School District Energy Incentive Agreement: In return for an energy efficiency incentive, Val Verde's Indian Middle School design far exceeded Title 24 requirements which resulted in an Energy Incentive Agreement with MVU. The project's energy savings are approximately 298,000 kWh, which resulted in incentives of $4300 for FY 08/09.
- Stater Bros. Energy Efficiency Project: Multiple energy efficiency measures (EEMs) were simulated for the new Stater Bros market (using DOE-2) which calculated a gross energy savings of 627,271 kWh as well as a gross demand reduction of 162 kW. Under MVU'S Energy Efficiency Program, this resulted in an incentive of approximately $31,000.

Proposed Energy Efficiency Projects and Services: (2010-2011)

- Residential Energy Efficiency Programs: All homes within the service territory are less than seven years old, which make it difficult to offer building envelope upgrades. MVU is developing innovative programs to encourage energy efficiency. These include direct-to-customer CFL Giveaways and Energy Star® rated electric appliance rebates.
- Ross Distribution Center Energy Efficiency Projects: MVU's largest customer is exploring projects to reduce annual energy consumption and reduce their peak demand significantly.
- Highland Fairview Corporate Park Project: Highland Fairview is proceeding with the development of a corporate park which will be served by MVU. There will be five buildings which includes a 1.8 million square feet building anchored by a Fortune 500 company. The design team for this project has expressed interest in obtaining LEED certification, and MVU is working with Highland Fairview in maximizing energy efficiency on this project. The Project is expected to be completed and energized in third quarter 2011.

Demand Reduction Programs:

Staff is evaluating potential technologies for future demand reduction programs, such as smart metering and thermal energy storage.

Evaluation, Measurement and Verification:

Engineering analysis programs, such as DOE-2, are the basis for calculated energy savings and incentive calculations.

MORENO VALLEY UTILITY

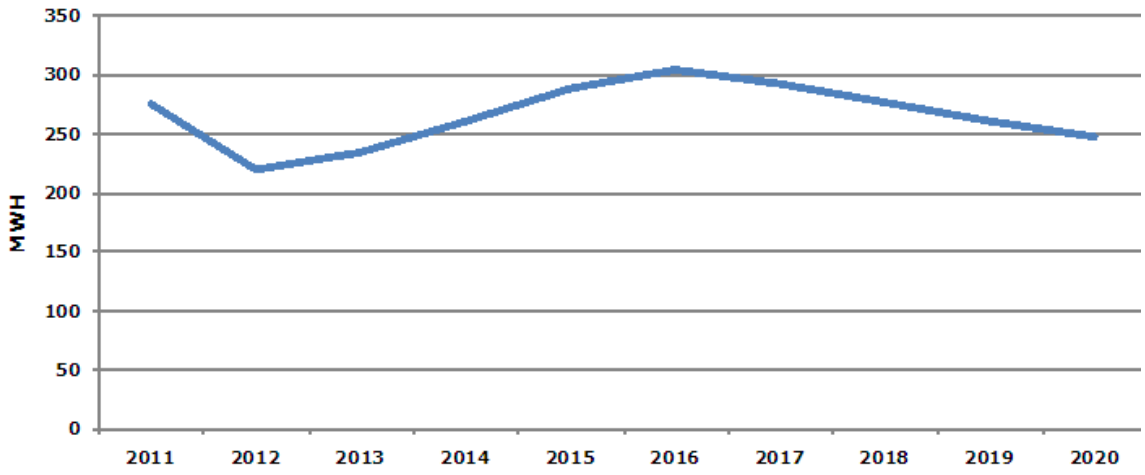
Time Period for Reporting Data: Fiscal Year ending 6/30/2010

Moreno Valley		Resource Savings Summary						Cost Summary			
Program Sector (Used in CEC Report)	Category	Units Installed	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers										
HVAC	Res Cooling										
Appliances	Res Dishwashers										
Consumer Electronics	Res Electronics										
HVAC	Res Heating										
Lighting	Res Lighting										
Pool Pump	Res Pool Pump										
Refrigeration	Res Refrigeration										
HVAC	Res Shell										
Water Heating	Res Water Heating										
Comprehensive	Res Comprehensive										
Process	Non-Res Cooking										
HVAC	Non-Res Cooling										
HVAC	Non-Res Heating										
Lighting	Non-Res Lighting										
Process	Non-Res Motors										
Process	Non-Res Pumps										
Refrigeration	Non-Res Refrigeration										
HVAC	Non-Res Shell										
Process	Non Res Process										
Comprehensive	Non Res Comprehensive	1	130	130	501,817	5,018,168	2,789	$ 31,378			$ 31,378
Other	Other										
SubTotal		1	130	130	501,817	5,018,168	2,789	$ 31,378			$ 31,378
T&D	T&D										
Total		1	130	130	501,817	5,018,168	2,789	$ 31,378			$ 31,378

EE Program Portfolio TRC Test	**9.82**

Excluding T&D

Energy Savings Targets 2011-2020



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
MWH	274	219	234	260	288	304	292	276	261	247
% of Load Forecast	0.31%	0.25%	0.26%	0.29%	0.33%	0.34%	0.33%	0.31%	0.29%	0.28%

CITY OF NEEDLES

- The City of Needles Public Utilities Department was established in 1982.
- Needles is located in Western Area Power Authority Administration control area and is not part of the CAISO grid.
- Needles has 2,972 meters, serving 2,525 residential customers, 447 commercial customers, 37 commercial demand customers, and 4 master metered and 1 municipal customers.
- Total energy sales are 55,245,174 kilowatt-hours (FY 2009-10); 46.4 percent is residential sales, 53.6 percent is commercial and the remainder is master metered and municipal sales.
- Approximately 45% of Needles power comes from hydroelectric
- 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. The Needles City Council approved Resolution No. 7-24-07 1 on July 24, 2007 adopting the provisions of California Assembly Bill 2021 – *Public Utilities Energy Efficiency.* The budget amount of $150,000.00 adopted for the program was based upon the Rocky Mountain Institute's analysis *" to identify all potentially cost-effective electricity efficiency savings and establish annual targets for energy efficiency savings and demand reduction for the next 10-year period"*

The City of Needles' energy efficiency programs are designed to reduce the summer air conditioning loads and increase the annual load factor. In FY 2009-10, the City of Needles' energy efficiency programs reduced peak demand by 178 kilowatts and 177,814 kilowatt-hours (per Western Area Power Authority approved Integrated Resource Plan Annual Progress Report for 2010). *Note: T*he kilowatt savings are derived from the number of hours that air conditioners are used in Needles (essentially all hours when temperature is greater than 90 degrees – April through October).

Note: At FYE 6/30/2009 the total combined residential and commercial usage was 57,755,675 kilowatts hours. At FYE 6/30/10, the combined residential and commercial usage was 55,245,174 kilowatt hours, a decrease of 2,530,501 kilowatt hours or 4.37987%.

The City of Needles will continue to budget $150,000 annually for the existing energy efficiency programs and will allocate additional funding if customer demand is greater than the program allocation**.** The $150,000.00 is funded by ratepayers via a line item on their electric bill (*Mandated Conservation* at $0.0032/kWh). The prerequisite for eligibility for the energy efficiency program (City pays for 14 or higher SEER rated air conditioners, evaporative coolers and refrigerators) is that the rate payer's apply for weatherization through the San Bernardino Community Action Coalition ("HEAP"). Needles budgeted $50,000 for solar programs beginning in FY 2008/09.

Current Residential Customer Programs:

- Air conditioner, evaporative cooler, refrigerator replacement with SEER 14 or higher with proof of home weatherization completed.

- 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: (FY 2010-11)

Maintain Existing Programs at current levels and monitor effectiveness for potential expansion (finances allowing). Planned activities include mounting a *"Get a Tree for Free"* program whereby, the City will fund $2,500.00 ($25.00 per tree plus sales tax) to have residents purchase up to 3 trees each at the local nursery. Once they bring their sales slip in and Code Enforcement verifies that the trees have been planted on the appropriate elevation of the home to optimize shade value, the customer's electric bill will be credited for the amount that the resident paid for the tree(s).

City of Needles Demand Reduction Programs:

The City of Needles demand reduction program reduction target calls for 0.2mW for FY 2010-2011.

CITY OF NEEDLES

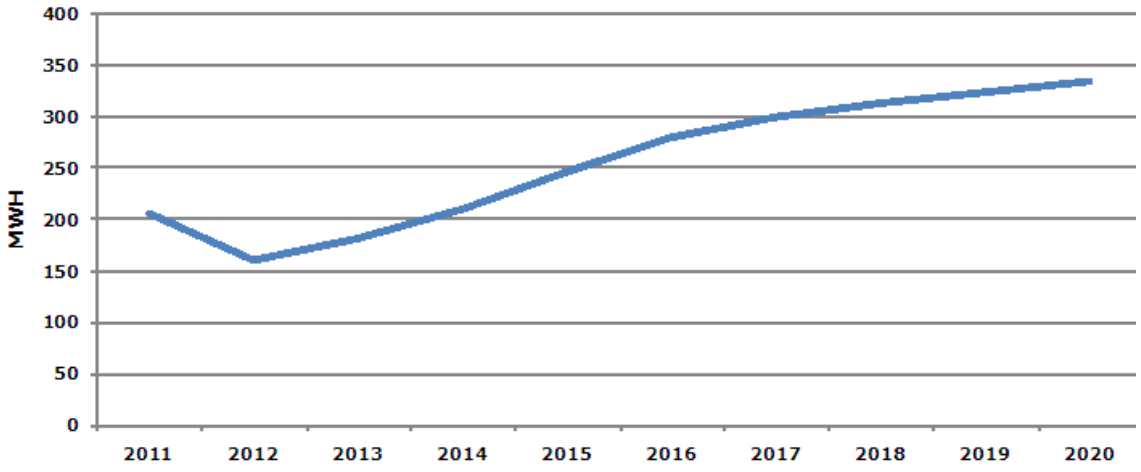
Time Period for Reporting Data: Fiscal Year ending 6/30/2010

Needles		Resource Savings Summary						Cost Summary			
Program Sector (Used in CEC Report)	Category	Units Installed	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers										
HVAC	Res Cooling	35	2	2	2,828	50,904	32	$ 150,000			$ 150,000
Appliances	Res Dishwashers										
Consumer Electronics	Res Electronics										
HVAC	Res Heating										
Lighting	Res Lighting										
Pool Pump	Res Pool Pump										
Refrigeration	Res Refrigeration										
HVAC	Res Shell										
Water Heating	Res Water Heating										
Comprehensive	Res Comprehensive										
Process	Non-Res Cooking										
HVAC	Non-Res Cooling										
HVAC	Non-Res Heating										
Lighting	Non-Res Lighting										
Process	Non-Res Motors										
Process	Non-Res Pumps										
Refrigeration	Non-Res Refrigeration										
HVAC	Non-Res Shell										
Process	Non Res Process										
Comprehensive	Non Res Comprehensive										
Other	Other										
SubTotal		35	2	2	2,828	50,904	32	$ 150,000			$ 150,000
T&D	T&D										
Total		35	2	2	2,828	50,904	32	$ 150,000			$ 150,000

EE Program Portfolio TRC Test	

Excluding T&D

Energy Savings Targets 2011-2020



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
MWH	205	160	181	211	246	280	299	312	323	334
% of Load Forecast	0.33%	0.25%	0.27%	0.30%	0.33%	0.36%	0.37%	0.37%	0.37%	0.37%

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 its customers. It serves about 29,000 electric customers. It has a peak load of 189 megawatts with sales of about 1,040 gigawatt hours annually. CPAU successfully met its FY 2010 efficiency savings goals for water, electricity and natural gas. CPAU has many demand-side management goals for all its utilities that are designed to support the City's environmental and sustainable policies.

This achievement is attributed to the increased number of programs available for all customer types, as well as an expansion of programs administered by third party agencies. Such third party program administration enhances the City's ability to set and achieve greater efficiency goals while freeing up staff and other resources for additional programs and projects.

DSM Goals for FY 2010

Achievements Versus Goals for Green House Gas Emission Reductions

Program	2020 Goal CO2 Tonnes Reduced	2010 Achievement CO2 Tonnes Reduced
Electric Efficiency	15,800	6,022
Solar Electric (PV)	3,800	1,113
Natural Gas Efficiency	7,300	1,536
Solar Water Heating	1,500	12

All Programs Summary Report for the period July 1, 2009 to June 30, 2010

Program	# of Applicants	Rebate $ Issued*	Savings: Gross kWh/Year	Savings: Peak kW	Savings: Therms/ Year	Savings: CCF/ Year
Efficiency Programs						
Residential Smart Energy	3,109	$127,403	626,145	0	35,462	
REAP (low income)	57	$46,792	121,798	0	3,613	
Residential Water	1,083	$76,902			6,682	11,616
Commercial Advantage	68	$385,986	2,992,717	188	37,391	
Right Lights+	33	$282,036	2,207,349	365	1,989	
Large Business Program (Enovity)	4	$80,780	503,600	141	18,080	
Commercial Refrigeration (NRM)	7	$67,688	131,839	0	0	
Commercial Water	227	$44,079	3,480		3,262	55,414
Efficiency Subtotal:	**4,588**	**$1,111,666**	**6,586,928**	**694**	**106,479**	**67,030**
Renewable Programs						
Solar Water Heat Res.	12	$12,926	-	0	1,514	
Solar Water Heat Com.	0	$ -	-	0	0	
PV Partners	53	$780,863[1]	344,000	215[2]	0	
Palo Alto Green Members	5,981	$ -	-	0	0	
Renewable Subtotal:	**6,052**	**$793,789**	**344,000**	**0**	**1,514**	**0**
Total:	**10,640**	**$1,905,455**	**6,930,928**	**694**	**107,993**	**67,030**

This figure does not reflect costs for audits, direct installation services, nor program administration fees.

[1] Includes performance based incentives paid for system installed before this reporting period

[2] The installed PV capacity was 215 kilowatts, but does not likely contribute to peak demand savings

Greenhouse Gas Reduction

The City's Climate Protection Plan includes CPAU's electric and natural gas efficiency goals to assist the City in meeting its sustainability goals. As seen in the table below, CPAU significantly exceeded the electric efficiency goal, but made more limited progress in other areas, primarily because natural gas upgrades are more expensive and have longer payback periods. This is particularly the case for solar water heating, which is not cost-effective in this climate.

Program	2020 Goal CO2 Tonnes Reduced	2010 Achievement CO2 Tonnes Reduced
Electric Efficiency	15,800	6,022
Solar Electric (PV)	3,800	1,113
Natural Gas Efficiency	7,300	1,536
Solar Water Heating	1,500	12

Energy and Water Efficiency as a Supply Resource

The goal of programs promoting efficiency is to be cost-effective when compared to the cost of purchasing new supplies. The table below summarizes purchase costs for supply and efficiency on a unit basis:

		Per Unit Costs			
		FY 2008	**FY 2009**	**FY 2010**	**Future**
		Efficiency	Efficiency	Efficiency	Supply
Water	$/CCF	$ 3.49	$ 4.57	$ 3.07	$ 3.69
Gas	$/therm	$ 0.752	$ 0.496	$ 0.408	$ 0.91
Electric	$/kWh	$ 0.029	$ 0.0465	$ 0.0638	$ 0.11

Expansion of Programs

During the past three years, CPAU has expanded the number and variety of efficiency programs in all utilities and for all customer classes. From residential usage information and comparison in the Home Energy Reports to industrially-focused process, natural gas and chiller programs through the Commercial and Industrial Energy Efficiency Program, there are many more ways for customers to access efficiency measures than ever before. In addition, funding has been significantly enhanced for ongoing programs that were found to be cost-effective, such as the Right Lights+ energy saving program for small businesses and the Santa Clara Valley Water District water conservation programs, so their reach could be expanded. For the upcoming year, further additions to the DSM programs portfolio are being solicited through a Request for Proposals process. See Appendix A for a complete listing of all current DSM program activities.

Expenditures

CPAU programs help customers get the most for their utility dollar, reduce their demand for electricity, natural gas and water and reduce greenhouse gas emissions. To achieve its aggressive resource efficiency goals, Palo Alto has expended about $22 million for demand-side management (DSM) between 2003 and 2010. For FY 2010, about $6 million was spent from public benefit and supply funds.

CPAU estimates that it will spend a similar amount in FY 2011 from the operating budget and transfers from reserves. Of this $6 million, $4.8 million is from electric public benefit and supply-purchase funds, about $800,000 is from natural gas public benefit funds, and just under $500,000 is from water DSM funds.

DSM Program Overview

CPAU's major DSM programs are summarized below. In addition to these programs, CPAU offers a wide variety of educational and niche services to serve all customer needs.

Residential Smart Energy Program:
Purpose: improving residential electric and gas use efficiency through rebates
Primary Expenditure: $127,403 in rebates
Customer Impact: 4,416 upgrades to appliances, equipment and home shells, including 2,056 Compact Fluorescent Light (CFL) and Light Emitting Diode (LED) bulbs, 114 heating and cooling systems and 94 insulation installations, 1,350 appliances, 52 water heaters and 10 pool pumps. CPAU also replaced 740 holiday incandescent light strands with high-efficiency LEDs.
Savings: Electric---626,145 kWh (gross) and 500,916 kWh (net).
Natural gas---35,462 therms

Residential Energy Assistance Program:
Purpose: improving low-income residential electric and gas use efficiency at no cost
Primary Expenditure: $168,189 in direct subsidies to contractors
Customer Impact: 57 low-income homes received lighting and shell upgrades
Savings: Electric---121,798 kWh (gross) and 97, 438 kWh (net)
Natural gas---3,613 therms

Residential Green@Home:
Purpose: improving residential electric, gas and water use efficiency through in-home audits
Primary Expenditure: $60,000 in direct subsidies to contractor
Customer Impact: 88 residential home energy audits completed (performed by volunteers)
Savings: No immediate savings result from the audits themselves; however, customers received personalized advice on specific ways to reduce their water and energy costs.

Residential--Santa Clara Valley Water District (SCVWD) Program
Purpose: improving residential water use efficiency in partnership with the SCVWD through rebates and audits
Primary Expenditure: $76,902 in rebates and $26,530 in reimbursed audit and administrative fees
Customer Impact 1,151 residents provided with services including indoor and outdoor home water-use audits (340), rebates for toilets (229), washing machines (514), landscape upgrades (61) and evapotranspiration (ET) controllers for irrigation systems (7).
Savings: Water---11,616 CCF (almost 8.7 million gallons)
Natural gas---6,682 therms

Commercial Advantage Program
Purpose: improving business electric, gas and water use efficiency through rebates
Primary Expenditure: $385,986 in rebates

Customer Impact: 68 customers received rebates for lighting upgrades, wall and ceiling mounted motion sensors, LED exit signs, boilers, pipe insulation, variable frequency drives, PC power management software, night covers for display cases, anti-sweat heater controls, auto-closers for cooler doors, window film, new construction projects and custom electric and natural gas saving projects.
Savings: Electric---2,992,717 kWh (gross) and 2,797,054 kWh (net)
Natural gas---37,391 therms

Right Lights+ Program
Purpose: improving small business' electric efficiency through installation and rebates
Primary Expenditure: $282,036 in rebates; $466,288 in subsidies to contractor (Ecology Action) to perform audits, supply products and arrange contractors to complete work.
Customer Impact: 30 customers received onsite audits and efficiency rebates on a variety of lighting, sensors and commercial kitchen upgrades as well as for door gaskets, LED exit signs, vending machine controls, strip curtains for coolers and customized projects.
Savings: Electric---2,207,349 kWh (gross) and 1,765,879 kWh (net)
Natural gas---1,989 therms

Commercial Refrigeration (NRM): $68,183
Purpose: improving business' electric efficiency through installations and rebates
Primary Expenditure: $67,668 in rebates and $515 in third-party administrator fees (NRM)
Customer Impact: 7 business customers with commercial kitchens were given rebates for equipment upgrades with longer paybacks, such as walk-in cooler controls and motors, LED case lights and LED lights for walk-in coolers.
Savings: Electric ---131,839 kWh (gross) and 105,471 kWh (net)

Commercial and Industrial Energy Efficiency Program
Purpose: improving large business electric and gas efficiency through audits and rebates
Primary Expenditure: $337,930 for third-party contractor assistance with system replacements (Enovity)
Customer Impact: 4 large commercial customers replaced systems including an air cooled chiller, various controls, linear fluorescents, occupancy sensors, boilers and insulation on a steam distribution system.
Savings: Electric---503,600 kWh (gross) and 402,880 kWh (net)
Natural gas---18,080 therms

Commercial--Santa Clara Valley Water District (SCVWD) Program
Purpose: improving business water use efficiency with the SCVWD through audits and rebates
Primary Expenditure: $44,079 in rebates, $43,462 for direct installations and $35,700 for business audits and administrative fees.
Customer Impact: 265 business customers received services that included indoor and outdoor audits, irrigation audits and rebates for toilets (193), washing machines (16), landscape conversions (10) and evapotranspiration (ET) controllers for irrigation systems (3).
Savings: Water---55,414 CCF (almost 41.5 million gallons)
Electric---3,480 KWh (gross)
Natural gas---3,262 therms

Evaluation, Measurement and Verification

To meet the requirements of state law, CPAU contracted with a third party consultant---Navigant, formerly Summit Blue, and its subcontractor Energy Market Innovations, Inc.---to provide evaluation, measurement and verification services (EM&V) for the public benefits programs. The EM&V effort covers both impact evaluation, which measures the program-induced energy savings, and process evaluation, which assesses the program implementation procedures to identify areas for improvement. The consultant completed its second report for the FY 2009 electric efficiency programs in early 2010.

CPAU has a number of energy efficiency and renewable energy programs in both the residential and non-residential sectors. About 70% of the savings achieved comes from businesses and therefore the impact evaluation efforts for FY 2009 were centered on non-residential projects. In addition to impact evaluation, the consulting team also performed process evaluation focusing on Smart Energy (residential) and Right Lights+ (small business) Programs.

Results from the impact evaluation show a realization rate of 90% (ratio of verified energy savings to claimed energy savings) for the Commercial Advantage Program and a realization rate of 85% for the Right Lights+ program. The report also provides recommendations to improve the realization rate for these two programs. Evaluation efforts for the FY 2010 gas and electric programs are currently underway and are expected to be completed in early 2011.

Research and Development Projects

During FY 2010, CPAU began working on a variety of research and development projects. Demand response, electric vehicle, and smart metering/smart grid projects are all being reviewed for development within the Utilities Department. The DSM staff may become involved to a greater extent with these programs as they get closer to implementation.

Demand Response and Smart Grid

CPAU has had a voluntary demand response program with its largest customers since 2001. Under this program, customers reduce load when called upon by the utility to meet system reliability requirements. A pilot project to pay customers for their reduced load under a full demand response program is in development and is expected to be available to customers in summer 2011. CPAU is in the process of developing a strategic plan for the implementation of a smart grid. The full implementation of the program is at least one year away.

Energy Efficiency Community Block Grant (EECBG) Stimulus Funds Projects

Background: The Energy Efficiency Community Block Grant (EECBG) program was created by Congress in 2007 and was funded for the first time by American Recovery and Reinvestment Act (ARRA) of 2009 with an appropriation of $3.2 billion. The EECBG Program is administered by the Office of Energy Efficiency and Renewable Energy of the U.S. Department of Energy (DOE). On March 26, 2009, DOE announced the EECBG formula grant allocations, and the City of Palo Alto was eligible to receive up to $663,000. Palo Alto's application was awarded on September 21, 2009 for the full amount. The first set of quarterly financial and project performance reports was submitted to the Department of Energy and to the Office of Management and Budget on January 7, 2010.

Projects Funded: The two demonstration projects developed for the EECBG application include the early replacement of High Pressure Sodium (HPS) street lights on selected streets with Light Emitting Diode (LED) street lights and implementation of Home Energy Reports for residents. The EECBG funds to be allocated to the LED Streetlight Project and the Home Energy Report project are $450,000 and $213,000 respectively. Reports have been delivered in November 2010 and January 2011. Customers are generally pleased with the program. First results on energy savings will be available in mid-2011. The Request for Quote for LED streetlights was issued in August 2010 and the selection of LED streetlight vendor was made by Council in November 2010. Lights are to be installed in the first half of 2011.

CITY OF PALO ALTO UTILITIES

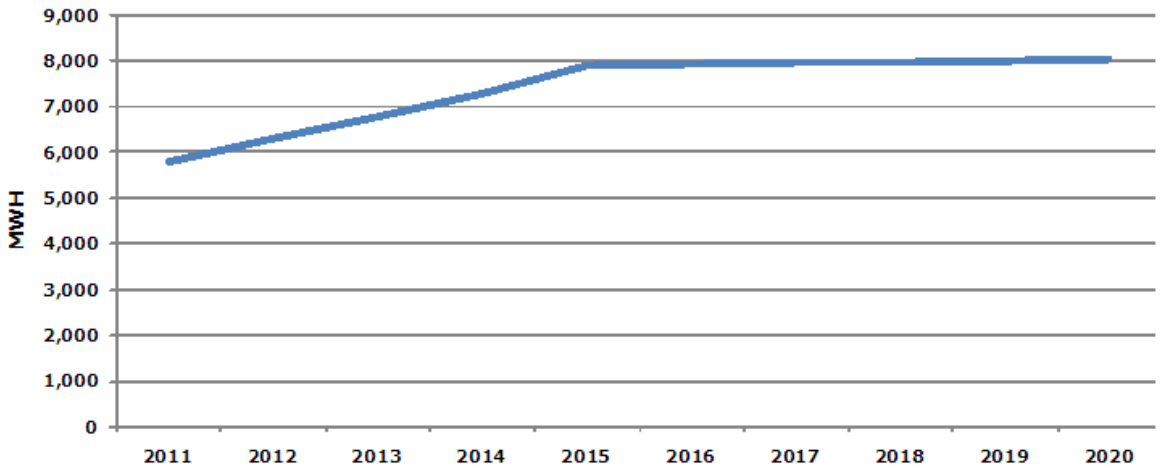
Time Period for Reporting Data: Fiscal Year ending 6/30/2009

Palo Alto		Resource Savings Summary						Cost Summary			
Program Sector (Used in CEC Report)	Category	Units Installed	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	528	5	5	70,274	702,744	388	$ 37,925		$ 15,168	$ 53,093
HVAC	Res Cooling	11	1	1	3,482	62,683	40	$ 2,000		$ 2,022	$ 4,022
Appliances	Res Dishwashers	298	2	2	9,545	124,082	69	$ 14,221		$ 2,747	$ 16,968
Consumer Electronics	Res Electronics										
HVAC	Res Heating	7	2	2	402	7,202	4	$ 1,833		$ 212	$ 2,045
Lighting	Res Lighting	3,607	444	382	175,386	2,482,133	1,325	$ 24,446		$ 64,671	$ 89,117
Pool Pump	Res Pool Pump	10	8	4	11,200	112,000	62	$ 2,000		$ 2,417	$ 4,417
Refrigeration	Res Refrigeration	524	47	47	303,303	5,459,458	2,962	$ 25,156		$ 120,594	$ 145,751
HVAC	Res Shell	10,367	2,445	2,445	24,331	483,761	273	$ 29,515		$ 12,641	$ 42,156
Water Heating	Res Water Heating	3			430	2,148	1	$ 120		$ 42	$ 162
Comprehensive	Res Comprehensive	17						$ 1,275			$ 1,275
Process	Non-Res Cooking										
HVAC	Non-Res Cooling	267	20	20	247,206	3,313,998	1,777	$ 57,800		$ 89,254	$ 147,054
HVAC	Non-Res Heating										
Lighting	Non-Res Lighting	6,520	469	444	2,282,990	21,999,851	12,190	$ 340,583		$ 770,981	$ 1,111,564
Process	Non-Res Motors										
Process	Non-Res Pumps										
Refrigeration	Non-Res Refrigeration	2,472	172	63	748,033	5,220,633	2,799	$ 84,749		$ 145,378	$ 230,127
HVAC	Non-Res Shell	8,988	14	14	122,237	1,222,368	680	$ 12,134		$ 26,350	$ 38,483
Process	Non Res Process										
Comprehensive	Non Res Comprehensive	1,514,924			1,211,939	1,211,939	674	$ 158,841		$ 27,527	$ 186,368
Other	Other	379	3	8	58,784	307,840	168	$ 10,325		$ 6,518	$ 16,843
SubTotal		1,548,922	3,630	3,438	5,269,542	42,712,840	23,412	$ 802,922		$ 1,286,523	$ 2,089,445
T&D	T&D										
Total		1,548,922	3,630	3,438	5,269,542	42,712,840	23,412	$ 802,922		$ 1,286,523	$ 2,089,445

EE Program Portfolio TRC Test	**1.92**

Excluding T&D

Energy Savings Targets 2011-2020



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
MWH	5,799	6,290	6,782	7,276	7,906	7,927	7,950	7,973	7,999	8,026
% of Load Forecast	0.60%	0.65%	0.70%	0.75%	0.80%	0.80%	0.80%	0.80%	0.80%	0.80%

PASADENA WATER AND POWER (PWP)

Background and Goals

- Established in 1906, Pasadena Water and Power ("PWP") today provides electric service to more than 63,577 metered accounts over a 23 square-mile service area.
- Peak demand: highest recorded was 320 megawatts ("MW") in September 2010; 293 MW in FY 2010.
- Annual energy sold in FY2010 was 1,178,005 megawatt-hours ("MWh")
- The mission of PWP's energy efficiency programs is to promote the use of socially and environmentally responsible energy efficient measures and customer assistance programs for the benefit of all Pasadena residents and business customers.
- On September 18, 2006, the City of Pasadena adopted the *United Nations Urban Environmental Accords (*http://www.wed2005.org/pdfs/Accords_11x17.pdf*)*, calling for a 10% system demand reduction by 2012 as one of 21 environmental goals for the city.
- On December 19, 2005, the City of Pasadena adopted the Green Building Practices Ordinance requiring new standards for new construction and tenant improvements. These standards incorporate energy and water efficiency measures into the design, construction and maintenance of public and private buildings.
- On April12, 2010, the City of Pasadena adopted revised energy efficiency goals of 12% by 2020 (in accord with AB2021's three-year cycle review requirement)

Energy Efficiency Program Mission:

- Meet or exceed energy efficiency goals established by the Pasadena City Council.
- 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.
- Demonstrate and evaluate new and emerging technologies which encourage market transformation of energy efficiency and peak load reduction.

Actual (FY09/10) Energy Efficiency Program Highlights

- PWP's FY09/10 energy efficiency program expenditures:
  - $4,302,255, or 2.6% of PWP's total retail rate revenues.
  - Funded from Public Benefit Fund revenues, which totaled $6,841,803.
- Summary of FY09/10 energy efficiency program results:
  - 200,288 megawatt-hours (MWh) lifetime energy savings
  - 14,384 MWh annual savings (1.22% of FY09/10 retail sales)

    - 3.9 MW peak load reduction (1.3% of FY09/10 system peak)
    - Average cost-effectiveness test of 1.56 TRC and 6.9 PAC:
- FY09/10 energy efficiency program results by customer sector:
    - Residential efficiency programs provided 1,720 equipment rebates saving 1,385 MWh per year and reducing peak load by 0.326 MW.
    - Commercial efficiency programs provided 151 rebates saving 12,998 MWh per year and reducing peak load by 3.601 MW.
    - PWP's water efficiency programs saved 13.9 million gallons, resulting in 175 MWh per year energy savings (shown on the E3 as "Non-Res Pumps"); PWP's Public Benefit Fund provided $52,611 in incentives to PWP's Water Fund for the value of the energy savings
- Additional PWP activities not funded by the Public Benefit Fund included Transmission and Distribution (T&D) system upgrades, saving 97 MWh per year
- Combined first year energy savings for FY09/10 activities from Public Benefit Programs, Water Conservation Programs and T&D upgrades total over 14,656 MWh and peak load reduction of 3.927 MW.
- Four-year energy efficiency program summary (FY06/07 to FY09/10) results:
    - 53,638 MWh cumulative annual savings (115% of adopted goal)
    - 12.1 MW peak load reduction (220% of adopted goal for efficiency programs)

Actual (FY09/10) Commercial Customer Programs:

- Energy Efficiency Partnering (EEP) Program: This program allowed any building technology that saves energy to qualify for a rebate. Provided an electronic processing loop to speed up rebate processing and provide installers with an immediate customized rebate estimate. Rewarded 35 customers over $2,750,900 rebates for 108 projects that achieved cost effective energy savings and peak load reductions.
- Direct Install Emerging Technologies (DIET) Program: Provided 27 customers at 43 sites with no cost site evaluations installation of four innovative efficient technologies, included daylight harvesting, HVAC Ultraviolet, hotel room keycard, and CO2 sensors. Limited expenditure of up to $25,000 per site.
- High Performance Building Program: Offered incentives for new or remodeled buildings which exceed Title 24 energy standards by at least 12 percent. The program matched one month's electricity savings (in dollars) for each percentage greater than Title 24 code. Pasadena is built out and redevelopment activity has decreased with the current economy.
- Technical Assistance: The Technical Assistance program provided walk-through assessments of facilities and information on appropriate efficiency technologies to business customers.
- Business Energy Efficiency Outreach & Education: Promoted PWP's commercial energy conservation and efficiency programs via events, brochures and advertising.

Actual (FY09/10) Residential Customer Programs:

- Energy Star® Home Incentive Program: Provided 910 rebates to 897 customers for the purchase and installation of high efficiency items including refrigerators, hard-wired lighting fixtures and ceiling fans with attached light kits.
- Refrigerator Recycling: Provided 285 rebates for the free pick up and recycling of old, inefficient refrigerators/freezers and/or retired second units. Customers were mailed a coupon for three

CFL's (redeemable at local community centers) and a check for $25 or $35 incentive for their old refrigerators and freezers, respectively.

- Income Qualified Refrigerator Exchange: Provided free pick up and recycling of old refrigerators and delivery of new high-efficient refrigerators to 219 qualified low-income residential customers.
- Efficient Home Cooling: Provided 743 rebates to 270 customers for the installation of new central air conditioners (14 SEER minimum), Energy Star® doors, windows and room air conditioners, solar attic fans, and sun shade window screens.
- Energy Use Assessments: Provided customers with the Home Energy Suite, an online self-serve energy analysis tool. 308 visitors used the online tool to perform 506 calculations. If the customer needed more direct assistance, PWP sent energy conservation experts to identify energy conservation opportunities and provide 38 customers with analyses of usage and high billing histories.
- Cool Trees Rebates: Provided rebates to 27 customers for the planting of 52 shade trees . Program allows up to 10 shade trees per household. Provided detailed guidebook and education at landscaping workshops on how to locate, plant and maintain shade trees.
- Residential Programs Outreach & Education: Promoted PWP's residential conservation tips and efficiency programs online, at events, in brochures, to HOA's direct mail pieces, workshops, and advertising in local papers.
- Efficient Pool Pump Program: Provided 15 rebates for up to $250 for efficient pool pump.

Actual (FY09/10) Program Evaluation, Measurement and Verification ("EM&V")

- Residential Programs
  - Energy Star: Contractor performed site verification of 10% of residential efficiency purchases and installations; also left behind 3 CFL's with each customer verified.
  - Refrigerator recycling and replacement program: Equipment verifications were provided by ARCA, the vendor who delivers and recycles these units.
  - KEMA/E3 Energy Efficiency Reporting Tool ("E3") used to calculate deemed energy savings on residential program activity.
- Non-Residential Programs
  - Utility staff and/or third party contractors performed pre-and post-installation equipment and installation verification on site for 100% of customer projects.
- Energy Efficiency Partnering (EEP):
  - Equipment: Independent contractor calculated energy reduction using the Department of Energy's eQuest building modeling software savings calculations for all mechanical projects including central plants, chillers, package units, and motors. Data loggers and CT's used to verify savings on 19 % of mechanical projects.
  - Lighting: Engineer-certified lighting calculator (Excel workbook) used to calculate lighting retrofit project energy savings based on actual hours of operation. Lighting accounted for 46% of the EEP projects.
- Direct Install Emerging Technologies (DIET)
  - Independent contractor verified savings for 51 (88%) of projects.
  - Third party engineers used data loggers, e-Quest and DOE 2 building modeling software, calibrated with customers actual 12-24 month billing history, for quantifying actual energy savings.

- Selected a qualified engineering firm to provide future EM&V analyses for PWP and discussed future plan and schedule (see "Budgeted FY10/11 EM&V/Program Evaluation Plan" below)

Budgeted (FY10/11) Energy Efficiency Program Objectives:

- Continue implementation of cost-effective programs for all customers.
- PWP used the "EERAM" tool provided for California's public utilities by Summit Blue Consulting to revise its next ten-year (2011-2010) efficiency goals.
- Expected FY 10/11 program expenditures over $4,700,000 may result in annual energy savings over 14,500 MWh and reduce peak demand by 3.3 MW (1.2% reduction in forecasted energy use) . Large non-residential customers continue to invest in aggressive efficiency projects as a result of PWP incentive programs.
- Cumulative FY06/07-FY10/11 savings are expected to exceed the cumulative annual goals for the four year period by 11%.
- Ensure that energy efficiency is a reliable resource to integrated resource planning by implementing the most cost-effective, reliable, and feasible energy efficiency measures for Pasadena customers.
- Measure and evaluate the impact and potential for energy efficiency measures and programs.

Budgeted (FY10/11) Commercial Customer Programs:

- Energy Efficiency Partnering Program ("EEP"): Features an online rebate calculator and allows any technology that saves energy to qualify for a rebate. Rewards projects that achieve the most cost effective energy and demand reductions. Participation is at a high level with the institutional sector. All public schools, the community college, municipal facilities and several large institutions are participating in this program.
- LED Street Signal Retrofit Project: Provides funds for LED replacements for municipal traffic signals and pedestrian indicators, managed by Pasadena's Public Works Department and installed by contractors.
- Direct Installation of Emerging Technology Program ("DIET"): Provides free evaluations and installation of innovative efficient technologies, up to $25,000 per metered account, at no cost to customer. Technologies include daylight harvesting, HVAC Ultraviolet, hotel room keycard, and CO2 sensors. Program closing this year.
- Direct Installation of Efficient Technology Program ("Energy DIET", in development):
    - High school and college students to perform pre-assessment of energy and water saving opportunities in small businesses.
    - Contractor to provide free technical evaluations and installation of best practice lighting, refrigeration and HVAC equipment.
    - Incentives up to $2,500 per location.
    - Targeted for hard-to-reach small business.
- High Performance Building Program: Offered incentives for new or remodeled buildings which exceed Title 24 energy standards by at least 12 percent. The program matched one month's electricity savings (in dollars) for each percentage greater than Title 24 code. Pasadena is built out and redevelopment activity has decreased with the current economy.
- Technical Assistance: The Technical Assistance program provides assistance and information on appropriate efficiency technologies to business customers.

- Business Energy Efficiency Outreach & Education: Promote PWP's commercial energy conservation and efficiency programs via community events, chamber of commerce meetings, brochures and advertising.

Budgeted (FY10/11) Residential Customer Programs:

- Energy Star® Home Incentives Program: Continue existing product menu (refrigerators, lighting fixtures).
- Efficient Cooling Home Incentive Program: Continue existing product menu (central and window air conditioners, windows and skylights, solar attic fans)
- Residential Pool Pump Program: Provide rebates for efficient pool pumps and encourage timers be set to off-peak hours.
- Refrigerator Retirement Program: No-cost in-home collection and recycling of old unit, plus $25-$35 rebate and free CFLs.
- Cool Trees Rebates: Provided rebates to 27 customers for the planting of 52 shade trees . Program allows up to 10 shade trees per household. Provided detailed guidebook and education at landscaping workshops on how to locate, plant and maintain shade trees.
- CFL Recycling: No-cost CFL recycling at local lighting retailers and all community centers. Recycling pouches are provided at community events, community centers and hardware stores.
- Home Energy Reports: PWP is working with OPOWER to deliver customized energy use reports to 25,000 residential electric customers. These reports will compare the electric usage of each recipient with similar PWP households. The program is currently under development and expected to launch in Spring 2011.
- Income-qualified Residential Efficiency Programs
  - Refrigerator Exchange: Provide no-cost collection and recycling of old refrigerator and installation of new high-efficient refrigerator to qualified low-income residential customers; PWP provides an extended warranty on each unit installed.
  - Efficient Affordable Housing Program: Provides funds to qualified multi-family affordable housing properties in partnership with the City's Housing Department.

Budgeted (FY10/11) Program EM&V

- Residential Programs
  - Energy Star, Efficient Cooling, Cool Trees, and Pool Pumps:
    - Contractor performs site verification of 10% of residential efficiency purchases and installations; verifies customer reason for their appliance purchase, i.e. whether old unit was still operational, its age, etc.(early vs. natural replacement); and leaves behind 3 CFL's with each customer verified.
    - Prescriptive rebates: Use "natural replacement" deemed savings per the E3 for prescriptive rebates, except where customers indicate "early replacement" on rebate applications.
  - Refrigerator recycling and replacement programs: Equipment verifications are provided by ARCA, the vendor who delivers and recycles these units.
  - KEMA/E3 Energy Efficiency Reporting Tool ("E3"): used to calculate deemed energy savings on residential program activity.
- Non-Residential Programs

- Utility staff and/or third party contractors perform onsite pre-and post equipment and installation verification on 100% of customer projects.
- Energy Efficiency Partnering (EEP):
  - Equipment: Independent contractor calculates energy reduction using the Department of Energy's eQuest building modeling software savings calculations for 100% of mechanical projects including central plants, chillers, package units, and motors
  - Lighting: Engineer-certified lighting calculator (Excel workbook) is used to calculate lighting retrofit project energy savings based on actual hours of operation.

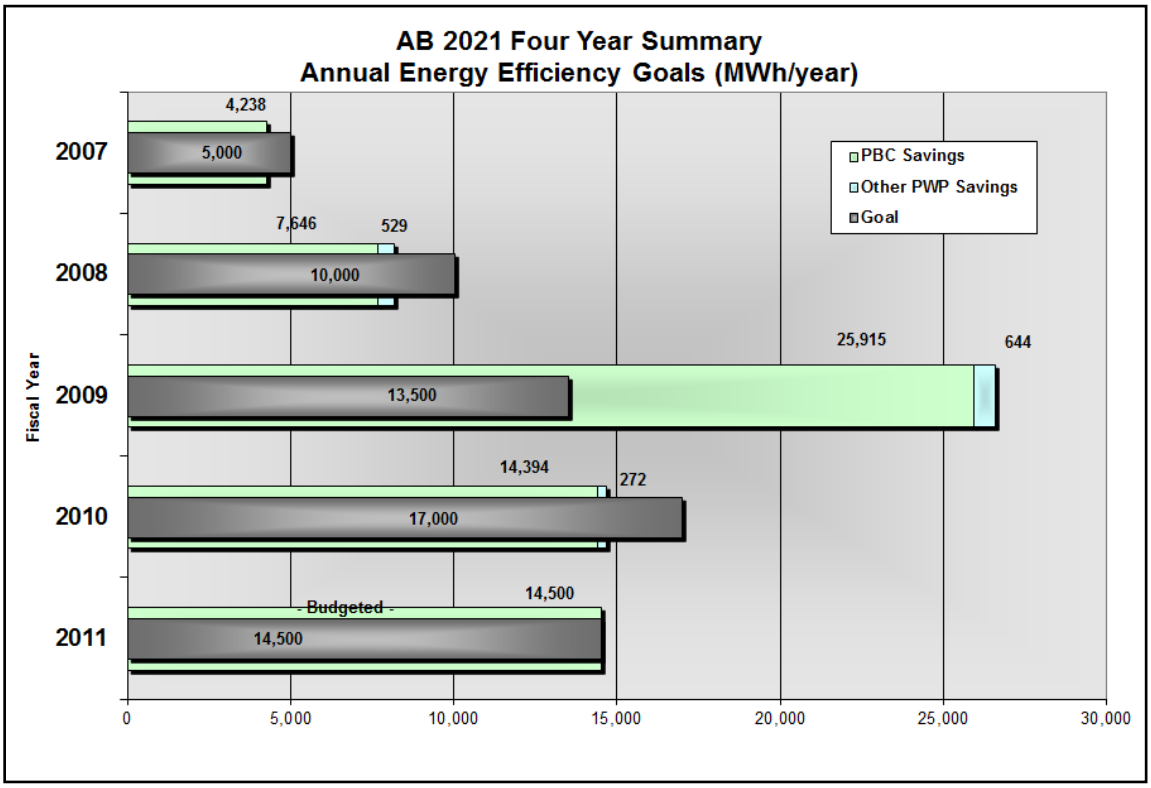
- Direct Install Emerging Technologies (DIET) –
  - Independent contractor verifies savings of projects.
  - Third party engineers uses data loggers, e-Quest and DOE 2 building modeling software, calibrated with customers' actual 12-24 month billing history, for quantifying actual energy savings.
  - Program scheduled to close in FY10-11.
- Small Business Direct Install (SBDI)
  - Being designed to launch in Spring 2011.
  - Site evaluations previously collected by a local non-profit/youth will be analyzed and used by an independent contractor for installing efficient technologies.
  - Target traditionally hard to reach small business customers.
- Designing "Continuous Commissioning" demonstration projects with large institutional customers to perform facility diagnostics and measurements
- Program Evaluation Plan: PWP selected a qualified vendor to provide EM&V services expected to begin in April 2011 that will include the following:
  - Phase One – EM&V Plan Development
    - PWP has an EM&V Plan that was previously created by another vendor. New vendor will evaluate this EM&V Plan and translate it into Phase Two.
  - Phase Two – EM&V Study
    - Gather initial program data, review the program tracking system, and assess in-house market research. Additional on site time for verification of installations as well as for measurement of savings based on properly selected IPMV protocols.
    - Perform an Impact Evaluation on the following programs over the next three years:
      - 2010 Energy Efficiency Partnering (EEP)
      - 2010 Direct Installation of Emerging Technology (DIET)
      - 2011 Direct Installation of Efficient Technology ("Energy DIET")
      - Efficient Affordable Housing

Budgeted (FY10/11) Demand-side Renewable Energy Programs:

- Pasadena Solar Initiative ("PSI") began 1-1-2008 and provides performance-based incentives of $4.00/Watt for income qualified and affordable housing projects, $2.04/Watt for residential, $1.40/watt for business customers, and $2.15/Watt for non-profit customers through January 31, 2011.
- PSI customers must determine potential cost-effective efficiency measures before solar rebates are paid.

Budgeted (FY10/11) PWP Demand Reduction Programs:

- Demand Response Pilot Program: Evaluate technologies and program options which provide energy savings to the customer while giving the utility the ability to reduce peak demand.
- Staff is evaluating potential technologies for future demand reduction programs, such as smart metering and thermal energy storage.
- Work in conjunction with customers, other POUs and SCPPA on joint RD&D projects.



PASADENA WATER AND POWER (PWP)

PASADENA
Water&Power

Time Period for Reporting Data: Fiscal Year ending 06/30/10

Pasadena		Resource Savings Summary							Cost Summary			
Program Sector (Used in CEC Report)	Category	Units Installed	Net Demand Savings (kW)	Net Peak kW Savings	Gross Annual kWh Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	1			286	229	2,288	1	$ 80		$ 9	$ 89
HVAC	Res Cooling	602	220	147	147,944	118,356	2,111,908	1,343	$ 60,936		$ 7,379	$ 68,315
Appliances	Res Dishwashers	3			216	173	2,246	1	$ 245		$ 9	$ 254
Consumer Electronic	Res Electronics											
HVAC	Res Heating											
Lighting	Res Lighting	58	955	4	17,616	14,093	232,189	118	$ 7,295		$ 574	$ 7,869
Pool Pump	Res Pool Pump	15	12	6	21,000	16,800	168,000	99	$ 3,300		$ 330	$ 3,630
Refrigeration	Res Refrigeration	1,606	149	149	1,368,099	1,094,479	19,700,626	10,478	$ 251,620	$ 49,896	$ 38,584	$ 340,100
HVAC	Res Shell	88	20	20	38,933	31,146	311,462	179	$ 19,187		$ 775	$ 19,963
Water Heating	Res Water Heating											
Comprehensive	Res Comprehensive											
Process	Non-Res Cooking											
HVAC	Non-Res Cooling	5	754	754	2,270,183	2,270,183	39,823,540	22,923	$ 312,629	$ 607,192	$ 119,208	$1,039,029
HVAC	Non-Res Heating											
Lighting	Non-Res Lighting	2	1,947	1,947	7,204,007	7,204,007	79,244,077	43,396	$1,505,065	$ 80,814	$ 143,903	$1,729,782
Process	Non-Res Motors	1	900	900	3,518,890	3,518,890	52,783,350	27,796	$ 933,218		$ 79,889	$1,013,107
Process	Non-Res Pumps	1			175,371	175,371	2,630,568	1,550	$ 52,611			$ 52,611
Refrigeration	Non-Res Refrigeration											
HVAC	Non-Res Shell	495	1	1	6,439	5,151	51,514	30	$ 416		$ 139	$ 555
Process	Non Res Process											
Comprehensive	Non Res Comprehensive											
Other	Other	346			137,708	110,166	330,499	190		$ 24,500	$ 2,450	$ 26,950
SubTotal		3,223	4,957	3,928	14,906,693	14,559,044	197,392,267	108,105	$3,146,603	$ 762,402	$ 393,250	$4,302,255
T&D	T&D	1				96,540	2,896,200	1,525	$ 0			$ 0
Total		3,224	4,957	3,928	14,906,693	14,655,584	200,288,467	109,630	$3,146,603	$ 762,402	$ 393,250	$4,302,255

EE Program Portfolio TRC Test	1.53

Excluding T&D

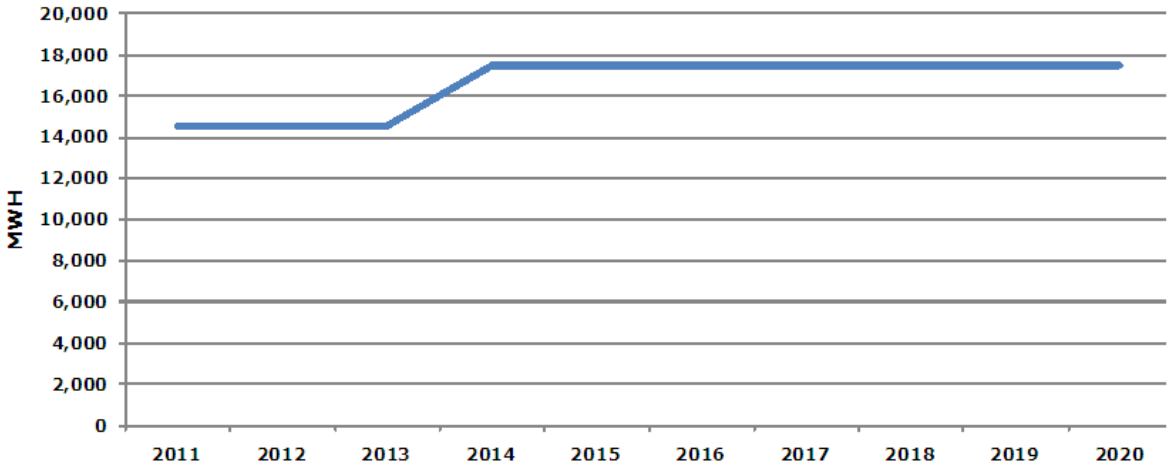
Time Period for Forecast Data: Fiscal Year ending 06/30/11

Pasadena		Resource Savings Summary							Cost Summary			
Program Sector (Used in CEC Report)	Category	Units Installed	Net Demand Savings (kW)	Net Peak kW Savings	Gross Annual kWh Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	1			286	229	2,288	1	$ 80		$ 5	$ 85
HVAC	Res Cooling	602	220	147	147,944	118,356	2,111,908	1,343	$ 60,936		$ 4,402	$ 65,338
Appliances	Res Dishwashers	3			216	173	2,246	1	$ 245		$ 5	$ 250
Consumer Electronic	Res Electronics											
HVAC	Res Heating											
Lighting	Res Lighting	58	955	4	17,616	14,093	232,189	118	$ 7,295		$ 484	$ 7,779
Pool Pump	Res Pool Pump	15	12	6	21,000	16,800	168,000	99	$ 3,300		$ 350	$ 3,650
Refrigeration	Res Refrigeration	1,445	134	134	1,231,289	985,031	17,730,563	9,430	$ 226,458	$ 44,906	$ 36,956	$ 308,320
HVAC	Res Shell	88	20	20	38,933	31,146	311,462	179	$ 19,187		$ 649	$ 19,837
Water Heating	Res Water Heating											
Comprehensive	Res Comprehensive											
Process	Non-Res Cooking											
HVAC	Non-Res Cooling	4	640	640	1,929,656	1,929,656	33,850,009	19,485	$ 265,735	$ 516,113	$ 70,553	$ 852,401
HVAC	Non-Res Heating											
Lighting	Non-Res Lighting	2	2,337	2,337	8,644,808	8,644,808	95,092,892	52,076	$ 1,806,078	$ 96,977	$ 198,201	$ 2,101,256
Process	Non-Res Motors	1	630	630	2,463,223	2,463,223	36,948,345	19,457	$ 653,253		$ 77,011	$ 730,264
Process	Non-Res Pumps	1			122,760	122,760	1,841,390	1,085	$ 36,828		$ 3,838	$ 40,666
Refrigeration	Non-Res Refrigeration											
HVAC	Non-Res Shell	495	1	1	6,439	5,151	51,514	30	$ 416		$ 107	$ 523
Process	Non Res Process											
Comprehensive	Non Res Comprehensive											
Other	Other	346			137,708	110,166	330,499	190		$ 24,500	$ 689	$ 25,189
SubTotal		3,062	4,949	3,919	14,761,878	14,441,592	188,673,314	103,494	$ 3,079,811	$ 682,497	$ 393,250	$ 4,155,558
T&D	T&D	1				96,540	2,896,200	1,525	$ 0			$ 0
Total		3,063	4,949	3,919	14,761,878	14,538,132	191,569,514	105,019	$ 3,079,811	$ 682,497	$ 393,250	$ 4,155,558

EE Program Portfolio TRC Test	1.54

Excluding T&D

Energy Savings Targets 2011-2020



MWH	14,500	14,500	14,500	17,500	17,500	17,500	17,500	17,500	17,500	17,500
% of Load Forecast	1.15%	1.13%	1.12%	1.33%	1.31%	1.29%	1.27%	1.25%	1.23%	1.22%

PLUMAS-SIERRA RURAL ELECTRIC COOP (PSREC)

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

- Plumas-Sierra REC was established in 1937
- Average member-owners served: 7807
- Revenue by rate class: 47% residential, 48% commercial/industrial, 5% irrigation
- Annual energy use: 151 GWh: 52% comm., 42% res., 6% irr.
- Peak demand in 2010: 28MW
- PSREC facilities include: two 69kV interconnect substations, 150 miles of transmission line, 11 distribution subs, 1200 miles of 12.47/7.2kV distribution line, and a 6MW cogeneration facility
- 60 employees, including our telecommunications subsidiaries

Plumas –Sierra Energy Efficiency Program Background

PSREC implemented energy efficiency programs beginning in the early 1980s. Our programs are designed to encourage members to be more energy efficient, decrease their energy demand and costs and conserve resources. This is achieved by increased awareness of energy efficiency and conservation through promotion of programs and by providing educational information. We also further assist income qualified residential customers that receive rate assistance by providing energy efficiency measures to reduce their dependency on subsidies. PSREC's Ground Source Heat Pump Program has been one of the most successful programs of its kind in the country.

PSREC primarily uses KEMA's data for energy efficiency measure quantification.

Current Energy Efficiency Programs and Services (Calendar year 2010)

PSREC manages a comprehensive energy efficiency incentive program to encourage residential members to upgrade their homes to be more energy efficient. Generous rebates and solid technical support are available to members who purchase and install high-efficiency air and water heating systems, appliances, and lighting.

In 2010, PSREC expanded programs for small commercial and irrigation members. The results were exceptional, yielding a 32% increase in annual energy savings compared to 2009.

Residential Programs

- Ground Source Heat Pump (GSHP) Program: 0% interest ground source heat pump loop leases available for installation of ground-source heat pumps. This program has suffered due to the near halt of construction in our area.
- ENERGY STAR® Appliance Rebates: Rebates available for the purchase of an ENERGY STAR® refrigerator, dishwasher, clothes washer or other small electronics. This program was more heavily subscribed this year due to the correlating State Cash for Appliances rebates.
- Non-essential Freezer/Fridge Retirement: Rebates offered for recycling a non-essential freezer or refrigerator. This program continues to (un)plug away!
- Marathon Water Heater Program: Discounted sales of high-efficiency electric water heaters. This program remains steady, yet has been impacted with the halt of new construction.
- Energy Efficient Equipment Discounts: Discounted sales of water heater blankets, low-flow showerheads and ConvectAir heaters.
- Compact Fluorescent Light Bulb Program: Discounted sales of CFLs and distribution of free CFLs at several public events. Additionally, rebates offered for the purchase of ENERGY STAR® CFLs from local retail locations. This program has been much slower this year, probably due to market saturation or the availability of cheaper CFLs.
- ENERGY STAR® LED Holiday Light Rebate: Rebates provide an incentive to replace incandescent holiday light strands with qualified new ENERGY STAR LED holiday light strands. This program design has proven to be more effective than the previous holiday light exchange program.
- Energy Audits: PSREC significantly increased efforts to provide free comprehensive energy audits to assist members with energy conservation or troubleshooting high energy consumption in their home. This program has been successful by educating members of efficiency and conservation and assisting in reduction of energy use, especially in low-income homes.
- Meter Lending Program: Members can borrow our WattsUp® meter to plug in 120-volt appliances and help them identify energy usage of appliances. This program has helped several members understand just how much an appliance or space heater really uses and helps them make the choice of unplugging or reducing energy use.
- Green Building Program: Semi-annual presentations to introduce contractors to new technologies for building more energy efficient homes. We have had successful response to these presentations and have found that many contractors are beginning to realize the importance of energy efficient and green retrofits for existing homes, especially with the housing slump.
- Education/Outreach: Provide energy efficiency and conservation information to interested members to help them reduce their bill, understand their energy consumption and make their home more efficient. This program has successfully addressed high bill concerns by empowering members to use information such as our 'Do-It-Yourself Energy Audit' to learn more about their home and how they use energy.
- Lending Library and Resource Center: Provide energy efficiency and renewable energy resources to members through a book lending library and resource center in our office lobby.
- Low Income Winter Rate Assistance Program: Income-qualified members can apply for a discounted rate during the heating season. In conjunction, a home energy audit is offered to assist members with energy conservation. This program is steadily growing as member's who are struggling in the weak economy are extremely appreciative of the assistance.

Commercial Programs

- Custom Commercial Lighting Retrofit Rebates: Custom rebates offered to commercial businesses that retrofit existing lighting with more efficient lighting. Although we had several inquires about this program, yet we only had one retrofit this year.
- Irrigation Efficiency Program: This new program encourages installation of energy efficient equipment in agricultural irrigation systems by offering low cost pump tests and rebates for NEMA Premium motor replacement or installation of variable frequency drives. The pump test portion of this program was extremely successful this year and irrigators are taking steps to increase their efficiency.
- Keep Your Cool: For a limited time, with a partnership between PSREC and Bay Area Gasket Guy (BAGG), members were offered free, no obligation inspections on the condition and efficiency of commercial refrigeration equipment, refrigeration lighting, door gaskets, strip curtains and door closers. The first phase of this program has concentrated on the replacement of worn, ineffective refrigerator door gaskets and strip curtains. This program was very successful and funds were readily exhausted.
- Commercial Energy Audits: Provide free energy audits to businesses to assist members with energy conservation or troubleshooting high energy consumption in their business. With the suffering economy, our local businesses are also suffering. This program has been successful in assisting business owners in making decisions in efficiency upgrades and conservation.

2010 Program Summary:

Total Program Costs: $180,454
Total kW demand reduction: 184 kW
Total Lifecycle kWh reduction: 3,306,410
Program Portfolio TRC Test: 1.19

T&D System Upgrades (Calendar year 2010)

Due to the remote nature of the PSREC system and the substantial distribution system necessary to reach all of our rural members, PSREC is subject to significant system operational losses (~17,520 MWh/year). Investment in construction upgrades yields efficiency savings from reduction in system peak losses. Unfortunately, PSREC suffered extensive layoffs in 2010 and staffing was not available for many anticipated system upgrade projects.

Analysis in Variation of Goals and Results (Calendar year 2010)

A large part of PSREC's energy savings are typically achieved through our highly successful Ground Source Heat Pump (GSHP) Program. Most GSHP installations are in newly constructed homes due to PSREC's robust outreach and education to encourage custom home contractors to incorporate GSHPs in their construction plans.

Due to the economic downturn and near halt of new construction, our forecasted energy efficiency goals have been significantly impacted. GSHP installation has declined by 88% since 2007. The construction decline has been devastating to our community, as well as to our energy efficiency objectives. We hope to see the market recover next year and would anticipate our dedicated contractor network to again assist us in encouraging the installation of GSHPs.
In the meantime, PSREC has been hosting Green Building Seminars to introduce contractors to new technologies for building more energy efficient homes. Additionally, since the principal residential

program was tied to the construction slump, PSREC diversified this year by expanding programs for small commercial and irrigation members. The results were exceptional, yielding a 32% increase in annual energy savings compared to 2009.

Utility Energy Efficiency Program Targets

In 2010, PSREC's Board of Directors approved PSREC's goal to voluntarily conserve 7,000 MWh over the next ten years. Energy savings achievements in 2010 are aligned with our goals going forward.

EM&V Efforts (for 2010)

PSREC's GSHP Program constitutes the largest component of our residential energy efficiency programs, and was our top priority for Evaluation, Measurement, and Verification (EM&V) activities. PSREC initiated an engineering review to verify the energy savings attributable to GSHP systems in 2009. In 2010, we initiated a comprehensive EM&V review of the GSHP program through Efficiency Services Group. We are currently revising the GSHP Program to incorporate many of the changes suggested by ESG and to optimize the program for our members and the Cooperative.

Proposed PSREC Energy Efficiency Programs and Services (for 2011)

- Maintain or expand existing programs.
- Evaluate and implement new energy efficiency programs and technologies, as applicable.
- Continue to target small businesses to provide incentives for lighting and refrigeration retrofits.
- Revise and expand the Irrigation Efficiency Program for our agricultural members.
- Strive to establish more green building in the area.
- Research the potential of a pilot solar water heating program.

PLUMAS-SIERRA RURAL ELECTRIC COOP (PSREC)

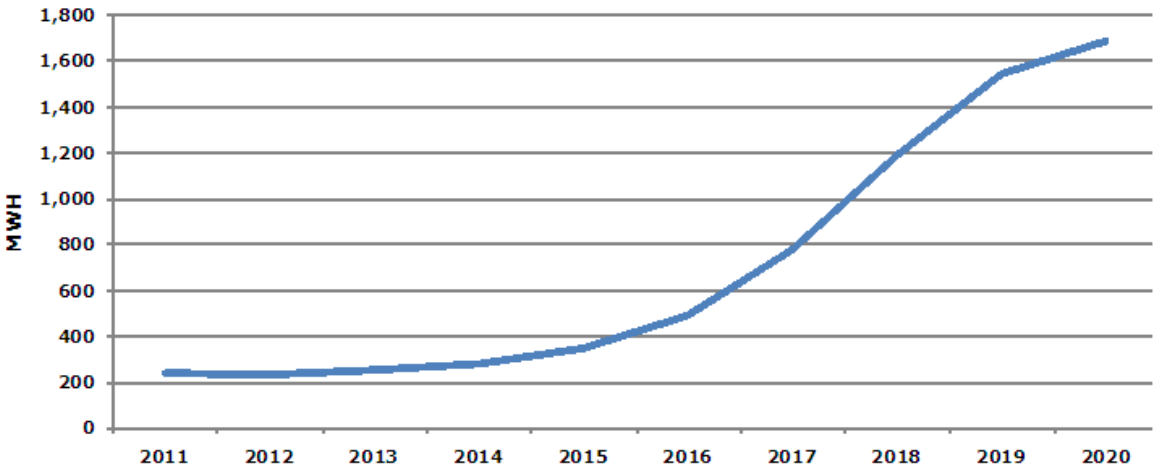
Time Period for Reporting Data: Calendar Year ending 12/31/2010

Plumas-Sierra Rural Electric Coop		Resource Savings Summary						Cost Summary			
Program Sector (Used in CEC Report)	Category	Units Installed	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	45	5	5	11,003	110,032	61	$ 2,250		$ 3,645	$ 5,895
HVAC	Res Cooling										
Appliances	Res Dishwashers	31	1	1	2,038	26,489	15	$ 1,550		$ 900	$ 2,450
Consumer Electronics	Res Electronics	13			447	4,025	2	$ 260		$ 132	$ 392
HVAC	Res Heating	4	4	4	22,752	568,800	286	$ 37,565		$ 8,872	$ 46,437
Lighting	Res Lighting	1,099	86	7	36,347	277,732	148	$ 7,851		$ 12,451	$ 20,302
Pool Pump	Res Pool Pump										
Refrigeration	Res Refrigeration	100	5	5	31,545	567,806	308	$ 11,675		$ 11,839	$ 23,514
HVAC	Res Shell										
Water Heating	Res Water Heating	39	2	2	9,916	273,768	147	$ 2,572		$ 3,593	$ 6,165
Comprehensive	Res Comprehensive										
Process	Non-Res Cooking										
HVAC	Non-Res Cooling										
HVAC	Non-Res Heating										
Lighting	Non-Res Lighting	1			15,317	168,485	93	$ 957		$ 4,667	$ 5,624
Process	Non-Res Motors										
Process	Non-Res Pumps	24	44	44	77,749	726,226	393	$ 4,450		$ 7,679	$ 12,129
Refrigeration	Non-Res Refrigeration	2	38	12	118,300	473,200	249	$ 7,428		$ 7,504	$ 14,931
HVAC	Non-Res Shell										
Process	Non Res Process										
Comprehensive	Non Res Comprehensive										
Other	Other	115			36,616	109,848	61			$ 42,614	$ 42,614
SubTotal		1,473	184	80	362,029	3,306,410	1,764	$ 76,557		$ 103,896	$ 180,454
T&D	T&D	1	505	505	21,000	840,000	467				
Total		1,474	690	585	383,029	4,146,410	2,232	$ 76,557		$ 103,896	$ 180,454

EE Program Portfolio TRC Test	**1.19**

Excluding T&D

Energy Savings Targets 2011-2020



MWH	237	230	247	279	346	491	778	1,191	1,546	1,688
% of Load Forecast	0.14%	0.13%	0.14%	0.15%	0.18%	0.26%	0.40%	0.61%	0.78%	0.84%

PORT OF OAKLAND

- *150 – 165* customers, 100 percent are commercial
- Peak demand – 11 megawatts
- Annual energy use: 71 gig watt-hours

Port of Oakland Energy Efficiency Program Highlights

Current Commercial Programs:

- Energy Audits: The Port is currently conducting an Energy Audit program that will result in recommendations of five major energy saving retrofit/improvement projects that could be undertaken to effectively support load reduction and the more efficient use of energy in the area. The proposed energy efficiency projects will be prioritized by highest to lowest energy savings. Rebates will be provided for the energy efficiency projects completed based on the energy audit recommendations, and up to 100 percent of the total energy audit cost.
- Energy Saving Measures Exceeding Title 24 Standards: Port will provide a rebate for any new facility constructed within the Port by its electricity customers that exceed the title 24 standards in energy saving measures. Eligible facility must reduce energy usage by a minimum of 10% compared to the standard title 24 facility. This rebate will pay for a % of the cost difference between a standard and an upgraded title 24 equipment (such as HVAC units) and material.
- Energy Saving Equipment Retrofits/Improvements Rebates: The Port has implemented a program that provides generous rebates and solid technical support for the installation of new energy efficient equipment/improvements by our commercial customers. Under our program, the eligible projects must reduce energy usage by a minimum of 20 percent, to be eligible for a rebate of the equipment cost differential (up to a 90 percent rebate for energy saving of 90 percent or more).
- Lighting Retrofit: A program providing rebates for the installation of energy efficient lighting that reduces annual energy usage by at least 35 percent in commercial facilities. This rebate is based on a single flat incentive rate of $0.05 per annual kilowatt-hours saved.
- Energy Saving / Efficiency Research, Development, and Demonstration Programs: Port electricity customers that do research, development and demonstrate new energy saving/efficiency programs are entitled to a rebate up to 20% of the cost of a project based on availability of funds. To qualify for a rebate under this program all Energy Savings/Efficiency Research, Development and Demonstration Programs must be based on environmental friendly natural resources (or waste products).

Proposed Port of Oakland Energy Efficiency Programs and Services: (for 2009-2010)

- Maintain existing programs at current levels.

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

- Photovoltaic (PV) Power Generating Systems In Accordance with Senate Bill 1 (SB1): Beginning January 1, 2008, this rebate will reimburse new solar energy generating facilities a one time flat rate of $ 3.50 per watt (Alternating Current) of installed capacity. In the event the new solar facility generates more than the electric customer's monthly electric consumption, then the Port will purchase the excess solar electric power from said facility at the same rate the Port sells power to said facility. In addition, the new solar energy generating facilities must obtain Port approval and must comply with all regulatory requirements prior to the construction of the facility. This rebate is subjected to 7% annual reduction per SB1.
- Other Renewable (or Green) Energy Programs: Beginning January 1, 2008, this rebate will reimburse new clean wind energy generating facilities that generates over 7.5 kilowatts a onetime flat rate of $ 1.50 per watt (alternating current) of installed capacity and if the facility generates less than 7.5 kilowatts then the rebate will be a onetime flat rate of $ 2.50 per watt (alternating current) of installed capacity. In the event the new wind power facility generates more than the electric customer's monthly electric consumption, then the Port will purchase the excess electric power from said facility at the same rate the Port sells electric power to said facility. In addition, the new wind power energy generating facilities must obtain Port approval and must comply with all regulatory requirements prior to the construction of the facility. All other renewable generation that qualify under this program are given a maximum rebate of 20% of the construction cost of the generating facility, based on the availability of funds.

Port of Oakland Demand Reduction Programs:

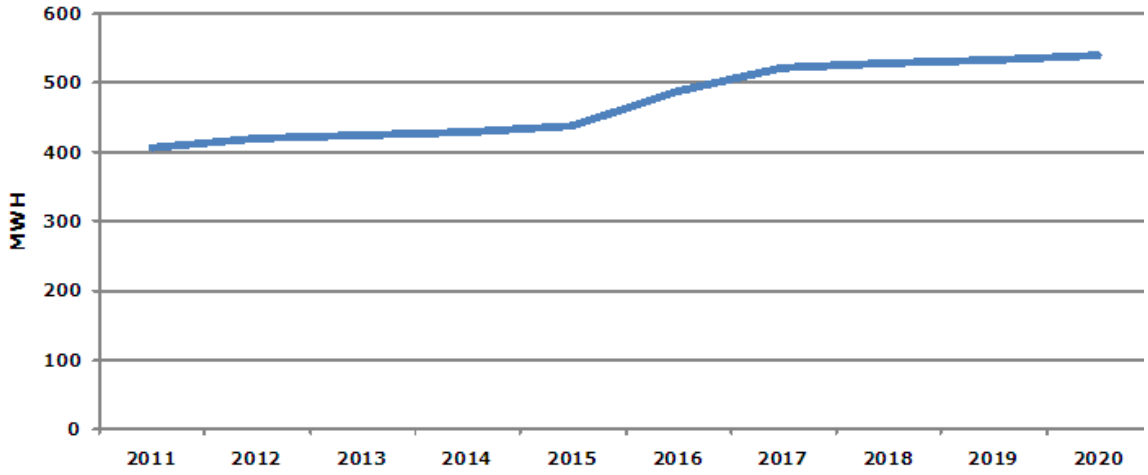
The Port of Oakland does not currently have any demand reduction programs in place.

PORT OF OAKLAND

Time Period for Reporting Data: Fiscal Year ending 6/30/2010.

No energy efficiency rebates provided in FY 2009-2010.

Energy Savings Targets 2011-2020



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
MWH	406	420	424	430	437	488	523	529	533	541
% of Load Forecast	0.52%	0.53%	0.51%	0.48%	0.48%	0.53%	0.56%	0.56%	0.56%	0.57%

RANCHO CUCAMONGA MUNICIPAL UTILITY

The Rancho Cucamonga Municipal Utility (RCMU) was formed in 2001 to provide safe, reliable and cost-effective electric service to retail customers that were building new facilities located within the designated service territory. RCMU served its first customers in 2003. Annually, more than 72,000 megawatt-hours of electricity are distributed to our customers via 20 circuit miles of wire spread across the roughly 4 square miles serviced by RCMU. RCMU's historical peak demand is 15.5 megawatts, set in August 2010. RCMU's service territory is comprised of all parcels along our circuit developed in 2003 or later. RCMU currently serves no residential customers but has over 480 commercial accounts, many of which are smaller, privately owned businesses.

Energy Efficiency Program

In fiscal year 2009/2010, RCMU spent $2,300 in rebates and $65,000 in direct installs to increase energy efficiency. Staff believes that due to the continuing difficult economic conditions, which are putting a strain on the cash flows of small businesses, there is reluctance among RCMU customers to participate in programs with any upfront monetary costs; therefore, staff is exploring programs and incentives that will accommodate this trend. RCMU has partnered with a non-profit that is dedicated to retraining displaced workers in the new "green" economy. The students of the nonprofit are all BPI and HERS-II certified and many already posses a valid contractors license. Staff is utilizing the technical expertise and eager student body of the non-profit to identify and develop programs that cater to the specific needs of RCMU's predominantly small and medium commercial customer base.

Energy Efficiency Program Goals

- Provide direct assistance to qualified customers who are unable to otherwise implement cost-effective and approved energy efficiency savings.
- Design and install distribution facilities that reduce system losses.
- Provide information and analysis to RCMU customers that allow them to make informed decisions about reducing energy consumption.
- Prioritize energy efficiency technologies and opportunities.

System Design

- Customers are served through a looped 12,000 volts underground facility with larger gauge ASCR conductors to improve system reliability and reduce system losses.
- RCMU evaluates circuit load performance to optimize performance and reduce system losses.
- RCMU purchases and installs efficient transformers to reduce system losses.
- All street lights are high pressure sodium lamps.
- All traffic signals and crosswalk signs use LED lamps.

Commercial Customer Programs

- Incentives/Rebates: RCMU has adopted the "Express Solutions" model for energy efficiency rebates. RCMU does not restrict customers to specific technologies or approved models of equipment; customers can elect to install any energy efficient improvement they wish. Customers receive a rebate for estimated kilowatt hour savings for the first year plus a rebate for the peak demand reduction. RCMU uses the following categories and incentive rates:

Category	Annual Consumption Reduction Rebate	Peak Demand Reduction Rebate
Lighting	$.05/kwh	$100/kw
Refrigeration	$.09/kwh	$100/kw
HVAC	$.09-$.15/kwh	$100/kw
Motors	$.09/kwh	$100/kw
Other	$.09/kwh	$100/kw

- Energy Audits: RCMU offers free, customized energy audits including lighting assessment, HVAC assessment, equipment assessment and a review of energy usage. Specific cost-effective recommendations to improve energy efficiency and reduce energy use are provided. Through June 30, 2010, energy audits for over 60% of RCMU's customer base were complete.
- Time of Use Rates: All customers whose demand exceeds 200 kilowatts receive time-of-use pricing, incentivizing them to reduce their energy costs through the effective time management of their energy usage.

Renewable Energy Programs

For calendar year 2010, RCMU is offering an incentive of $2.42 per watt installed for renewable energy generation systems with a peak AC output of less than 30 kW, and $0.09 per kilowatt hour produced for renewable energy generation systems with a peak AC output of 30 kW or more. These incentives are capped at 50% of total system installation cost. RCMU is also currently waiving all RCMU-related plan check and inspection fees. RCMU currently has its first solar photovoltaic customer going through plan check and expects the system to be operational in spring 2011.

Demand Reduction Programs

Currently two City facilities within RCMU's service territory have installed emergency back-up generation systems which can be utilized when the need arises. These generators are capable of supplying the power needs for these two facilities for 24 hours. These two facilities are also two of RCMU's largest customers.

Use of Recovery Act Funds

The City of Rancho Cucamonga has obligated $1.1 million of its Energy Efficiency and Conservation Block Grant money toward Lighting and HVAC Control Systems retrofits for City Hall. It is estimated that once complete, these improvements will reduce the energy consumption of both systems by 15-20%. City Hall is currently one of RCMU's largest customers with a peak demand of over 760kW. The retrofit is schedule to be complete before summer 2011.

RANCHO CUCAMONGA MUNICIPAL UTILITY

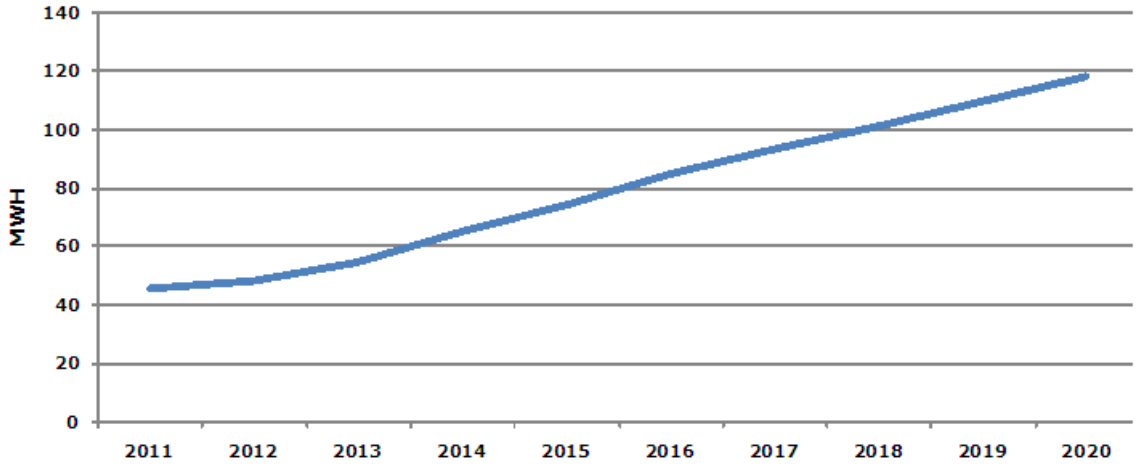
Time Period for Reporting Data: Fiscal Year ending 6/30/2010

Rancho Cucamonga Municipal Utility		Resource Savings Summary						Cost Summary			
Program Sector (Used in CEC Report)	Category	Units Installed	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers										
HVAC	Res Cooling										
Appliances	Res Dishwashers										
Consumer Electronics	Res Electronics										
HVAC	Res Heating										
Lighting	Res Lighting										
Pool Pump	Res Pool Pump										
Refrigeration	Res Refrigeration										
HVAC	Res Shell										
Water Heating	Res Water Heating										
Comprehensive	Res Comprehensive										
Process	Non-Res Cooking										
HVAC	Non-Res Cooling										
HVAC	Non-Res Heating										
Lighting	Non-Res Lighting	303	98		85,675	856,749	476	$ 2,307	$ 66,352	$ 16,000	$ 84,659
Process	Non-Res Motors										
Process	Non-Res Pumps										
Refrigeration	Non-Res Refrigeration										
HVAC	Non-Res Shell										
Process	Non Res Process										
Comprehensive	Non Res Comprehensive										
Other	Other										
SubTotal		303	98		85,675	856,749	476	$ 2,307	$ 66,352	$ 16,000	$ 84,659
T&D	T&D										
Total		303	98		85,675	856,749	476	$ 2,307	$ 66,352	$ 16,000	$ 84,659

EE Program Portfolio TRC Test	**0.91**

Excluding T&D

Energy Savings Targets 2011-2020



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
MWH	46	49	55	65	74	85	93	101	110	118
% of Load Forecast	0.07%	0.08%	0.09%	0.10%	0.11%	0.13%	0.14%	0.15%	0.16%	0.17%

REDDING ELECTRIC UTILITY (REU)

Energy Efficiency Program Performance Overview

Redding Electric Utility (REU) spent $2.6 million on its Public Benefits Program (PBP) in Fiscal Year (FY) 2010 equal to 2.85 percent of the Utility's retail revenue. Of this amount, more than 50 percent or $1.4 million was spent on REU's energy efficiency improvement programs. In addition to this amount, REU invested a little more than $500,000 in its ongoing advanced efficiency improvement program implementing thermal energy storage in commercial air- conditioning applications.

In summary, during FY 2010 REU achieved a net annual energy savings of 2.2 Gigawatt-hours (GWh) and reduced our system's net coincident peak demand by 1.1 megawatts (MW) at a cost to the Utility of $1.9 million. Based on the state-sanctioned E3 computer model used to evaluate energy efficiency program cost effectiveness, this translates into an overall energy efficiency program Resource Cost ratio for REU of 2.8. According to the E3 model, this would suggest that for every $1 spent on our energy efficiency programs REU received slightly less than $3 in value or benefit.

The FY 2010 program resulted in slightly less energy savings than in FY 2009 largely due to economic conditions including the continued loss of commercial accounts during the year and one of the state's highest unemployment rates existing in Redding and Shasta County. These conditions in combination with a relatively high saturation of high efficiency equipment in our community continued to slow the use of REU's rebate programs.

Background

Since 1998, REU has spent more than $12 million in numerous rebate and incentive programs to increase the energy efficiency in the Redding community. These programs have raised customer awareness of energy efficiency with the installation of high efficiency measures and through increased education. REU continues to offer rebates for many energy efficient products and measures that meet utility-defined criteria and specifications including: air-conditioning equipment, household appliances, lighting, and pumps/motors.

Peak Demand Reduction Programs

To date, the most successful incentive program for REU has been the rebates for high efficiency air-conditioning equipment. REU's other programs, such as the ENERGY STAR®-approved Appliance rebate programs, have been highly utilized by customers to reduce utility bills and save energy; however, their impact has been less dramatic and far less valuable for the Utility. Specifically, the "non-HVAC" programs serve to reduce overall energy usage more than peak demand. By definition, any program that reduces energy use by a greater percentage than it reduces peak demand serves to reduce the system load factor. Such a reduction in utility system load factor is, ironically, a reduction in utility system efficiency.

Therefore, while many energy efficiency programs are largely successful in reducing utility customer energy use, unless there are sufficient incentives and programs available to reduce peak demand by a like amount or more, these efficiency programs will serve to reduce utility systems' operating efficiency and increase utilities' operating costs and rates.

Serving the peak demand is essentially the most costly load – both economically and environmentally – for summer-peaking electric utilities to serve. Therefore, reducing this peak should be the most critical aspect of electric utility operations. Unfortunately, there continues to be a perception in some quarters that any and all kilowatt-hours saved are of equal value.

Any utility operator can tell you that is not the case. For example, reducing the energy consumption of Redding's streetlight service by 5,000 kWh (0.5 MW) from 8 p.m. to 6 a.m. is far less valuable to our Utility's customers than shaving 5,000 kWh and 1.0 MW from 1 p.m. to 6 p.m. The fact that on-peak energy has a greater amount of embedded source energy has been recognized over the last decade by state legislators and regulators -- as most clearly demonstrated by the California Energy Commission's adoption and application of the Time Dependent Valuation (TDV) of energy usage to the state's Title-24 building code.

REU would submit that similar treatment be afforded to the consideration or valuation of energy efficiency programs such that not every kWh saved is of equal value. The legislatively-mandated loading order for cost-effective resource procurement addresses this with peak load reduction being placed at the top of the list.

While REU's energy efficiency programs have been very successful in reducing energy consumption for customers over the past 10 or more years, our programs have not been as successful in reducing peak demand. Since 1998, REU's annual load factor has decreased from 44 percent to as low as 38 percent this past year. This has occurred as our current efficiency programs have served to shave more energy from the shoulder and off-peak hours than they have from the on-peak period.

This causes "peakier" peaks and deeper valleys in the Utility's load profile. Beyond the costly on-peak service requirements, the deep valleys can also make it difficult to accept wind energy, which is often produced in large quantities during off-peak periods.

To improve REU's operating efficiency and to continue to provide cost-effective efficiency improvements in our system, the Utility has begun the implementation of a thermal energy storage (TES) program that is primarily focused on the 5 ton, direct expansion air-conditioning (DX-AC) market. This application of TES technology is provided with the addition of the Ice Bear TES unit to qualified AC units.

The Ice Bears serve to reduce the applicable AC systems' peak demand on REU's electric system by diverting the vapor/gas refrigerant in the DX unit away from the compressor, and into a coil that runs through the system's ice block during the peak period. By relying on the temperature differential in the ice to condense the refrigerant back to liquid state, rather than the mechanically-driven compressor, the compressor does not run during the peak period and the AC load is reduced by 95 percent for as much as six hours per day.

Further, because the TES compressor is used during off-peak hours to re-freeze the storage system's water and make the ice that will later be used to provide cooling, the Utility "shifts" the load from on-peak to off-peak hours, thereby allowing the Utility to generate electricity during the cooler nighttime hours when it is more economically and environmentally efficient to do so. Shifting load to the nighttime hours also allows the Utility to accept more wind power, which is more plentiful at night.

With this nighttime operation, the compressor will typically run more efficiently than the same compressor running during the hottest hours of the day. Therefore, the customer will see a reduced amount of energy consumption (efficiency improvement) to provide a higher level of cooling comfort, and the Utility will see reduced operating costs as our load profile is flattened (operating efficiency/load factor improvement) – a true win-win solution for all parties.

This continued focus on peak load reduction will be increasingly important for REU because more than half of our demand is driven by air-conditioner load. With the required use of the new refrigerant R-410A in DX/AC units, the new AC units being installed in California will be at least 15 to 20 percent less efficient than older units that use R-22 when the temperatures exceed 105 to 115°F. Therefore, even though appliance standards require high SEER unit installation, these new units using R-410A will perform less efficiently at peak load times than older units with lower SEER ratings because the new refrigerant's performance degrades substantially when ambient temperatures reach these higher levels – that regularly occur in Redding.

New Technologies and Program Development

While REU's high-efficiency air-conditioner incentive program has been one of, if not our most successful programs to date, we will be less likely to see significant long-term peak load reduction benefits because of the reduced efficacy and performance of the new refrigerant at high ambient temperatures. Therefore, REU is turning to the TES load-shifting technology that will allow the Utility to cost-effectively sell energy to provide air-conditioning comfort to our customers, and reduce operating costs for both the individual customer and to the community as a whole in the City of Redding.

In a related energy efficiency program development, the City of Redding received an allocation of $892,700 from the Department of Energy's Energy Efficiency Community Block Grant Program. REU has developed and is implementing a whole-house based, deep energy retrofit/weatherization program for income-qualified customers. Part of this Program has been the creation of a training program for local contractors in association with the Shasta Builders' Exchange to create a green workforce that is capable of providing high quality home performance contracting services in our community. With the training phase complete for more than 40 contractors, REU has begun to implement the retrofit program and deploy these contractors to specific, income-qualified homes for auditing and remediation services that improve the energy efficiency, safety, and indoor air quality for the occupants.

To date, REU and our participating contractors have completed 15 whole-house, deep energy retrofits under the EECBG program, with an average energy reduction of 37 percent during summer months. REU anticipates completing 5 more whole house retrofits during the spring of 2011. In addition, REU is reaching out to approximately 150 additional income-qualified homes to provide low-cost, energy efficiency improvements to benefit the occupants. REU expects to complete our spending under the EECBG program by mid-year 2011, one year ahead of the EECBG timeline requirement.

REDDING ELECTRIC UTILITY (REU)

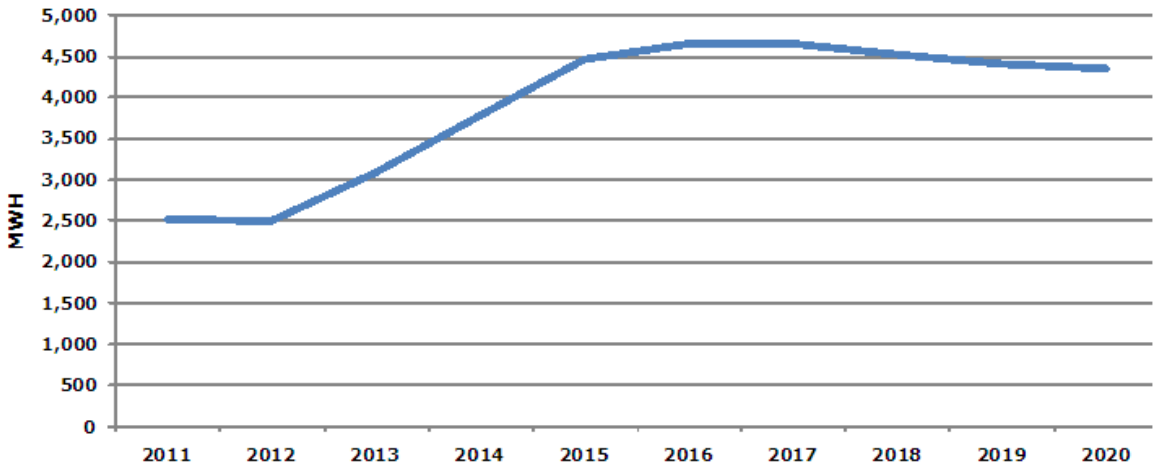
Time Period for Reporting Data: Fiscal Year ending 6/30/2010

Redding Electric Utility		Resource Savings Summary						Cost Summary			
Program Sector (Used in CEC Report)	Category	Units Installed	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	516	49	49	118,061	1,180,608	652	$ 5,960		$ 5,584	$ 11,543
HVAC	Res Cooling	1,621	263	224	232,639	4,184,145	2,675	$ 397,196		$ 34,765	$ 431,961
Appliances	Res Dishwashers	468	6	6	20,218	262,829	145	$ 11,826		$ 1,141	$ 12,968
Consumer Electronics	Res Electronics										
HVAC	Res Heating										
Lighting	Res Lighting	2,790	94	15	96,240	926,640	495	$ 12,293		$ 5,103	$ 17,396
Pool Pump	Res Pool Pump	8	6	3	8,960	89,600	50	$ 1,600		$ 412	$ 2,012
Refrigeration	Res Refrigeration	536	7	7	40,535	729,634	396	$ 31,372		$ 2,705	$ 34,078
HVAC	Res Shell	2,616	368	368	312,315	5,942,232	3,353	$ 469,497		$ 47,348	$ 516,845
Water Heating	Res Water Heating	7			770	11,544	6	$ 413		$ 44	$ 457
Comprehensive	Res Comprehensive										
Process	Non-Res Cooking										
HVAC	Non-Res Cooling	116	1	270	826	12,384	1,503	$ 346,972	$ 301,779	$ 66,352	$ 715,103
HVAC	Non-Res Heating										
Lighting	Non-Res Lighting	3,169	49	38	223,402	1,503,726	833	$ 25,106		$ 14,854	$ 39,960
Process	Non-Res Motors										
Process	Non-Res Pumps										
Refrigeration	Non-Res Refrigeration	5,455	537	107	946,369	3,841,157	2,090		$ 47,326	$ 15,988	$ 63,315
HVAC	Non-Res Shell	15,872	25	25	215,859	2,158,592	1,201	$ 15,872		$ 7,536	$ 23,408
Process	Non Res Process										
Comprehensive	Non Res Comprehensive										
Other	Other										
SubTotal		33,174	1,407	1,113	2,216,193	20,843,091	13,399	$ 1,318,106	$ 349,105	$ 201,834	$ 1,869,045
T&D	T&D										
Total		33,174	1,407	1,113	2,216,193	20,843,091	13,399	$ 1,318,106	$ 349,105	$ 201,834	$ 1,869,045

EE Program Portfolio TRC Test	**2.82**

Excluding T&D

Energy Savings Targets 2011-2020



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
MWH	2,523	2,496	3,076	3,776	4,457	4,655	4,649	4,518	4,402	4,350
% of Load Forecast	0.31%	0.29%	0.34%	0.39%	0.44%	0.45%	0.43%	0.40%	0.38%	0.38%

RIVERSIDE PUBLIC UTILITIES

Background

The City of Riverside, the City of Arts and Innovation, was established in 1870 and is the 12th largest city in California covering approximately 90 square miles. In 2009 Riverside created Seizing Our Destiny, a far-reaching set of goals and a strategic vision for attaining them over the next two decades. To this end Riverside has forged ahead with many affirmative and aggressive initiatives, supported and guided by the private sector. These include the Renaissance infrastructure and public building program, such as the restoration of the historic Fox Theatre, and the construction or renovation of many parks and recreational facilities. Other initiatives implemented under this plan were Green Riverside's environmental sustainability programs, digital inclusion and access programs of SmartRiverside.

Riverside Public Utilities (RPU)

Created in 1895, RPU is one of the oldest publicly-owned utilities (POU) in Southern California. RPU has a proud tradition of high quality, reliable electric service with low rates while embracing "green" practices and the use of renewable energy to meet the needs of the customer.

Vision: Riverside Public Utilities (RPU) will be recognized as a community treasure with a national reputation for excellence.

Mission: RPU is committed to the highest quality water and electric services at the lowest possible rates to benefit the community.

Core Values: safety, honesty and integrity, teamwork, professionalism, quality service, creativity and innovation, inclusiveness and mutual respect, community involvement, and environmental stewardship.

Key Statistics:

- Riverside Public Utilities (RPU) was established in 1895
- Over 106,000 electric and 64,000 water customers
- Total population over 300,000
- Peak demand hit system high of 604 megawatts in August 2007
- Annual energy use is approximately 2,100 gigawatt-hours
- RPU employs just under 600 full-time employees
- Service territory is approximately 90 square miles

In 2010, the RPU General Manager launched the Environmental and Economic Effectiveness Effort (E4 Plan). This plan addresses difficult economic times through short-term electric rate freezes, economic development efforts, and a focus on green programs. The E4 Plan initiative also highlights aggressive

customer outreach, upgrades to RPU websites, a Smart Grid implementation, paperless billing, renewable solar energy and energy efficiency. The RPU Board and City Council unanimously passed the E4 Plan embracing its aggressive goals of energy efficiency and renewable energy while stimulating the local economy and job creation.

RPU's investment in proactively marketing its programs to its customers has played a significant role in increased program participation. The utility experienced a 300% increase in program participation from 7,000 to 22,000 applications in FY 09-10. Riverside Public Utilities also won 24 awards in the last year and has received 85 awards since 2006. These awards include recognition from the U.S. Department of Energy (DOE), American Public Power Association (APPA), California Municipal Utilities Association (CMUA), Solar Electric Power Association (SEPA), Public Relations Society of America (PRSA), and many other prestigious organizations.

Despite the poor economy RPU programs were successful this past year both in customer participation numbers and the reported energy savings. Despite recent success, RPU still faces many economic and programmatic challenges:

- RPU has seen a drop in revenues as well as overall energy use. Energy sales and forecasts have seen a decrease of approximately 8 percent over the last two years.

- The local economy, including both job and housing markets, has yet to recover making investment in energy efficiency measures difficult for many Riverside homeowners and businesses.

- RPU's low-income program (SHARE) participation levels have nearly doubled over the last two years requiring additional unprecedented funding levels to meet increased demand for this program.

- The California Solar Initiative (SB1) requires that RPU provide $2.5M annually from public benefit funds that could otherwise be spent on energy efficiency programs, research and development, and education. With over 270 days of sunshine annually, Riverside is an ideal location for photovoltaic energy thus both the commercial and residential PV programs have been very popular.

- There is evidence that the Federal tax credits for energy efficiency measures have helped to stimulate participation in RPU programs. It is unclear if participation will remain at existing levels after the tax credits disappear.

- There is concern that ARRA funded programs and projects will be expiring in the near future and reduction of incentives may reduce program participation and kWh savings.

Last year RPU focused its new commercial programs on direct installation, which target cash-strapped businesses. These new programs included direct installation of programmable thermostats for small businesses, installation of VendingMisers for any business with cold drink vending machines, and the extension of the small business lighting program.

RPU also created a highly successful Whole House Rebate Program for residential customers using EECBG/ARRA funds resulting in energy efficient retrofitting for over 50 homes in Riverside through June 30, 2010. RPU is anticipating EECBG/ARRA funds to retrofit nearly 200 homes in all. Once the remaining funds are depleted, the program will be sustained long-term with Public Benefits (PBC) funding.

Riverside is committed to meeting the annual energy efficiency (EE) and conservation goals it has established through AB2021 for energy and demand reduction by 2016. These targets must be reviewed and updated every three years as required by legislation. The revised goal of 174,378 megawatt-hours (MWh) over the next 10 years was established earlier this year. RPU will provide the required financial budget to meet these new targets and will continue to develop new cost-effective programs that yield energy savings necessary to achieve the goals set forth by Assembly Bill 2021 (AB2021).

Customer Incentives

RPU is continually reviewing the programs and services we offer to respond to the changing needs of our customers. With the successful rollout of the Whole House (EECBG/ARRA Funded) program, transitioning the program to a PBC funded program and simplification of the application process for all residential programs to a single program application for all residential energy efficiency measures will be the next step.

Commercial Rebate Programs

- Air Conditioning Incentives – rebates for replacement or first time purchase of energy efficient AC units.
- Energy Star – rebates for purchase of Energy Star refrigerators, dishwashers, commercial clothes washers, solid door refrigerator/freezers.
- Lighting Incentive – rebates for kWh savings on installation of more efficient lighting.
- New Construction Incentive – rebates for savings exceeding Title 24 standards for new construction projects pre-approved by Riverside Public Utilities.
- Pool and Spa Pumps Incentive – rebates for purchase of qualifying efficient pumps and motors.
- Tree Power – rebates for purchase and planting of up to 5 qualifying shade trees per year.
- Thermal Energy Storage Incentive – feasibility study and incentives available for use of Thermal Energy Storage based on guidelines.
- Performance Based Incentive – rebates for customers who can demonstrate a kWh savings based on custom energy-efficiency measures.
- Commercial Photovoltaic Incentive – rebates for customers who install PV on their business to reduce peak load.
- Energy Innovations Grant for Post-Secondary Educational Institutions – 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.

Direct Installation Commercial Programs

- Programmable Thermostats – provides installation of energy-saving programmable thermostats for our small business community.

- Vending & CoolingMisers – provides businesses with energy-efficient devices that control cold beverage dispensing machines and sliding door refrigeration coolers for maximum energy savings.
- Small Business Lighting – provides a lighting assessment and up to $500 in free energy-efficient lighting for small businesses.

Residential Rebate Programs

- Energy Star – rebates for purchasing Energy Star rated appliances that use less energy and water.
- Cool Cash – rebates for replacing Central Air Conditioners with a SEER rating of 14 and above.
- Tree Power – rebates for purchasing and planting of up to 5 qualifying shade trees per year and 1 free qualifying shade tree coupon printed on the March back of the bill.
- Residential Photovoltaic Incentive – rebates for customers who install PV on their home to reduce peak load and offset high electricity bills.
- Pool Saver – rebates for purchasing efficient pool pump motor, and monthly credit for using pool pumps during off-peak hours.
- Weatherization – triple rebates for installing attic insulation or wall insulation, standard rebates for duct insulation, duct testing/sealing, window replacement, window film, whole house fans, programmable thermostats and cool roofs.
- Whole House (EECBG/ARRA Funded) – rebates for completing two or more energy efficiency measures at a time. Points are awarded for each type of measure and then multipliers are given at specific point intervals on a sliding scale to encourage implementation of more energy efficiency measures.

Special Residential Rates and Services

- Appliance Recycling – free recycling service for old inefficient appliances (refrigerators, dishwashers, clothes washers and room air conditioners).
- U-Rate – reduced rates for customers who use more than 9,000 kilowatt hours annually and agree to shift usage to off-peak hours.
- Utilicare – provides reduced rates to households that require specific types of life support equipment.
- SHARE – credits up to $150 toward electric deposit or bill payment assistance for qualified low-income applicants annually.
- WeCare – provides free in-home weatherization services for senior and disabled customers.
- Green Power Premium – allows customer to donate an additional 2 cents per kilowatt hour above their current kWh rate to assist in purchasing renewable energy resources.

Photovoltaic Efforts (Solar)

RPU continues to promote residential and commercial participation in its renewable energy programs. In support of Senate Bill 1 (SB1) RPU has allocated a budget of $2.5 million annually through December 31, 2016 for customer installed systems.

RPU has a goal of installing 20 megawatts of local photovoltaic by 2020. During the last year there were 33 residential installations totaling 154 kW AC and 7 non-residential systems generating 219 kW AC of

renewable solar energy. RPU currently has over 1.4 megawatts of photovoltaic systems installed and operational as of June 30, 2010.

Research, Demonstration and Development (RD&D)

RPU continues to invest in RD&D programs through local higher education institutions, such as the University of California at Riverside (UCR) solar and nanotechnology research efforts. RPU also participates in SCPPA-related RD&D efforts and will explore future research opportunities as they occur.

Demand Response/Smart Grid

In addition to a voluntary load curtailment program, RPU continues to implement a commercial time-of-use rate to encourage off-peak energy use by its large customers. RPU is evaluating other demand response measures such as Smart Grid technology and Ice Bear applications.

Evaluation, Measurement, and Verification (EM&V)

Pursuant to AB2021 legislation, Riverside Public Utilities is committed to providing evaluation, measurement and verification efforts for its energy-efficiency programs. RPU is in the process of creating an EM&V plan to include a review of RPU's residential and commercial rebate processes, program portfolio, the cost-effectiveness of the programs and the methods of reporting energy savings in compliance with the law. RPU will select a consultant to assist in implementing the plan including a review of RPU's marketing materials, rebate programs, internal processes, third party monitoring and verification and to provide an impact evaluation. The impact evaluation will consist of customer telephone surveys, onsite inspections, verifications that might include metering efforts and a thorough analysis of program effectiveness.

In addition to the efforts provided by third party consultants, RPU consistently performs the following in support of EM&V activities:

- An onsite inspection rate of no less than 10 percent for all residential program participants, performed by RPU staff and contractors.
- A pre- and post-inspection of most commercial rebate participants, including a review of historical energy usage and energy-saving calculations.
- Audits and installations performed by third-party contractors for RPU direct installation programs have high inspection rates that are performed by the consultant and RPU staff.
- Refrigerator/Freezer Recycling program administered by Appliance Recycling Centers of America (ARCA) assures proper inspection when the contractor is picking up old appliances.

Stimulus Update

According to the Energy Efficiency Community Block Grant (EECBG) guidelines of the American Recovery and Reinvestment Act (ARRA), the City of Riverside was allocated $2,850,600 under the formula set by federal law.

The following projects were submitted and approved under the grant for the EECBG funding through ARRA:

- Government Building Retrofits – projects include boiler and water pump replacement; heating, ventilating and air conditioning unit upgrades; and building automation for eight

city facilities. Six of the eight projects have been completed and the remaining two are underway.

- Whole House Rebate Program – offers a "whole house" approach to energy efficiency through an elevated rebate program that provides greater incentives as more energy efficient measures are added to a home. The stimulus funded program is expected to improve energy efficiency in over 200 homes. Once ARRA funding is expended the program will be continued using Public Benefit funds.

- Personal Computer Management Software Rebate Program – this pilot program offers software rebates which will allow businesses to turn off PCs automatically saving energy and money. The City of Riverside and Riverside Community College have installed the software on over 3,500 personal computers to date.

- Greenhouse Gas Community Inventory – URS Corporation completed a community GHG emissions baseline to compliment a previously funded government facilities study.

- Solarized Trash Compactors and Recycling – grant funds were used to purchase and install 25 new trash containers and recycling units in public areas throughout the city. The compactors use solar energy to power compaction of the trash reducing the number of trips needed to empty the containers.

- PV Electric Vehicle Charging Storage System – the proposed project will use a photovoltaic charging system to charge 12 golf carts, off-setting expensive peak power and providing green renewable energy.

- Street Lighting Retrofit LED – grant funds to provide funding for approximately 200 additional energy-efficient light-emitting diode (LED) streetlights to improve public safety, lower energy use and save money.

- Lighted Street Name Sign Reduction – proposal to install approximately 1,000 "Diamond Grade 3 (DG3)" or LED street name signs to reduce maintenance costs and energy use.

RPU and the City of Riverside will continue to actively pursue external resources to leverage Public Benefits funding to enhance its energy efficiency and demand side management programs.

RIVERSIDE PUBLIC UTILITIES

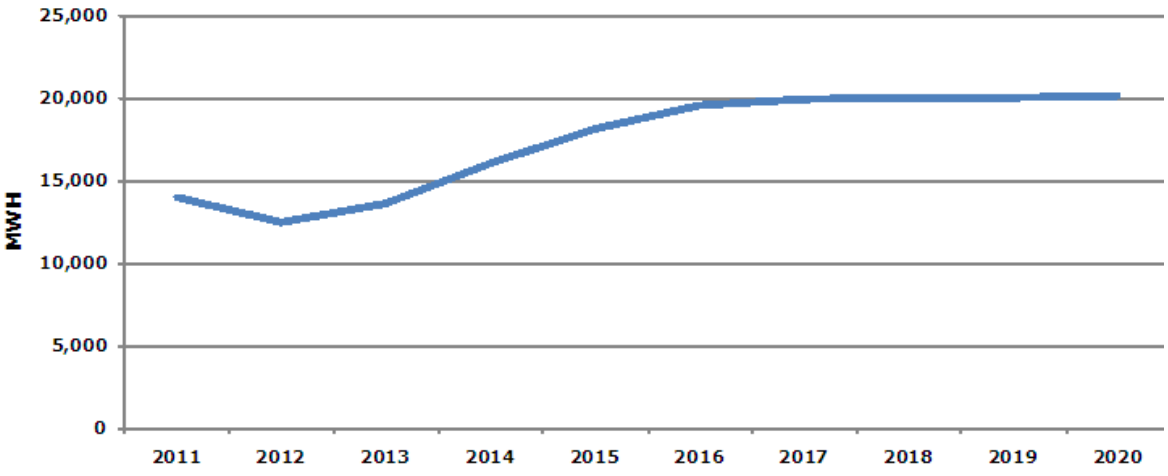
Time Period for Reporting Data: Fiscal Year ending 6/30/2010

Riverside		Resource Savings Summary						Cost Summary			
Program Sector (Used in CEC Report)	Category	Units Installed	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	1,220	12	12	28,304	283,040	163	$ 91,500		$ 1,692	$ 93,192
HVAC	Res Cooling	17,637	904	879	2,455,488	69,565,324	44,205	$ 602,347		$ 748,086	$ 1,350,432
Appliances	Res Dishwashers	791	6	8	20,250	263,245	139	$ 39,550		$ 1,452	$ 41,002
Consumer Electronics	Res Electronics										
HVAC	Res Heating										
Lighting	Res Lighting										
Pool Pump	Res Pool Pump	68	52	29	76,160	761,600	448	$ 13,600		$ 4,851	$ 18,451
Refrigeration	Res Refrigeration	2,403	71	71	447,834	8,061,005	4,287	$ 475,209		$ 46,916	$ 522,125
HVAC	Res Shell	1,054	45	144	254,494	5,089,884	2,930	$ 238,610		$ 34,008	$ 272,618
Water Heating	Res Water Heating										
Comprehensive	Res Comprehensive	53			122,744	122,744	65	$ 133,848		$ 648	$ 134,495
Process	Non-Res Cooking										
HVAC	Non-Res Cooling	7,189	4,258	741	5,350,700	71,737,707	40,471	$ 814,510	$ 302,085	$ 468,366	$ 1,584,961
HVAC	Non-Res Heating										
Lighting	Non-Res Lighting	5,480	883	883	4,416,000	44,160,000	24,542	$ 541,400	$ 134,400	$ 262,652	$ 938,452
Process	Non-Res Motors										
Process	Non-Res Pumps										
Refrigeration	Non-Res Refrigeration	719	12	12	1,039,591	4,438,659	2,337	$ 136,287	$ 134,287	$ 23,193	$ 293,767
HVAC	Non-Res Shell										
Process	Non Res Process										
Comprehensive	Non Res Comprehensive	5,681	909	909	4,544,800	45,448,000	24,028	$ 242,669		$ 237,527	$ 480,197
Other	Other	383,071			429,040	429,040	253		$ 229,843	$ 2,896	$ 232,739
SubTotal		425,366	7,151	3,687	19,185,402	250,360,246	143,869	$ 3,329,529	$ 800,615	$ 1,832,288	$ 5,962,432
T&D	T&D										
Total		425,366	7,151	3,687	19,185,402	250,360,246	143,869	$ 3,329,529	$ 800,615	$ 1,832,288	$ 5,962,432

EE Program Portfolio TRC Test	3.74

Excluding T&D

Energy Savings Targets 2011-2020



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
MWH	14,017	12,526	13,705	16,071	18,159	19,617	19,994	20,037	20,082	20,169
% of Load Forecast	0.65%	0.59%	0.64%	0.73%	0.80%	0.84%	0.84%	0.82%	0.81%	0.80%

ROSEVILLE ELECTRIC (RE)

General Information

- Roseville Electric (RE) was established in 1912 as a department of the City of Roseville
- 53,202 customers (46,766 residential and 6,434 businesses).
- Annual FY10 energy sales: 1,208 gigawatt-hours (GWH)
- 128 employees

Energy Sales

- Energy Sales: Roseville Electric was negatively impacted by the ongoing sluggish recovery from the recession. Energy (GWH) sold during FY10 decreased 2.1% over FY09.
- Residential and commercial vacancies and reduced per meter energy consumption may cause this trend to continue in FY11.
- Major construction projects in Roseville have been placed on hold during the recession, eliminating previously larger scale projected growth.
- Due to rate increases implemented in 2010, revenues for FY10 improved by 5.5% over FY09.

Public Benefits History

- RE began offering energy efficiency programs in the early 1980's.
- From 2001 to 2010 these programs have resulted in peak demand reductions of 16.94 MW and cumulative energy savings of over 108,689 MWH.

FY10 All Energy Efficiency Dollars Summary

- Total energy efficiency – REBATES ONLY - expenditure in FY10 ending on June 30, 2010 was $1,412,709
    - Energy efficiency – REBATES ONLY - expenditures equal 32.97% of total public benefit dollars spent
    - Energy efficiency – REBATES ONLY - expenditures equal 1.04% of total utility revenues
- Total expenditures on energy efficiency in FY10 ending June 30, 2010 was $2,313,562 - including ALL ADMINISTRATIVE AND PROGRAM OVERHEAD.
    - Energy efficiency expenditures – WITH ALL ADMINISTRATIVE AND PROGRAM OVERHEAD - equal 53.99% of total public benefit dollars spent
    - Energy efficiency expenditures - WITH ALL ADMINISTRATIVE AND PROGRAM OVERHEAD - equal 1.69% of total utility revenues

FY10 Energy Efficiency Savings

- Total kWh: 6,279,118 kWh
- Residential kWh: 2,062,635 kWh
- Business (non-residential) kWh: 4,216,483 kWh

FY10 Demand Savings

- Total kW: 1.756 MW
- Residential kW: .819 MW
- Business (non-residential) kW: .937 MW

FY10 Residential Energy Efficiency Programs

- Energy Efficiency Incentives and Support Programs: RE offers comprehensive technical support and incentives to facilitate installation of incrementally higher-efficiency cooling and heating equipment, pool pumps, shade trees and Energy Star ™ appliances for residential customers. Incentives are also offered for refrigerator recycling.
- Energy Audits: A free comprehensive online audit is available for residential customers. This audit is also a prerequisite for the instillation of solar electric at the residential customer's home.
- Residential New Construction Program: RE provides incentives to residential new home production builders to exceed (perform better than) Title 24 energy budget. The Preferred Homes energy efficiency program and the energy efficiency portion of the BEST Homes energy efficiency and roof top solar electric programs are popular among local builders. Home buyers also are attracted to these high performing homes, often times desiring the results of energy efficiency and solar electric without having an understanding of how these benefits are produced.
    - In fiscal year 2009-2010, over 30% of all new single family participated in the residential new construction programs.
- Residential FY10 energy efficiency dollars spent: $926,950

FY10 Business (non-residential) Energy Efficiency Programs

- The "Two-Five-O" Small Business Lighting Program: Over 203 small business customers participated in the "Two Five-O" lighting retrofit program.
- Municipal Facilities: **RE** continued a 10-Year Plan to upgrade the efficiency of municipal facilities beyond code requirements during renovations and capital improvement projects**.**
- School Facilities: RE assisted local schools with energy efficiency retrofits.
- Mid-size and Large Business Programs: RE offered incentives to implement energy efficient measures that reduced peak loads and energy consumption.
- Custom Business Incentives: The Customized Program is designed to provide rebates to mid-size and large business customers who install peak load reducing energy efficiency measures where the work is outside the regular program requirements.
- Business New Construction Program: The busine**s**s new construction program provides assistance in bringing energy efficiency into the design and construction of the facility. The goal is to control peak load and reduce overall energy use. The program includes lighting, mechanical, envelope and whole-building measures.
- Business (non-residential) FY10 energy efficiency dollars spent: $485,759

Other Public Benefits Programs

- Total Public Benefits: RE spent $4,284,838 on Public Benefits in FY10 ending on June 30, 2010.
    - Public Benefit expenditures equaled 3.14% of $136,261,594 total actual utility revenues
    - This figure includes all assigned administrative and program overhead costs.
    - Programs funded include: Low-Income Assistance, Energy Efficiency, Demand-Side Management, Solar/Renewable Energy Programs and Research and Development.
- Solar/Renewable Energy: Total public benefit expenditures on customer owned and operated SB1 compliant renewable energy (solar electric – PV) in FY10 ending June 30, 2010 was $1,454,885.
    - Renewable Energy expenditures for SB1 compliant systems equaled 33.95% of total public benefit dollars spent
- Low Income: Total public benefit expenditures on low income assistance in FY10 ending June 30, 2010 was $216,000 including all overhead
    - Low Income expenditures equaled 5.04 of total public benefit dollars spent
    - The Roseville Electric Rate Assistance Program (ERAP) provides a 15 percent discount to the standard residential rate for qualified residential customers.
    - The Medical Rate Assistance Program, (MedRate) is offered to customers whose income is no greater than specified by HUD as "low income" for Placer County and who use a qualifying medical device. The Program discount is 50 percent of the standard residential rate for the first 500 kWh of usage per billing period and 15 percent of the standard residential rate for usage in excess of 500 kWh.
    - Low Income Refrigerator Replacement: old less efficient refrigerators were replaced by new high efficiency Energy Star refrigerators at no cost to the customer. Total program cost was $83,650 – included in residential energy efficiency.
- Demand Reduction: Total public benefit expenditures on demand reduction via a utility controlled radio frequency signal activated residential air conditioning load control system in FY10 ending June 30, 2010 was $103,203 including all overhead
    - Demand Reduction expenditures equal 1.5% of total public benefit dollars spent
    - Residential central air conditioning load control program called *Power Partners,* implementation began in the summer of 2007.
    - Utility control switches are the program activator
    - Total installed kW of Reduction: 3,700 kilowatts
- Research and Development: Total public benefits expenditures specific to research and development during fiscal year ending June 30, 2010 was $7,071.
    - Research and Development expenditures equaled 5.8% of total public benefit dollars spent
    - IMPORTANT NOTE: RE spent $169,251 in research and development dollars not charged to public benefits in support of the Utility Exploration Center – SEE BELOW FOR MORE INFORMATION.

Non-Public Benefits Expenditures and Activities

Educational Programs and Community Outreach

- Utility Exploration Center: RE is the co-developer and co-operator of the "Utility Exploration Center" (UEC). Roseville Electric strongly believes that education is the foundation for energy efficiency and conservation. The UEC is an educational center servicing Roseville ratepayers and

the region that teaches energy efficiency and water conservation to visitors, including school age children. RE's incentive and energy efficiency programs are tied into the UEC programs through workshops, special events and the messaging of the interactive displays. The UEC partners with regional elementary schools to provide UEC tours to approximately 3,000 school children. These tours are designed to meet state grade level educational standards. The UEC opened in December 2007. The 100,000th visitor walked through the door in July of 2010.

- LivingWise: The City owned utilities serving the City of Roseville support the LivingWise program, which is an educational program that goes into schools to teach the students the importance of energy efficiency and water conservation.
- Community Events**:** RE participates in numerous community events to promote energy efficiency and increase program participation. These events include Downtown Tuesday Nights, Holiday Tree Lighting, Earth Day, Summer Solstice, and several educational workshops at the Utility Exploration Center.

Energy Conservation Rates

- Energy Conservation Rates
  - Residential Service: tiered rated to encourage lower residential use.
  - Large General Service: rates are time-of-use to encourage energy conservation during peak periods.

FY10 Evaluation Measurement and Verification

- It is anticipated that RE will evaluate residential shade tree, residential passive energy efficiency public benefit energy efficiency programs.
- Additionally, RE will do EM&V on the small business "reach-in" refrigeration DOE ARRA funded program.

American Recovery and Reinvestment Act (ARRA)

- The City of Roseville was awarded $1,073,700 from the Department of Energy. The City approved disbursement of these funds in small business energy efficiency retrofits, City owned onsite audit and an LED City streetlight pilot project.
- 2009-2010 FY10 activity was primarily limited to program development
  - Small Business
    - Completed outreach to third party direct install contractors to create a "qualified contractors" list for programs.
    - Expect to reach over 500 small businesses
  - City LED Street Light Pilot Project
    - Completed equipment RFP to test three "cobra head" style field tests.
    - Purchased equipment from three manufacturers for "cobra head" style fixtures.
    - Expect to write new specification for future street lights in the City of Roseville
  - City of Roseville Lighting and Controls
    - Will proceed with lighting retrofits in FY11
    - To include low wattage T8 linear fluorescents, HID to T8 conversions and lighting controls

FY10 Research and Development

Roseville Electric participated in three research and development efforts during FY10

- Utility Exploration Center ($169,251): Roseville Electric strongly believes that ratepayer education leads to greater energy efficiency and conservation. In support of this belief, since 2005 Roseville Electric has invested $2,200,000 in the design, contraction and operation of the UEC. Roseville Electric contributed $169,251 to UEC operations in FY10. At the UEC, Roseville Electric is attempting to quantify the contribution of education within the community to reductions in kWh and summer peak (kW) demand.
- American Public Power Association / DEED membership ($7,069): DEED is dedicated to increasing efficiency, reducing costs, investigating new technologies and services and improving processes and practices to better serve customers. DEED pools its members' resources to invest in the future technologies and best practices of the electric utility industry. DEED encourages and promotes energy efficiency innovation and funds innovative projects focused on the needs and research interests of its members.
- Electric car charging stations: Roseville Electric continues to maintain electric car charging stations at various locations around the City of Roseville.

Proposed FY11 Public Benefits Expenditures

- RE projects to spend $4,267,503 on Public Benefits programs based upon a collection of 2.85% of total projected FY11 utility revenues.

FY11: Proposed Energy Efficiency Programs

Public Benefit Programs

- General: Investigate new energy efficient strategies.
  - Continue to investigate, and implement where beneficial, programs shared with other publically owned electric utilities.
  - Bundled whole house programs
  - Thermal energy storage
- Residential Programs
  - Reduce the number of residential programs that do not have a TRC greater than 1.0.
  - Ensure participation in the BEST Homes programs continues to reach the 20% participation goal, which was approved by the Roseville City Council. Residential new construction is expected to continue at a significantly reduced level. However, the builders that are active in Roseville continue to participate in these programs.
  - Maintain focus on participation in the residential air conditioner programs, including incentives for replacement and the Power Partners program.
  - Increase educational programs related to energy efficiency and solar system installation.
  - Continue to offer energy efficiency programs to low-income customers.
  - Offer "seasonal" energy efficiency programs to the community. (Example, LED Holiday Light Exchange)
- Business/Commercial Programs
  - Hospitality Program: energy controlled in individual hotel rooms
  - T8 high wattage to T8 low wattage lighting retrofits
  - Vending Miser vending machine controls
  - Expanded third party direct install business/commercial programs.
  - Continue to promote our Customized Program to our large customers.
  - Continue to evaluate and modify the Small Business Lighting program to increase customer participation.

- Promote the new construction program for businesses so that all new buildings will surpass Title 24 by a minimum of 10 percent.

American Recovery and Reinvestment Act (ARRA)

- Spend $985,000 in ARRA dollars for business energy efficiency
- Implement small business refrigeration program to retrofit “reach-in” retail and food service display refrigeration
- Implement the small business lighting and controls program
- Implement the City of Roseville lighting and controls retrofit project

ROSEVILLE ELECTRIC (RE)

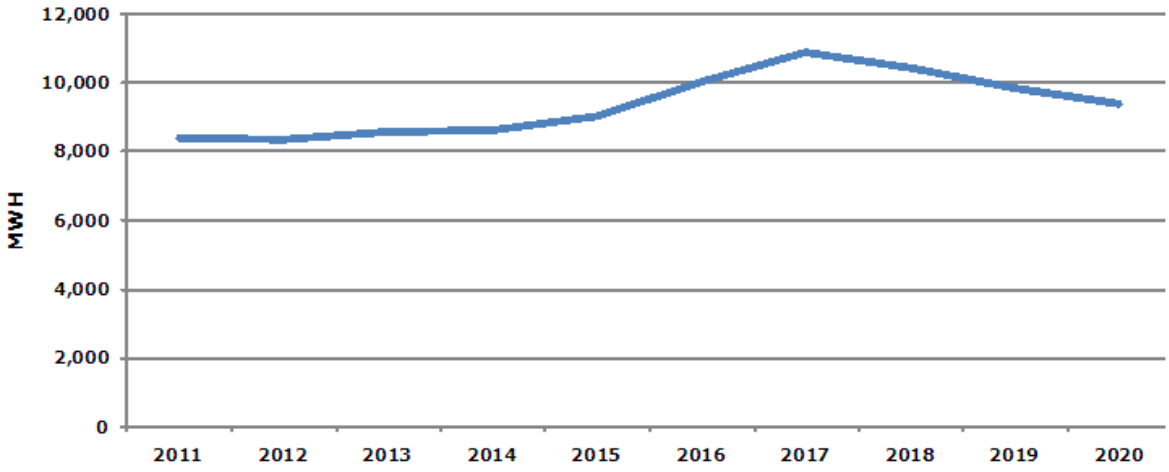
Time Period for Reporting Data: Fiscal Year ending 6/30/2010

Roseville		Resource Savings Summary						Cost Summary			
Program Sector (Used in CEC Report)	Category	Units Installed	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	529	5	5	12,273	122,728	68	$ 31,079		$ 821	$ 31,900
HVAC	Res Cooling	3,084	537	480	655,274	12,973,415	8,294	$ 755,795		$ 199,152	$ 954,947
Appliances	Res Dishwashers	48			1,229	15,974	9	$ 1,200		$ 109	$ 1,309
Consumer Electronics	Res Electronics										
HVAC	Res Heating										
Lighting	Res Lighting	1,009			36,292	290,334	155	$ 11,533		$ 1,703	$ 13,236
Pool Pump	Res Pool Pump	71	54	31	79,520	795,200	439	$ 34,700		$ 12,722	$ 47,422
Refrigeration	Res Refrigeration	1,440	141	141	910,037	16,380,673	8,886	$ 83,650	$ 8,735	$ 109,796	$ 202,181
HVAC	Res Shell	27	5	5	5,062	57,144	32	$ 2,356		$ 401	$ 2,757
Water Heating	Res Water Heating										
Comprehensive	Res Comprehensive										
Process	Non-Res Cooking										
HVAC	Non-Res Cooling	144	47	28	140,649	2,360,750	1,256	$ 19,180		$ 5,458	$ 24,638
HVAC	Non-Res Heating										
Lighting	Non-Res Lighting	1,450	1,484	1,470	9,145,236	147,114,041	81,527	$ 557,174		$ 428,912	$ 986,087
Process	Non-Res Motors										
Process	Non-Res Pumps										
Refrigeration	Non-Res Refrigeration										
HVAC	Non-Res Shell	95	9	9	12,103	181,546	101	$ 9,456		$ 448	$ 9,904
Process	Non Res Process										
Comprehensive	Non Res Comprehensive										
Other	Other										
SubTotal		7,895	2,283	2,169	10,997,675	180,291,805	100,767	$ 1,506,122	$ 8,735	$ 759,523	$ 2,274,381
T&D	T&D										
Total		7,895	2,283	2,169	10,997,675	180,291,805	100,767	$ 1,506,122	$ 8,735	$ 759,523	$ 2,274,381

EE Program Portfolio TRC Test	**2.88**

Excluding T&D

Energy Savings Targets 2011-2020



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
MWH	8,390	8,360	8,604	8,639	9,054	10,032	10,903	10,470	9,874	9,387
% of Load Forecast	0.63%	0.61%	0.61%	0.60%	0.61%	0.66%	0.70%	0.65%	0.60%	0.56%

SACRAMENTO MUNICIPAL UTILITY DISTRICT (SMUD)

SMUD Profile [4]

- Total Customers (year-end): 595,076
- Annual Energy Sales to Customers: 10,691,907 kWh (thousands)
- Record Net System Peak Demand – 1 hour: 3,280 MW (July 24, 2006)

SMUD Energy-Efficiency Program Highlights

- SMUD has been continuously operating energy-conservation, load management, and energy-efficiency programs since 1976.
- In 2007, the SMUD Board of Directors approved a significant expansion in annual savings goals for its energy-efficiency resources, from approximately 0.6% of annual sales to an annual average of approximately 1.5% over the following decade. These goals have now been extended through 2020. The expanded goals were part of the Board's vision to "empower our customers with solutions and options that increase energy efficiency, protect the environment, reduce global warming, and lower the cost to serve our region." SMUD is presently in the midst of redesigning its energy-efficiency portfolio to expand existing programs, plan and implement new programs, and develop and implement a broader marketing and engagement plan that will meet these expanded goals and the Board's vision.
- For 2010, SMUD spent $29.7 million for residential and commercial energy-efficiency programs, compared to a budget of $34.8 million.[5] All expenditures are public-goods funded. These programs are delivered 27.4 megawatts (MW) of peak-load reduction and 154.3 million kilowatt-hours (GWh) of annual energy savings, compared to annual goals of 24.5 MW and 143.6 GWh.
- For 2011 residential and commercial energy-efficiency programs, SMUD has budgeted $33.1 million in PG funds.[2] These programs are projected to deliver 24.5 MW of peak-load reduction and 154 GWh of annual energy savings.

SMUD 2011 Energy-Efficiency Programs

Commercial/Industrial Retrofit Programs

Commercial/industrial energy efficiency retrofit programs for existing buildings and facilities are budgeted for $8.4 million, with goals of 8.0 of peak-load reduction and 46.1 GWh in annual energy savings.

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[4] SMUD 2009 Annual Report, front inside cover and p. 21.

[5] Includes market research, planning, M&V, and emerging technologies R&D.

- Customized Energy Efficiency Incentives: Promotes the installation of energy-efficient equipment controls and processes at all commercial and industrial customer facilities. Provides incentives to contractors and/or customers to promote efficient practices for the following measures: lighting and controls, HVAC and refrigeration equipment and controls, retrocommissioning, and process improvements.
- Express Efficiency Incentives: Provides prescriptive incentives to participating qualified contractors for high-efficiency equipment across a variety of end-uses: lighting, HVAC, refrigeration, food-service equipment, and office-network PC power-management software. Incentives are targeted to the contractor/supplier in an effort to stimulate the market for energy-efficient equipment and services, and are designed to cover a significant portion of the incremental cost of the high-efficiency equipment.
- Prescriptive Lighting: Promotes the installation of energy-efficient lighting equipment and controls in commercial and industrial customer facilities by providing financial incentives to contractors who install efficient lighting and controls.
- Distributor Incentives: Promotes the installation of energy-efficient packaged-HVAC equipment and premium motors. Provides incentives to manufacturers and distributors to encourage warehouse stocking and marketing of premium-efficiency motors and high-efficiency packaged-HVAC units. These incentives are paid per sale of energy-efficient packaged-HVAC unit and per sale of premium-efficiency motor.

Residential Programs

Residential energy-efficiency programs for existing homes are budgeted for $17.1 million, with goals of 14.9 MW of peak-load reduction and 102.2 GWh in annual energy savings.

- Shade Trees: Provides free shade trees to SMUD customers. Implemented through the community-based non-profit Sacramento Tree Foundation (STF). STF foresters review tree selection and site locations with customers, who plant the trees.
- Equipment Efficiency: Provides rebates and/or SMUD financing for qualifying (Energy Star, Consortium for Energy Efficiency, and/or other high-efficiency) efficiency improvements to homes' building shells and equipment. Improvements include central air conditioners and heat pumps, duct sealing, windows, attic and wall insulation, insulated siding, solar domestic water heaters, and cool roofs. Two new program components will likely be added in 2011: Quality Installation for new or replacement HVAC, involving at a minimum tightly sealed ducts and correct sizing; and Quality Maintenance for existing HVAC, involving duct sealing and replacement, corrections to refrigerant charge and air flow, and other HVAC-performance improvements.
- Whole-House Performance: Participating contractors use building-science principles and diagnostic equipment to evaluate the current performance of the whole house, and then recommend comprehensive improvements that will yield an optimal combination of savings and comfort for homeowners. Once the homeowner selects the improvements that fit their needs and budget, participating contractors will do the work or enlist other professionals to have the job done. Appliance Efficiency: Provides rebates for qualifying (Energy Star or Consortium for Energy Efficiency-listed) appliances: clothes washers, dishwashers, and room air-conditioners. Included in this program are two previously separate programs. Refrigerator/Freezer Recycling provides rebates for the free pick-up and environmental recycling of old refrigerators and freezers. Pool Efficiency provides educational information to customers on the benefits of installing high-efficiency, variable-speed pumps and motors, and encourages customers to

operate pool equipment during off-peak hours. Pool Efficiency also focuses on educating the pool-contractor community on practices for retrofit and new-pool installations that maximize pumping efficiency and minimize energy use and peak demand.

- Home Electronics: This program has multiple implementation components: *Education*—Educate consumers on ways to reduce usage by the increasing proliferation of electronic devices in homes that consume energy even when turned off. *Collaboration*—SMUD, collaborating with other utilities, regional and national advocacy organizations, and the U.S. EPA, will influence electronics standards-setting, and will design and deploy program and best-practices guidelines to coordinate impacts of other developing home-electronics programs. *Incentives*—SMUD has implemented an upstream OEM- and retail-incentive program that can be replicated by utilities across the nation.
- Retail 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 partners.
- Multi-Family (Apartment and Condominium) Retrofit: This program is designed to capture some of the significant energy-savings potential in existing apartments and condominiums and their common areas not addressed by current SMUD programs. The foundation of the program is developing business relationships among the key players affecting the multi-family (MF) market segment, for the sole purpose of maximizing the efficiency of MF energy use, and offering rebates and financing to help buy down the higher cost of efficiency improvements. The program targets, builds, and fosters relationships with property managers and owners of MF rental property, owners of condominiums, property-management associations, condo-homeowners associations, vendors, and service providers.
- Residential Advisory Service: Provides on-site energy audits of homes, on-line energy audits, and telephone assistance for customers, with recommendations to reduce their homes' energy use (and bills). Recommendations include practices and home-improvement projects that will increase the energy efficiency of their dwellings.
- Home Electricity Reports: A scientifically designed program to measure the impact of sending electricity-usage reports to residential customers. The reports compare the customer's monthly usage to that of the previous year and to 100 neighbors in similar-size homes. The reports are customized to each house and provide energy tips to assist the customer in making behavior changes that reduce their energy use.

New-Construction Programs

New construction programs are budgeted for $2.4 million, with goals of 1.6 MW of peak-load reduction and 5.7 GWh in annual energy savings.

- Solar Smart Energy Homes provide incentives and marketing support to builders to build homes that include PV and have net electricity consumption that is 60 percent lower than typical new homes.
- Savings by Design: Provides incentives to builders and their design teams to design new commercial and industrial buildings 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).

Demand-Reduction Programs

- Peak Corp (Residential Air Conditioner Load Management): Customers volunteer to allow SMUD to install a radio-controlled cycling device on their central air conditioners, and to send a radio signal that switches or cycles off their air conditioners during an electric-system emergency.
- Voluntary Emergency Load Curtailment: Calls on commercial and industrial 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.
- Curtailment Agreements: Agreements in place with largest industrial customers to reduce usage on an on-call basis to help manage system peak loads.

Measurement and Verification Plans

In concert with its commitment to significantly ramp up energy-efficiency activities over the next decade, SMUD has established a framework to develop yearly measurement and verification (M&V) action plans. SMUD is planning M&V activities for all of its major programs, scheduled at fixed intervals (2-4 years apart), with the intention of evaluating all programs on a continued cyclical basis through 2017. For methodological approaches needed to perform specific types of evaluations, SMUD will be guided by the CPUC's "California Evaluation Framework" (June 2004) and "California Energy Efficiency Evaluation Protocols" (April 2006).

SMUD is planning to allocate approximately two percent of its total energy-efficiency budget towards impact- and persistence-focused M&V studies. These studies will be conducted primarily through the use of third-party contractors, with management and oversight by SMUD's Business Planning Department. SMUD has awarded or is in the process of awarding contracts for consultants to perform evaluations of the following programs in 2011:

Residential—

- Refrigerator/ Freezer Recycling
- Equipment Efficiency
- Home Electronics
- Home Electricity Reports

Commercial—

- Prescriptive Lighting (persistence of savings and market potential)

SACRAMENTO MUNICIPAL UTILITY DISTRICT (SMUD)

Time Period for Reporting Data: Calendar year ending 12/31/10

SMUD - 2010 (Actual)		Resource Savings Summary						Cost Summary			
Program Sector (Used in CEC Report)	Category	Units Installed	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh Savings	Net Lifecycle GHG Reductions (tons)	Utility Incentives Cost	Utility Direct Install Cost	Utility Mktg, EM&V, and Admin Cost	Total Utility Cost
Appliances	Res Clothes Washers	916	138	138	371,142	5,567,131	2,255	$160,300	$0	$608,689	$768,989
HVAC	Res Cooling	19,319	2,812	2,812	4,377,989	65,669,842	26,596	$2,211,750	$0	$1,993,316	$4,205,066
Appliances	Res Dishwashers	268	12	12	28,097	421,461	171	$13,400	$0	$175,496	$188,896
Consumer Electronics	Res Electronics	52,141	1,278	1,278	15,642,387	156,423,866	63,352	$990,684	$0	$1,057,431	$2,048,116
HVAC	Res Heating	847	411	411	1,510,407	27,187,321	11,011	$410,795	$0	$98,085	$508,880
Lighting	Res Lighting	1,749,537	6,690	6,690	51,740,000	429,442,000	173,924	$2,732,398	$0	$2,075,667	$4,808,065
Pool Pump	Res Pool Pump	378	360	360	7,100	106,500	43	$113,400	$0	$229	$113,629
Refrigeration	Res Refrigeration	7,228	638	638	4,857,975	19,661,088	7,963	$229,190	$0	$176,655	$405,845
HVAC	Res Shell	762	52	52	166,747	3,334,943	1,351	$21,280	$0	$5,370	$26,650
Water Heating	Res Water Heating	50	23	23	144,705	2,894,103	1,172	$75,000	$0	$7,579	$82,579
Comprehensive	Res Comprehensive(a)	0	520	520	3,620,000	18,100,000	7,331	$0	$0	$116,588	$116,588
Process	Non-Res Cooking	0	0	0	0	0	0	$0	$0		$0
HVAC	Non-Res Cooling	476	1,298	1,298	10,216,010	153,240,156	62,062	$748,886	$0	$1,452,730	$2,201,616
HVAC	Non-Res Heating	0	0	0	0	0	0	$0	$0		$0
Lighting	Non-Res Lighting	1,068	5,209	5,209	28,258,018	113,032,073	45,778	$3,829,535	$0	$1,978,378	$5,807,913
Process	Non-Res Motors	208	41	41	300,000	4,500,000	1,823	$124,521	$0	$45,279	$169,800
Process	Non-Res Pumps	0	0	0	0	0	0	$0	$0		$0
Refrigeration	Non-Res Refrigeration	2	135	135	1,169,883	11,698,827	4,738	$15,078	$0	$90,302	$105,380
HVAC	Non-Res Shell	0	0	0	0	0	0	$0	$0		$0
Process	Non-Res Process	11	1,048	1,048	9,086,089	90,860,887	36,799	$62,691	$0	$582,063	$644,754
Comprehensive	Non-Res Comprehensive(b)	272	7,076	7,076	16,154,000	134,262,248	54,376	$1,729,087	$0	$2,249,068	$3,978,155
Other	Other(c)	0	100	100	8,000,000	8,000,000	3,240	$0	$0	$1,500,654	$1,500,654
SubTotal			27,842	27,842	155,650,550	1,244,402,445	503,983	$13,467,996	$0	$14,213,579	$27,681,575
T&D	T&D		0	0	0	0	0	$0	$0	$0	$0
Total			27,842	27,842	155,650,550	1,244,402,445	503,983	$13,467,996	$0	$14,213,579	$27,681,575

EE Program Portfolio TRC Test (d)	**2.82**

Excluding T&D

Time Period for Forecast Data: Calendar year ending 12/31/11

SMUD - 2011 (Planned)		Resource Savings Summary						Cost Summary			
Program Sector (Used in CEC Report)	Category	Units Installed	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh Savings	Net Lifecycle GHG Reductions (tons)	Utility Incentives Cost	Utility Direct Install Cost	Utility Mktg, EM&V, and Admin Cost	Total Utility Cost
Appliances	Res Clothes Washers	500	75	75	202,588	3,038,827	1,231	$87,500	$0	$108,741	$196,241
HVAC	Res Cooling	20,425	3,220	3,220	4,867,607	73,014,103	29,571	$2,542,667	$0	$1,812,661	$4,355,328
Appliances	Res Dishwashers	300	14	14	31,452	471,785	191	$15,000	$0	$61,793	$76,793
Consumer Electronics	Res Electronics	54,489	2,000	2,000	15,200,000	152,000,000	61,560	$1,798,125	$0	$1,587,241	$3,385,365
HVAC	Res Heating	970	0	0	1,196,610	21,538,976	8,723	$470,518	$0	$105,667	$576,184
Lighting	Res Lighting	1,835,000	7,400	7,400	60,000,000	498,000,000	201,690	$3,000,000	$0	$2,726,755	$5,726,755
Pool Pump	Res Pool Pump	0	0	0	0	0	0	$0	$0		$0
Refrigeration	Res Refrigeration	8,000	710	710	4,960,855	19,843,420	8,037	$0	$0	$1,387,581	$1,387,581
HVAC	Res Shell	973	65	65	214,331	4,286,617	1,736	$24,374	$0	$8,212	$32,586
Water Heating	Res Water Heating	57	26	26	165,743	3,314,856	1,343	$85,904	$0	$9,882	$95,785
Comprehensive	Res Comprehensive(a)	0	0	100	5,800,000	0	0	$0	$0	$3,037,218	$3,037,218
Process	Non-Res Cooking	0	0	0	0	0	0	$0	$0		$0
HVAC	Non-Res Cooling	630	1,543	1,543	6,907,321	103,609,814	41,962	$753,045	$0	$920,298	$1,673,342
HVAC	Non-Res Heating	0	0	0	0	0	0	$0	$0		$0
Lighting	Non-Res Lighting	15	4,511	4,511	23,649,651	94,598,604	38,312	$3,334,657	$0	$2,508,593	$5,843,251
Process	Non-Res Motors	300	95	95	564,982	8,474,730	3,432	$35,000	$0	$21,646	$56,646
Process	Non-Res Pumps	0	0	0	0	0	0	$0	$0		$0
Refrigeration	Non-Res Refrigeration	3	202	202	1,754,824	17,548,240	7,107	$28,914	$0	$120,931	$149,845
HVAC	Non-Res Shell	0	0	0	0	0	0	$0	$0		$0
Process	Non-Res Process	6	572	572	3,964,839	39,648,387	16,058	$123,581	$0	$381,414	$504,995
Comprehensive	Non-Res Comprehensive(b)	328	3,062	3,062	16,920,962	152,609,762	61,807	$1,589,558	$0	$2,432,993	$4,022,551
Other	Other(c)	0	200	200	10,400,000	0	0	$0	$0	$1,987,461	$1,987,461
SubTotal			23,695	23,795	156,801,765	1,191,998,122	482,759	$13,888,842	$0	$19,219,086	$33,107,928
T&D	T&D		0	0	0	0	0	$0	$0	$0	$0
Total			23,695	23,795	156,801,765	1,191,998,122	482,759	$13,888,842	$0	$19,219,086	$33,107,928

EE Program Portfolio TRC Test (d)	**2.09**

Excluding T&D

CITY OF SHASTA LAKE

History and Load Data

The City incorporated in 1993 which included an electric enterprise formally known as the Shasta Dam Area Public Utility District which was established in 1945. The City is a load serving entity and distribution provider. The City owns and operates two small solar installations, the largest is 10 kilowatts and both are located on City facilities. The City provides retail electric service to customers located within the City's corporate limits, as well as certain adjacent areas and serves approximately 4,444 retail customers (meters), of which 4,094 are residential. Residential users account for 21.57 % of annual retail sales. All other accounts (some small commercial and 13 large industrial) account for 79.43% of sales. 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 was 33.7 megawatts on July 28, 2009, at 6 pm. Total annual sales were 194,152,101 kilowatt hours.

Overview of Shasta Lake Energy Efficiency Programs

The City of Shasta Lake manages a comprehensive energy efficiency incentive program for residential & commercial customers focusing on peak load reduction and energy conservation. For residential customers, rebates are offered for the installation of various energy efficiency measures. For commercial customers, rebates are available for upgraded lighting, HVAC equipment, and in cases where an analysis is performed rebates can be offered for additional equipment that reduces energy use and/or demand.

Residential Customer Programs:

- Energy Efficiency Hotline: A toll free line is available for the city's electrical customers to answer questions and provide information on energy efficiency and energy savings-related matters.
- Free Energy Audits:. On-site energy audits by city energy specialists are available to residential customers. Energy efficiency measures are recommended based on each audit and upon request, the customer is provided a written report summarizing findings and recommendations and/or additional visits to answer questions.
- Rebate Program: Comprehensive technical support and incentives to facilitate installation of higher efficiency cooling and refrigeration equipment, envelope measures, ENERGY STAR® appliances, and lighting for residential customers.
- Weatherization Incentives: Shasta Lake provides financial incentives for homeowners who invest in weatherization measures, including insulation and window treatments/replacements.

Commercial/Industrial Customer, Schools and Public Facilities Programs:

- Free Energy Audits: Shasta Lake offers free, on-site energy audits for both commercial and industrial customers. Energy efficiency recommendations and followup visits support implementation of recommended energy efficiency measures. Rebates are available for energy efficiency upgrades identified in these audits. Verification services, to ensure appropriate installation of recommended measures is also provided.
- Commercial Lighting Rebate Program: A commercial lighting retrofit program is offered to businesses in the city's electric service territory. There is a prevalence of T-12 lighting throughout the city and most high bay lighting uses high intensity discharge fixtures instead of more efficient florescent fixtures. Shasta Lake provides technical assistance and financial incentives for the installation of energy efficient lighting upgrades.
- Commercial Refrigeration Direct Install Program: A commercial refrigeration retrofit program, Keep Your Cool (KYC), is offered to businesses in the city's electric service territory. The KYC contractor audits the age and condition of existing refrigeration equipment and makes recommendations to improve the energy efficiency of equipment. Efficiency measures installed in the KYC program include programmable EC motors, motor controllers, anti-sweat heater control units, LED case lighting, door gaskets, auto door closers and strip curtains.
- Custom Energy Efficiency Projects: Shasta Lake financial incentives for commercial customers are based on site-specific consumption. Incentives are tailored to the individual customer needs based on the audit and the potential energy savings.

Shasta Lake Demand Reduction Programs:

Remote-read meters have been rolled out to nearly all customers. It is anticipated that this remote meter reading system will allow the City to implement an interruptible load program, time of use metering and other such programs when such services will benefit the citizens of Shasta Lake.

Performance Results for FY2010

Shasta Lake's AB2021 Energy Reduction Target for FY2010 was 129,200 kWh. In FY2010, the city exceeded their target by 880%, with a total net energy reduction of 1,266,339 kWh.
Shasta Lake's AB2021 Demand Reduction Target for FY2010 was 15.2 kW. In FY2010, the city surpassed their annual target, with a total demand reduction of 181 kW.
One large commercial project contributed the bulk of kWh savings and demand savings in FY2010. Knauf Insulation in Shasta Lake completed their lighting upgrade, which replaced 1000W High Pressure Sodium lighting with T-5 High Output lighting with controls and sensors. This project resulted in net annual savings of 1,131,666 kWh (89% of the city's results) and net demand reduction of 129 kW (71% of the city's results). The next largest contribution to FY2010 results was from KYC refrigeration upgrade projects, which served 4 small businesses and yielded a net annual savings of 91,340 kWh and net demand reduction of 16 kW.

Performance Results for FY2008-FY2010

Shasta Lake's 3-year AB2021 Energy Reduction Target for FY2008-FY2010 was 387,600 kWh. Energy efficiency program activity during this period resulted in a total net energy reduction of 1,582,392 kWh, exceeding the cumulative target by 308%.
Shasta Lake's 3-year AB2021 Demand Reduction Target for FY2008-FY2010 was 45.6 kW. Energy efficiency program activity during this period resulted in a total net demand reduction of 273 kW.

Revision to Annual Energy Savings Targets for FY2011-FY2020

A recent assessment of energy savings potential in Shasta Lake conducted by Summit Blue indicated that an appropriate 10 year target (spanning FY2011-FY2020) for the city's energy-efficiency programs would be 7,719 MWh. Taking into account current economic conditions and the demographics of the City, staff decided to target 300 MWh per year over the next three years as a start towards achieving that target, a 132% increase over the previous annual target.

FY2011 Forecast

The City of Shasta Lake is forecasting that it will meet the revised AB2021 targets by continuing to offer a comprehensive suite of energy efficiency rebates and other program offers, with the commercial sector contributing the vast majority of the energy savings. Additionally, the city implemented a comprehensive Residential Audit Program in FY2011 which includes diagnostic testing and free instant savings measures (CFLs and low-flow showerheads) to increase uptake in the residential sector.
The city's energy efficiency rebates were revised for FY2011 based on the Measure Quantification Report issued by KEMA in December 2009. The FY2011 energy efficiency program reflects a comprehensive suite of measures which encourages residential upgrades through increased rebate levels. The city's forecast indicates that the AB2021 target of 300,000 kWh will be met with a funding level of $213,000 for rebates and administration.

Shasta Lake Evaluation, Measurement and Verification for 2009/2010

Shasta Lake undertook its first EM&V report in early 2010. The report focused on the two programs that produced the largest amount of savings during the 2008/2009 year, the Keep Your Cool program and their commercial lighting program. The report can be found on the NCPA website.
As noted above, the vast majority of energy savings for Shasta Lake in 2009/2010 was a result of a lighting upgrade at the Knauf insulation plant. Consequently, an EM&V study will be done for Shasta Lake for the 2009/2010 period, for that project. The results of that report will be available on the NCPA website upon completion.

CITY OF SHASTA LAKE

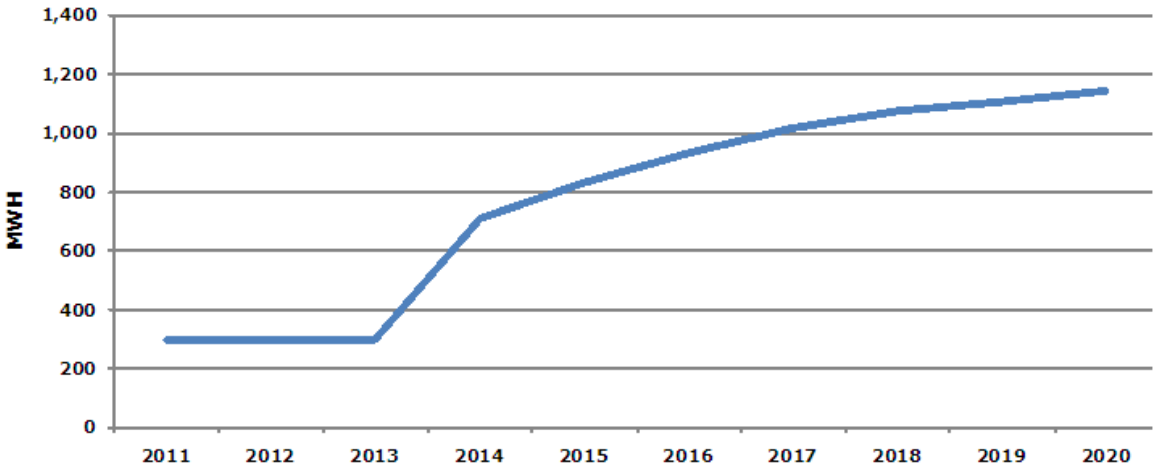
Time Period for Reporting Data: Fiscal Year ending 6/30/2010

Shasta Lake		Resource Savings Summary						Cost Summary			
Program Sector (Used in CEC Report)	Category	Units Installed	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	20	2	2	4,848	48,480	27	$ 1,500		$ 8,277	$ 9,777
HVAC	Res Cooling	47	11	2	13,891	250,030	157	$ 6,752		$ 6,373	$ 13,125
Appliances	Res Dishwashers	5			330	4,290	2	$ 125		$ 751	$ 876
Consumer Electronics	Res Electronics										
HVAC	Res Heating										
Lighting	Res Lighting	466	15	2	12,781	118,163	63	$ 260	$ 1,200	$ 2,124	$ 3,584
Pool Pump	Res Pool Pump	1	1		1,120	11,200	6	$ 250		$ 1,912	$ 2,162
Refrigeration	Res Refrigeration	26	1	1	4,160	74,880	41	$ 1,750		$ 12,990	$ 14,740
HVAC	Res Shell	51	6	6	5,021	94,865	54	$ 6,639		$ 14,169	$ 20,808
Water Heating	Res Water Heating	2			1,184	17,760	10	$ 100		$ 2,835	$ 2,935
Comprehensive	Res Comprehensive										
Process	Non-Res Cooking										
HVAC	Non-Res Cooling										
HVAC	Non-Res Heating										
Lighting	Non-Res Lighting	1	129	129	1,131,666	18,106,650	10,034	$ 65,606		$ 4,200	$ 69,806
Process	Non-Res Motors										
Process	Non-Res Pumps										
Refrigeration	Non-Res Refrigeration	4	16	16	91,340	590,663	311		$ 13,672	$ 2,814	$ 16,486
HVAC	Non-Res Shell										
Process	Non Res Process										
Comprehensive	Non Res Comprehensive										
Other	Other										
SubTotal		622	181	158	1,266,339	19,316,980	10,705	$ 82,981	$ 14,872	$ 56,445	$ 154,298
T&D	T&D										
Total		622	181	158	1,266,339	19,316,980	10,705	$ 82,981	$ 14,872	$ 56,445	$ 154,298

EE Program Portfolio TRC Test	**9.19**

Excluding T&D

Energy Savings Targets 2011-2020



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
MWH	300	300	300	713	833	934	1,016	1,073	1,108	1,143
% of Load Forecast	0.16%	0.15%	0.14%	0.30%	0.33%	0.36%	0.37%	0.37%	0.38%	0.38%

SILICON VALLEY POWER

SILICON VALLEY POWER, CITY OF SANTA CLARA (SVP)

- Established in 1896
- 51,854 customers; 83.9% are residential customers but only 8.9% of power sales are residential. 87.3% of sales are to the 1,893 industrial customers. SVP projects an average increase of 3.4% annually in sales.
- Peak demand: 459.8 megawatts in 2009; 72.8% load factor.
- Annual energy use: 2,800 gigawatt-hours in 2009.
- SVP owns power generation facilities. Has invested in joint ventures that produce electric power and trades on the open market. 25.1% of its power comes from geothermal, wind, and other eligible renewable sources.
- The City of Santa Clara employs 144 in the Electric Department (SVP).
- SVP mission: To ensure the citizens, organizations and businesses of Santa Clara a low-cost, reliable and stable source of electric power.

SVP Energy Efficiency Program Highlights:

SVP's Public Benefit Programs are separated into residential and business programs, with the majority of funding toward the business sector since that is the customer class that represents 90.3% of the sales. Total program expenditures are about $6-7 million per year. Total program cost for energy efficiency programs in fiscal year 2009-2010 was $7,145,822 ($8,583,786 on all public benefit programs), resulting in 2,845 kW net demand reduction and 30,592,561 kWh net reductions. Since 1998, total program costs for all public benefit programs were $65,131,880, resulting in over 272.2 million kWh in cumulative first year savings.

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:

- Business Audits: Free energy efficiency audits to business customers.
- Rebates: A comprehensive portfolio of energy efficiency rebates (for purchase and installation of energy efficient lighting, motors, air conditioners, motion sensors, programmable thermostats, new construction, and customized energy-efficiency installations).
- Compressed Air Management Program (CAMP): Provides assistance to large commercial and industrial facilities to assist them in upgrading poorly functioning and inefficient compressed air systems.
- Retrocommissioning (RCx): Provides commissioning and retro commissioning services to data centers, commercial buildings, educational facilities, and hotels.
- "Keep Your Cool" Program: Provides service through a third party to repair or replace broken refrigeration door gaskets and to install new strip curtains for businesses in Santa Clara.
- Express Refrigeration Program: This program delivered energy efficiency measures such as refrigeration controls, motors, and LED lights at no cost to customers with commercial refrigeration equipment. The target market was small businesses such as mini markets and restaurants.
- EnergySmart Program: This program incorporates the measures that were previously funded under the "Keep Your Cool" and "Express Refrigeration" programs when those programs expired in late 2009 (mid-fiscal year). The new program will be managed by a single contractor to provide a more seamless interaction with the customer rather than dealing with separate programs managed by two contractors.
- Laboratory Energy Management Program: This program focuses on the unique needs of energy-intensive laboratory space. The program provides recommendations for energy savings, technical analysis and rebates for energy efficiency retrofit projects.
- Enhanced Automation Initiative: This program is focused on hardware and software upgrades to building controls systems to bring buildings up to optimum performance.
- Vending Miser Installation Program: This is a direct install program to install Vending Miser occupancy sensors on cold drink machines to reduce energy consumption by 36-56% when the area is not occupied for periods of time.
- Data Center Optimization Program (DCOP): This program will target small data centers under 10,000 square feet within existing office or other buildings. The program will deliver an assessment of all electric end uses such as facility site infrastructure loads (cooling, fans, pumps, lighting, and uninterruptible power supplies), network equipment, storage, and servers. The program scope includes comprehensive facility assessments, reports, project management service during implementation, financial incentives for energy reductions, and savings verification services.
- SVP Sustainable Preschools Program: This program targets preschools and will provide technical assistance, contractor management and incentives for the installation of energy efficiency measures.
- Business Energy Information: Management information on energy usage through 15-minute interval meters, Itron's 'EEM Suite' software, training, and other sources.
- Energy Innovation Program: This program encourages businesses to demonstrate new products and product applications not yet commercially viable in today's marketplace, install energy efficient technologies not generally known or widely accepted, yet show potential for successful market

growth, successfully apply energy efficiency solutions in new ways, or introduce energy efficiency into industries or businesses that are resistant to adopting new technologies or practices.

- LEED Rebate for Energy Efficient Building Design: If your building meets LEED criteria and exceeds Title 24 energy requirements by at least 10 percent, you can get a rebate of up to $47,500.
- Business Solar Photovoltaic Rebate: Provides financial incentives for the installation of solar systems at business sites. Rebate structure is designed to decline over time as more PV is installed in SVP's service territory, similar to the California Solar Initiative program. Businesses can receive rebates that started at $3.00 per output watt up to a total of $300,000 per customer for systems up to 100 kW. (Current rebate level at the time of this report is $2.25 per watt.) Businesses installing systems between 100kW and 1 MW are eligible for a Performance Based Incentive starting at $0.40 per kWh. Current rebate level at the time of this report is $0.30 per kWh.) Businesses are required to complete an energy audit in order to receive a rebate, as is the case with the statewide California Solar Initiative.

Current Residential Customer Programs:

- Residential In-Home Energy Audits and Education: Through this technical support program SVP staff provides on-site audit analysis, energy efficiency recommendations and distributes energy saving items (four compact fluorescent lights, "lime lites," and programmable thermostats). The Solar Explorer and the SVP information booth participate in major city events, providing education on energy efficiency and solar electric generation systems. In collaboration with the Santa Clara Police Department, compact fluorescent light bulbs (CFL's) 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 or window AC units and recycle their old units.
- Energy Star Ceiling Fan Rebates: Provides a rebate of $35 per fan (up to three fans per residence) for the installation of Energy Star ceiling fans.
- Energy Efficient Pool Pump Rebates: Provides a rebate to replace an existing pool pump and motor with a new high efficiency two-speed or a new high efficiency variable speed motor.
- Solar Attic Fan Rebates: This program encourages customers to cool the attic space with a solar attic fan. By reducing the attic temperature, the insulation is more effective at stopping heat from entering the home, thereby reducing the need to cool the living space.
- Residential Attic Insulation Rebates: These rebates encourage the installation of attic insulation by providing incentives for both single-family and multi-family units. All homes are inspected to ensure installation has been completed.
- Neighborhood Solar Program: SVP customers have the option to pay into a special fund to support the installation of solar electric systems at non-profit community buildings. The third installation is located at the Bill Wilson Center and was completed in the Fall of 2010.
- 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).
- Refrigerator & Room Air Conditioner Recycling: Rebate for recycling old refrigerators and room air conditioners.
- Residential Solar Photovoltaic Rebate*:* Provides significant financial incentive to residential customers for installation of solar systems. Customers receiving the rebate are required to also

complete an energy audit, as is the case with the statewide California Solar Initiative. The rebate started at $4.50 per watt and under a declining scale similar to the California Solar Initiative program, and is currently at $3.00 per watt, up to a maximum system size of 10 kW.

Current Community Programs:

- Public Facilities' Energy Efficiency Program: SVP provides technical assistance and financial incentives for the expansion, remodel, and new construction of City of Santa Clara buildings. Included in this program are higher levels of rebates for qualifying equipment, energy management assistance, and a small budget for retro commissioning.

Time Period for Reporting Data: Fiscal Year ending 6/30/10.
Proposed Energy Efficiency Programs and Services: (for 2010-2011)

(Continuation of Existing Programs):

Commercial Customer Program:

- Small Business Efficiency Services Program
- Business Audits
- Business Energy Information
- Business Rebates
- Data Center Optimization Program (DCOP)
- Energy Innovation Program
- LEED Rebate for Energy Efficient Building Design
- Business Solar Photovoltaic Rebate
- Express Refrigeration Program
- Laboratory Energy Management Program
- Enhanced Automation Program
- Retrocommissioning (RCx)
- SVP Sustainable Preschools Program

Residential Customer Programs:

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

Community Programs

- Public Facilities' Energy Efficiency Program

(Modifications to Existing Energy Efficiency Programs and New Programs)

Business Customer Programs:

- Compressed Air Management Program (CAMP) ended in April 2010 when the target market for this program was exhausted.

- "Keep Your Cool" Program was rolled into the EnergySmart program when the contract with this third party implementer expired.
- Express Refrigeration Program was rolled into the Energy Smart program when the contract with this third party implementer expired.
- Vending Miser Installation Program was a limited-time 3 month program that ran in the Fall of 2009. Because the majority of the target market utilized the program, the program ended as planned. However, SVP still offers a prescriptive rebate for this measure.

Residential Customer Programs*:*
- Low-Income Refrigerator Replacements: Replaces old, energy-wasting refrigerators for eligible low-income residents with new, energy-saving appliances. SVP has offered this popular program in the past and will bring it back in FY 2010-2011.
- Expanded Appliance Rebates: SVP will add rebates for Energy Star electric hot water heat pumps once they become available in the marketplace.
- SVP PlugIns Catalog: SVP will cancel this program at the end of the contract, which expires December 31, 2010. When this program began, it provided a means for customers to purchase hard-to-find specialty CFLs and other energy efficient fixtures. These are now widely available at hardware stores and other retail outlets and the utilization of this program has declined.

Energy Efficiency Conservation Block Grant (EECBG) Programs:

The City of Santa Clara was awarded $1,180,900 in stimulus funds under the EECBG funding opportunity. These programs will be administered under the municipal electric utility, Silicon Valley Power, and will be spent on the following programs:

- Retrocommissioning of City Facilities
- LED Pedestrian Signal Retrofits
- A Photovoltaic System on a park facility at Henry Schmidt Park
- LED Lighting retrofits at various locations around the City of Santa Clara
- A Low Income Weatherization Program

During this fiscal year, SVP contracted with Willdan Energy Solutions to perform Retrocommissioning of the City facilities. This kicked off in February 2010 and installation of the identified measures will occur in Fiscal year 2010-2011. The remaining four projects were under development during the current fiscal year, with contracts expected to be in place and implementation underway in FY 2010-2011 for all but the photovoltaic system.

Demand Reduction:

SVP has a load factor of 72.8%, 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 200 kW 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.

Evaluation, Measurement & Verification (EM&V):

Silicon Valley Power contracted with Summit Blue Consulting, LLC to create an EM&V plan, which was delivered in Fall 2008. Resulting from that plan, SVP contracted with Summit Blue to perform the evaluation of its FY 2007-2008 energy efficiency programs, which was completed in January 2009, and the FY 2008-2009 energy efficiency programs, which was completed in December 2009. Summit Blue is currently evaluating SVP's FY 2009-2010 energy efficiency programs. Results of this evaluation should be available in February 2011. As a part of the EM&V process, Summit Blue used a consultant to analyze SVP's data center market and provide feedback and recommendations for further improving participation in the programs by this market segment. This analysis is being considered as SVP looks at the development of a Data Center New Construction Program for FY 2011-2012.

SILICON VALLEY POWER

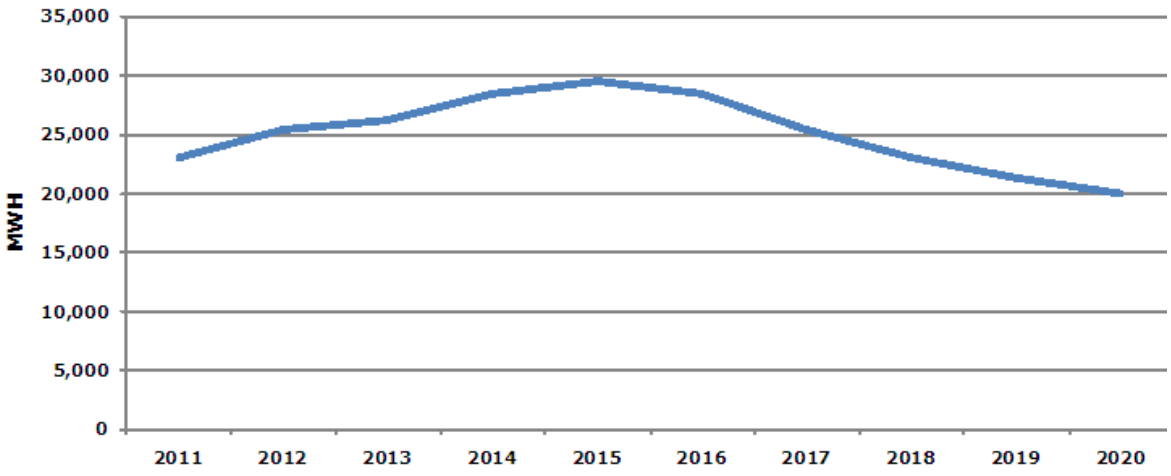
Time Period for Reporting Data: Fiscal Year ending 6/30/2010

Silicon Valley Power		Resource Savings Summary						Cost Summary			
Program Sector (Used in CEC Report)	Category	Units Installed	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	9			209	2,088	1	$ 900		$ 2	$ 902
HVAC	Res Cooling	135	11	4	10,498	120,839	71	$ 6,100	$ 1,070	$ 5,883	$ 13,052
Appliances	Res Dishwashers										
Consumer Electronics	Res Electronics										
HVAC	Res Heating										
Lighting	Res Lighting	2,805	132	18	86,096	676,291	361	$ 603	$ 10,638	$ 134,004	$ 145,245
Pool Pump	Res Pool Pump	3	2	1	3,360	33,600	19	$ 600		$ 1,247	$ 1,847
Refrigeration	Res Refrigeration	606	107	107	693,571	12,484,282	6,772	$ 23,730		$ 87,165	$ 110,895
HVAC	Res Shell	56	5	5	3,371	67,424	38	$ 9,800		$ 17,138	$ 26,938
Water Heating	Res Water Heating										
Comprehensive	Res Comprehensive										
Process	Non-Res Cooking										
HVAC	Non-Res Cooling	1,033	1,015	1,006	24,807,049	249,373,137	138,763	$ 3,566,002		$ 1,709,867	$ 5,275,869
HVAC	Non-Res Heating										
Lighting	Non-Res Lighting	18,133	730	659	3,894,511	54,287,177	30,082	$ 473,640		$ 432,004	$ 905,643
Process	Non-Res Motors	6	5	4	21,058	315,864	168	$ 1,570		$ 7,914	$ 9,484
Process	Non-Res Pumps										
Refrigeration	Non-Res Refrigeration	1,227	805	792	930,484	6,438,390	3,401	$ 79,622	$ 105,750	$ 169,826	$ 355,199
HVAC	Non-Res Shell										
Process	Non Res Process										
Comprehensive	Non Res Comprehensive	1	31	31	82,495	824,951	435	$ 17,178		$ 4,585	$ 21,763
Other	Other	188			59,859	179,578	99		$ 56,674	$ 222,309	$ 278,983
SubTotal		24,201	2,845	2,628	30,592,561	324,803,620	180,210	$ 4,179,745	$ 174,132	$ 2,791,944	$ 7,145,822
T&D	T&D										
Total		24,201	2,845	2,628	30,592,561	324,803,620	180,210	$ 4,179,745	$ 174,132	$ 2,791,944	$ 7,145,822

EE Program Portfolio TRC Test	**2.67**

Excluding T&D

Energy Savings Targets 2011-2020



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
MWH	23,055	25,415	26,255	28,502	29,506	28,413	25,456	23,052	21,328	20,020
% of Load Forecast	0.75%	0.81%	0.83%	0.89%	0.91%	0.86%	0.76%	0.68%	0.62%	0.58%

TRINITY PUBLIC UTILITY DISTRICT

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

TPUD Energy Efficiency Program Highlights

Since FY 2000 through FY 2010 TPUD public benefits expenditures on energy efficiency total approximately $337,000 and have resulted in kilowatt-hours savings of more than 165,000 kilowatt-hours.

Current TPUD Energy Efficiency Programs:

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

Proposed TPUD Energy Efficiency Programs and Services: (for 2010-2011)

- Maintain existing programs at current levels.

TPUD Demand Reduction Programs:

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

TRINITY PUBLIC UTILITY DISTRICT

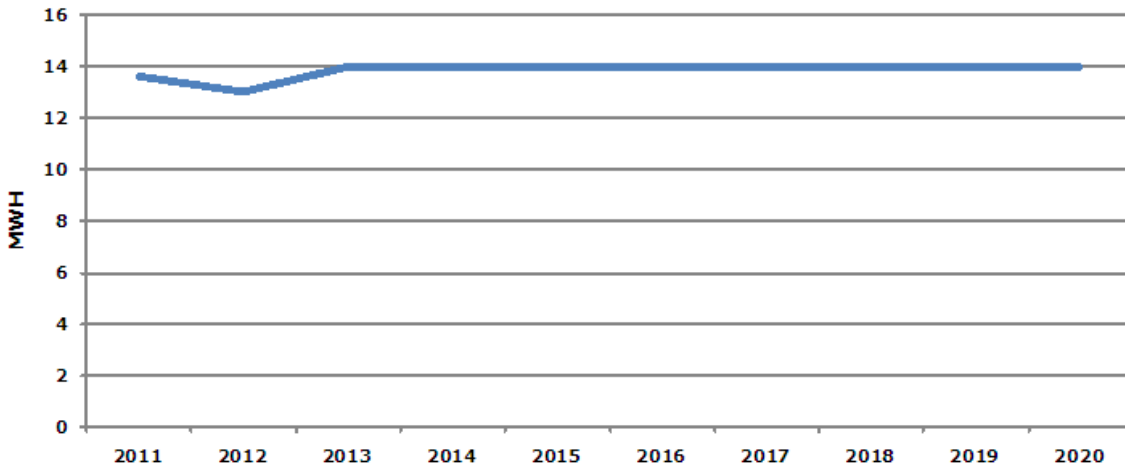
Time Period for Reporting Data: Fiscal year ending 6/30/2010

Trinity Public Utility Distric		Resource Savings Summary						Cost Summary			
Program Sector (Used in CEC Report)	Category	Units Installed	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers										
HVAC	Res Cooling										
Appliances	Res Dishwashers										
Consumer Electronics	Res Electronics										
HVAC	Res Heating										
Lighting	Res Lighting										
Pool Pump	Res Pool Pump										
Refrigeration	Res Refrigeration										
HVAC	Res Shell				7,414	151,164	92	$ 15,882			$ 26,684
Water Heating	Res Water Heating										
Comprehensive	Res Comprehensive										
Process	Non-Res Cooking										
HVAC	Non-Res Cooling										
HVAC	Non-Res Heating										
Lighting	Non-Res Lighting										
Process	Non-Res Motors										
Process	Non-Res Pumps										
Refrigeration	Non-Res Refrigeration										
HVAC	Non-Res Shell										
Process	Non Res Process										
Comprehensive	Non Res Comprehensive										
Other	Other										
SubTotal					7,414	151,164	92	$ 15,882			$ 26,684
T&D	T&D										
Total					7,414	151,164	92	$ 15,882			$ 26,684

EE Program Portfolio TRC Test	**0.02**

Excluding T&D

Energy Savings Targets 2011-2020



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
MWH	14	13	14	14	14	14	14	14	14	14
% of Load Forecast	0.01%	0.01%	0.02%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%

TRUCKEE DONNER PUBLIC UTILITY DISTRICT

- Established in 1927
- 13,145 customers, 88 percent are residential
- TDPUD projects an average growth rate of 1 percent per year, for the next 10 years
- 2010 Peak demand – 37.9 megawatts (winter peaking)
- 2010 Energy Use – 147.7 gigawatt-hours

TDPUD Energy Efficiency Program Highlights

- In 2010 (calendar-year accounting), the Truckee Donner Public Utility District (TDPUD) continued to make significant investments in our Public Benefits and energy efficiency programs. This included Public Benefit and energy efficiency spending of ~4.5% of gross electric sales with a 2011 budget also at ~4.5% of gross electric sales. In 2010, the TDPUD's energy efficiency results included a first year energy savings of over 2.5% of gross electric sales with a TRC of 5.14.
- In 2010, the TDPUD implemented three new energy efficiency programs (Residential Energy Survey, Green Schools – 'Trashion Shows', and Neighborhood Resource Mobilization/Block Party Programs) that expanded our offerings to businesses and income qualified customers and continued to serve our residential base. The TDPUD targeted the most cost-effective programs and partnered with local agencies, businesses, and community groups to effectively implement programs. The TDPUD is seeing increasing acceptance of the economic and community benefits of energy efficiency investments.
- The continuing economic crisis during 2010 impacted our energy efficiency programs as customers struggled to make ends meet. On the positive side, the TDPUD's 'Save Energy, Save Money' message had much more traction with our customers. However, the customer's ability to make the investments necessary to implement cost effective energy efficiency projects was diminished. This was particularly true with our commercial and small business customers. To address this, the TDPUD focused on direct-install and give-a-way programs. The American Recovery and Reinvestment Act of 2009 (ARRA) was one opportunity to address the economic crisis but, due to the design and implementation of the stimulus money, the TDPUD was precluded from participating in a meaningful way (other than future opportunities to work with PECI commercial refrigeration program). This was due to the fact that the majority of the money was distributed to cities and counties (of which the TDPUD is neither) and the competitive opportunities through the California Energy Commission's State Energy Program and the Department of Energy were not designed for smaller utilities grant applications.
- The TDPUD updated our 10-year energy efficiency targets in early 2010 as part of the SB1037/AB 2021 requirement. For the period from 2011 through 2020, the new energy savings target is: 19,880 MWh (~1.1% per year). This is a significant increase from the first energy savings targets, established in 2007, of 10,1014MWh (~.67% per year). The new aggressive targets take into account the TDPUD's strong past energy efficiency results. However, the new targets also recognize that past results were heavily influenced by screw-in CFL lighting

programs which the TDPUD is beginning to saturate and which, unfortunately, are being prematurely discounted by the regulatory bodies.

2010 Highlights Include:

- Implemented programs with the potential to reduce electric usage by over 2.5% in the first year. The District was able to achieve this performance through a combination of cost-effective measures (mostly lighting), effective program management, and leveraging the District's position within the community.
- Created an Evaluation, Measurement, & Verification (EM&V) Plan for calendar year 2010 programs and completed the final EM&V report within 2-months of calendar year 2010 end. The EM&V report concluded: Net Annual kWh Savings of 4,007,032 kWh, Net Lifecycle kWh Savings of 37,081,572 kWh, Net Peak kW Savings of 1,155 kW, and a TRC of 5.14.
- Effectively delivered public benefits and energy efficiency programs for a cost of less than $0.02/kWh which is less than one quarter of the District's power purchase costs and a small fraction of the customer's rate.
- Implemented a new income qualified program, Energy Saving Program (ESP), targeting residential energy efficiency and weatherization measures. This innovative new program provided a one-time bill credit for the customers largest bill in the last 12-months (up to $200) but also required that the customer participate in a free energy survey of their home and that they agree to install energy conservation measures provided for free at the time of the survey (seven types of CFL's, piping/water heater insulation, door sweeps, etc.). To implement the program, the TDPUD partnered with a local non-profit (Family Resource Center of Truckee) to do the outreach and qualification for the program and worked with the Sierra Green Building Association (SIGBA) to conduct the residential energy surveys. ESP was very successful in providing immediate assistance during the economic crisis, enabled the customer to reduce energy usage over time, and strengthened the TDPUD's relationship with our low-income customers and the overall community.
- Launched the Residential Energy Survey (RES) Program which is the free energy survey component of the TDPUD's low-income program. RES includes a walk-through visual survey of a customer's home and energy conservation measures provided for free at the time of the survey (Seven types of CFL's, piping/water heater insulation, door sweeps, etc.). The TDPUD estimates that this program has a simple payback of 2-3 years along with tremendous educational and customer relationship benefits.
- Partnered with the Truckee Tahoe Unified School District (TTUSD) and the Sierra Watershed Education Partnership (SWEP) on the Truckee High School Envirolution Club's 'Trashion Shows' when the District distributed over 1,800 conservation kits (12-pack of CFL's, LED night lights, low-flow shower heads, etc.) to every elementary and middle school student in the TDPUD's territory. The 'Trashion Shows' are a combination of science, art, and peer-to-peer education led by the Truckee High School Envirolution club. The students develop runway-quality costumes out of trash, each with a conservation or environmental message. 'Trashion Shows' were held at general assembly's at each elementary and middle school and the TDPUD's conservation kits were integrated into the show and then distributed, by the high school students, to the younger children at the end of each show. This partnership was very cost-effective in delivering important energy and water savings measures to our customers. The benefits of the peer-to-peer education and leadership of the high school students was invaluable.

- Collaborated with the Town of Truckee, Nevada County, and other local public agencies to develop and pilot the concept of delivering services and programs directly to a neighborhood. With a tag-line of 'Public Agencies Together….One Neighborhood at a Time', the concept was piloted in the Olympic Heights neighborhood of Truckee with a block-party format where each local public agency brought their respective programs and services. For the TDPUD, this included handing out 7-types of CFL's for free and offering a free on-the-spot residential energy survey through the new RES Program. It is estimated that ~25% of the neighborhood residents attended the 4-hour event and the customer feedback on the event was overwhelmingly positive.
- Significant investments in community outreach, communications, and marketing are tapping increasing interest in energy efficiency programs. As an example, the TDPUD's annual LED (Light Emitting Diode) Holiday Light Program achieved ~6 percent customer participation over a 3-week period and all of the customers came to the TDPUD office where they were educated, provided with free CFL's, and given information on other energy efficiency opportunities.

2010 Commercial Customer Programs

- 'Keep Your Cool' Commercial Refrigeration Program: This direct-install program was developed by the Northern California Power Agency (NCPA) for their member utilities in 2001 and targets cost-effective commercial refrigeration measures (door gaskets, strip-curtains, and door closers). This program was oversubscribed in 2009 and the TDPUD increased funding in 2010 along with adding 4 additional measures (Programmable Electronically Commutated (EC) Motors, Evaporator Fan Controllers, Anti-Sweat Heater (ASH) Controls, and Vending Machine Controllers).
- Commercial LED Exit Sign Retrofit Program: This direct-install program was developed by the TDPUD to retrofit existing incandescent and fluorescent exit signs using a local contractor and high-efficiency LED exit sign retrofit kits. The combination of low retrofit cost and ease of installation created a very cost effective program.
- Commercial Energy Audits: TDPUD offers free on-site energy audits conducted by a TDPUD Energy Specialist for commercial customers that provide specific recommendations on cost-effective energy improvements to manage and reduce energy use and load.
- Commercial Energy Conservation Rebate Program: TDPUD provides a comprehensive commercial energy efficiency incentive program; focusing on peak load reduction and energy savings. Generous rebates and technical support are available to commercial customers to promote the installation of energy efficiency measures. This includes an appliance efficiency program for clothes washers, dishwashers and refrigerators; a building efficiency program that includes building envelope and forced-air distribution system leak testing and mitigation; a lighting efficiency program that includes any and all high efficiency lighting measures; space heating system efficiency program including ground source heat pumps and a water heating efficiency program including the purchase of energy efficient electric water heaters and solar water heater tanks.
- Solar PV Program: TDPUD offers financial incentives to commercial customers who incorporate solar PV technologies into their businesses (SB-1). This program is fully subscribed into 2011.

2010 Business Partnership Programs (Green Partners)

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

2010 Residential Customer Programs

- Energy Saving Program (ESP): Implemented a new income qualified program targeting residential energy efficiency and weatherization measures (see 2010 Highlights above).
- Residential Green Partners: This new 2009 program was focused primarily on screw-in lighting with a goal to determine which types of lighting (beyond standard spiral 60-watt equivalent CFL's) are used most in our community and to provide free samples of this lighting for our customers. Based on data from over 300 customers and over 3000 screw-in lights (over 20 types ranging from can and track lights to globes to flame tips to outdoor lights to dimmables). Based on the data collected, the TDPUD is now handing out, in addition to 12-packs of 60-watt equivalent CFL's, the following lights: 40-watt equivalent globes (G25's), 50-watt equivalent R20's, 65-watt equivalent floods (R30's), 65-watt equivalent dimmable floods (DR30's), 120-watt equivalent outdoor floods (PAR30's), and 100-watt equivalent spiral CFL's. This program is in addition to the rebate program that the TDPUD has for high-efficiency lighting.
- Portable/Take Home Energy Meters: Using the 'Kill-A-Watt' portable energy meters, this program allows customers to sign out a watt meter for a 2-week period to measure the energy use of their residential plug loads (from refrigerators to electronics). The TDPUD then helps the customer understand the data and identify cost-effective energy efficiency opportunities.
- Residential Energy Audits: TDPUD offers free on-site energy audits, conducted by a TDPUD Energy Specialist, that provide specific recommendations on cost-effective energy improvements to manage and reduce energy load and provided savings. Customers must participate in the TDPUD Residential Energy Survey Program (See 2010 Highlights above) and have high bills to participate in this program.
- Residential Energy Conservation Rebate Program: TDPUD provides a comprehensive residential energy efficiency incentive program, focusing on peak load reduction and energy savings. Generous rebates and technical support are available to residential customers to promote the installation of energy efficiency measures. This includes an appliance efficiency program for clothes washers, dishwashers and refrigerators; building efficiency program includes building envelope and forced-air distribution system leak testing and mitigation; residential CFL's efficiency program including a multi-family unit CFL light bulb give away; space heating system efficiency program includes ground source heat pumps and the water heating efficiency program includes the purchase of energy efficient electric water heaters and solar water heater tanks.
- Solar PV Program: TDPUD offers financial incentives to residential customers who incorporate solar PV technologies into their homes (SB-1). This program is fully subscribed into 2012.

2010 Community Programs

- Energy Conservation & Efficiency Workshops: TDPUD staff offered numerous energy conservation and efficiency seminars and workshops in 2010.
- Million CFL Program: The Million CFL program is a 10-year program that was started in 2008 and designed to provide incentives and CFL give-a-ways that will result in significant lighting efficiency savings. All CFL give-a-ways are done face-to-face allowing for education of the customer and promotion of other programs.
- LED Holiday Light Swap Program: The District began an LED (light emitting diode) Holiday Light swap program in 2007. The program involves giving District customers up to three strands of LED holiday lights in exchange for their old inefficient holiday lighting. In 2010, this cost-effective program served ~6% of our customer base in a 4-week period. In additional, all of these customers visited our Conservation Department to participate in the program where the TDPUD educated them on the many other energy savings opportunities and handed out free CFL's.
- Green Building Education/Installer: TDPUD has partnered with the local Sierra Green Building Association, the Town of Truckee, and the Contractors Association of Truckee Tahoe (CATT) 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 and other local groups to provide tours of residential and commercial buildings in the community that incorporate green building design features**.**

2010 Education Programs - Public Schools & Community:

- Energy Education: TDPUD personnel give presentations on energy topics to local schools each year.
- "Living Wise" Resource Efficiency Program: TDPUD has collaborated over the years with the 6th grade staff at the local middle school to provide the curriculum and resources for the "Living Wise" Resource Efficiency program.
- Green Building Symposium: TDPUD helps organize and conducts a presentation at the Truckee Home Show's annual Green Building Symposium.

2010 TDPUD Website

The TDPUD continues to improve our website and conservation/energy efficiency pages that are an on-line resources to our customers regarding programs, rebates, application information, and local resources.

2010 TDPUD Demand Reduction Programs

The TDPUD does not currently have any demand reduction programs in place since there is very little air conditioning load and the TDPUD high demand time is winter, weekends, and holidays. However, many of our energy efficiency programs address our unique load profile.

2010 TDPUD Water Conservation Programs:

The TDPUD serves both water and electric power services to our customers. In fact, the TDPUD's largest electric customer is the TDPUD Water Department and we fully understand the links between water conservation and energy savings for both ourselves and our customers. Current water conservation programs include:

- TDPUD Water Wise Demonstration Garden: TDPUD began installing residential water meters in 2009 and will begin billing water by usage in 2011. For many customers, water usage is driven by landscaping and irrigation. To help our customers manage their irrigation use, TDPUD developed a water wise demonstration garden at our main headquarters to educate our customers on techniques to maintain beautiful landscaping and save water. The garden includes almost 100 native and drought tolerant plants along with replacing our traditional lawn with a variety of native bunch grasses that can use 2/3 less water.
- Commercial Smart Water Controller Program: This direct-install program was piloted in 2010 and includes the installation of a water irrigation system that, through wireless technology, taps into weather forecasts and actual Doppler radar to minimize water use.
- Commercial Water Conservation Rebate Program: TDPUD offers rebates to commercial customers for the installation of water-saving measures including water-efficient clothes washers, low-flush toilets; waterless urinals and other water saving devices.
- Residential Water Conservation Rebate Program: TDPUD offers financial rebates to residential customers for the installation of water-saving measures including water-efficient clothes washers, low-flush toilets, and for repairing water leaks. TDPUD also hands out for free low-flow showerheads and faucet aerators.
- Landscape Water Conservation Workshops: TDPUD partnered with local nurseries to conduct landscape water conservation workshops for the community.

TRUCKEE DONNER PUBLIC UTILITY DISTRICT

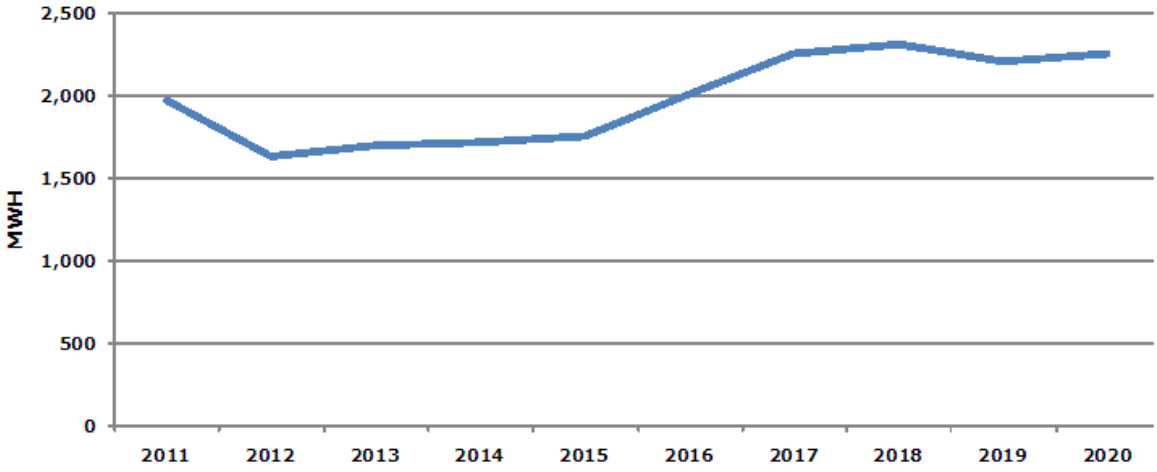
Time Period for Reporting Data: Calendar year ending 12/31/2010

Truckee Donner		Resource Savings Summary						Cost Summary			
Program Sector (Used in CEC Report)	Category	Units Installed	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	254	4	4	26,384	263,841	146	$ 25,300		$ 6,137	$ 31,437
HVAC	Res Cooling										
Appliances	Res Dishwashers	213	1	1	8,317	108,119	60	$ 21,300		$ 2,349	$ 23,649
Consumer Electronics	Res Electronics										
HVAC	Res Heating										
Lighting	Res Lighting	38,310	2,692	680	2,800,276	25,596,791	13,664	$ 202,290		$ 146,541	$ 348,831
Pool Pump	Res Pool Pump										
Refrigeration	Res Refrigeration	268	11	11	60,162	642,098	348	$ 24,990	$ 2,210	$ 8,825	$ 36,025
HVAC	Res Shell	21			381	6,853	4	$ 2,875		$ 2,388	$ 5,263
Water Heating	Res Water Heating	7,393	47	47	334,927	3,355,680	1,795	$ 18,667		$ 13,746	$ 32,412
Comprehensive	Res Comprehensive										
Process	Non-Res Cooking										
HVAC	Non-Res Cooling	1	12	12	22,523	337,838	188	$ 6,000		$ 895	$ 6,895
HVAC	Non-Res Heating										
Lighting	Non-Res Lighting	1,953	227	227	407,566	3,998,375	2,213	$ 92,700		$ 49,473	$ 142,172
Process	Non-Res Motors										
Process	Non-Res Pumps										
Refrigeration	Non-Res Refrigeration	36	172	172	346,497	2,771,978	1,461	$ 67,950		$ 39,769	$ 107,719
HVAC	Non-Res Shell										
Process	Non Res Process										
Comprehensive	Non Res Comprehensive										
Other	Other										
SubTotal		48,449	3,166	1,155	4,007,032	37,081,572	19,880	$ 462,071	$ 2,210	$ 270,122	$ 734,404
T&D	T&D										
Total		48,449	3,166	1,155	4,007,032	37,081,572	19,880	$ 462,071	$ 2,210	$ 270,122	$ 734,404

EE Program Portfolio TRC Test	**5.14**

Excluding T&D

Energy Savings Targets 2011-2020



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
MWH	1,978	1,640	1,706	1,727	1,762	2,017	2,257	2,317	2,214	2,263
% of Load Forecast	1.23%	1.00%	1.02%	1.01%	1.01%	1.14%	1.25%	1.25%	1.17%	1.18%

TURLOCK IRRIGATION DISTRICT

Established in 1887, the Turlock Irrigation District (TID) was the first publicly owned irrigation district in the state and is one of only four in California today that also provides electric retail energy directly to homes, farms and businesses. Organized under the Wright Act, the District operates under the provisions of the California Water Code as a special district. TID is also an independent control area and is governed by a five member board of Directors.

Since 1923, TID has been providing safe, affordable and reliable electricity to a growing retail customer base that now numbers in the excess of 99,000 residential, farm, commercial, industrial and municipal accounts in an electric service area that encompasses 662 square-miles in portions of Stanislaus, Merced, Tuolumne and Mariposa counties.

TID provides Irrigation water to more than 5,800 growers in a 307 square-mile service area that incorporates 149,500 acres of Central Valley farmland. The District has been delivering irrigation water to growers since completing its gravity-fed water conveyance system of canals and laterals in 1900.

TID SYSTEM OVERVIEW:

- 99,608 customers
- 72% are residential
- Peak demand 497 MW (2010 Summer Peak)
- 2010 energy use: 1,915 gigawatt-hours

TID ENERGY EFFICIENCY PROGRAM HIGHLIGHTS:

The TID Board of Directors adopted an aggressive 10-year plan to promote energy conservation by assisting customers with efficiency projects. For 2010, the goal was to conserve 13,285 megawatt-hours of electricity.

TID continues to help customers achieve energy savings through the implementation and promotion of a variety of programs that provide rebate opportunities for all rate classes to encourage customers to conserve energy. A significant portion of the energy efficiency measures were implemented by industrial and commercial customers. TID provides a variety of options for businesses that are looking to make changes in their existing systems by making upgrades or retrofitting their existing facility. Rebates are available that address areas such as lighting, compressed air systems, refrigeration systems, motors, gaskets, chillers and many other systems components.

CURRENT TID ENERGY EFFICIENCY PROGRAMS

Commercial, Industrial and Agricultural Customer Programs

- Meter Manager***:*** TID offers an on-line energy management tool for business customers so they can monitor their energy usage and utilize that information to more efficiently manage their energy consumption simply by logging into a secure web site.
- 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.
- Keep Your Cool Program: Energy efficiency retrofits of new gaskets, strip curtains and door closers.

Residential Customer Programs

- Residential Energy Audits**:** TID provides free in-home energy audits to customers who would like to learn how to reduce their energy use.
- Residential Rebate Programs: TID offers customers rebates for purchasing and installing:
    - Energy Star Refrigerator
    - Energy Star Room AC
    - Energy Star Clothes Washer
    - Whole House Fan
    - Shade Screens

- Shade Tree Rebate: TID provides rebates for up to 3 trees per year that are planted to provide shade.
- Air Conditioner Replacement Rebate: TID provides a rebate for replacement of an existing air conditioner or heat pump, with a new energy efficient model.
- Refrigerator Recycling: TID will pay customers to get rid of an old refrigerator or freezer and TID's contracted recycler will pick up and recycle the unit for free.
- CFL Rebate Program: TID provides a rebate for the purchase and installation of CFLs.
- New Construction Rebate: TID offers a rebate to home builders for exceeding Title 24 energy standards.
- "Energy Wise" Education Program: Provides energy saving education and kits to 6th grade students in the TID service territory.
- Education Specialist: Outreach education provided to schools and community groups.

Time Period for Reporting Data: Calendar Year ending 12/31/10

EXTERNAL MEASUREMENT & VERIFICATION OF SAVINGS

In 2010, TID underwent an independent evaluation measurement and verification of their energy efficiency programs reported energy and demand savings. The 2009 program was evaluated and the findings were posted on the NCPA website. TID will continue to this evaluation process and incorporate the CEC EM&V Guidelines that were recently created.

PROPOSED NEW ENERGY EFFICIENCY PROGRAMS (2011):

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

MODIFICATIONS TO EXISITING ENERGY EFFICIENCY PROGRAMS: (2011)

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

ASSISTANCE PROGRAMS:

- TID CARES Program: An energy assistance program for qualified customers to receive a discount on their monthly energy bills. The CARES program reduces the monthly customer charge of $11 to $2, a savings $9, and provides a 15% discount on the first 800 kWh energy charges.
- Medical Rate Assistance: The District provides a 50% discount on the first 500-kWh energy charges for customers who use additional energy due to life-support equipment or a medical condition.
- Weatherization: TID has contracted with organizations within our community to provide weatherization services for families who meet the income qualification guidelines. The program enables families to reduce their energy bills by making their homes more energy efficient.

TID DEMAND SIDE PROGRAMS:

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

TID RENEWABLE ENERGY PROGRAM HIGHLIGHTS:

- Tuolumne Wind Project: TID invested in a 136.6 megawatt wind facility in 2008
- Fuel Cell Project: TID installed the largest fuel cell in California partnering with the City of Turlock's Regional Water Quality Control Facility.
- Solar: TID offers solar rebates for customers that are interested.
- Small Hydroelectric: TID was the first in California to construct small-scale hydroelectric power plants using its own canal system and those of neighboring irrigation districts that were not in the retail electric business. Combined, the eight plants constructed beginning in the mid 1970's provides a total of 20 megawatts of electricity. TID also owns and operates a 5 megawatt hydroelectric power plant at La Grange Dam on the Tuolumne River.
- Geothermal: In 1984, TID acquired an interest in a geothermal power plant in the Geysers Steam Field located in California's Lake County. The project has a capacity of generating 6.8 megawatts.

RESEARCH, DEVELOPMENT & DEMONSTRATION:

2010 Project - Thermal Conductive Cooling Systems for Dairy Operations

Currently, the most common method used by dairy operations to abate the effects of heat stress among their animals is to install 1HP to 1 ½ HP High Speed Low Volume (HSLV) fans, soaking and misting systems. There is typically one fan for every 20 cows. Fans are controlled by a thermostat and automatically turn on when temperatures are between 72 and 78 deg F. This method to cool dairy cows places a large demand for electricity during the summer's peak electrical hours.

The thermal conductive cooling system passes ground water through a heat exchanger installed under free-stall bedding material on which a cow lies. AgriAire has self-funded and completed two prior investigative studies validating the functionality and ability of conduction cooling to meet the demands of the dairy industry. Both tests were conducted at the University of Arizona's Tucson research center. The first test proved the ability of heat to migrate from a simulated cow to the heat exchanger. The second test utilized a live cow in a stall modified to simulate a free-stall bed.

In 2010, TID funded a third study at a dairy in Tulare, CA. The owner of a 4,000-cow dairy agreed to allow and support a 30-day application test by maintaining typical milking and animal movement operations for a 52-cow test group and a 150-cow control group. The test group was cooled exclusively by the heat exchanger-based, conductive cooling method. The control group was cooled by existing ventilation and misting/soaking methods. The test protocol was developed and monitored by the UC Davis Veterinary Medicine Training Research Center (VMTRC) located in Tulare under the supervision of Drs. Jim Cullor and Terry Lehenbauer.

Overall, the results of the TID-funded study are positive and encouraging. This was a 30-day test and further testing is needed. AgriAire is currently soliciting funding to conduct a longer test. The report written by the UC Davis VMTRC is available online at www.tid.com.

TURLOCK IRRIGATION DISTRICT

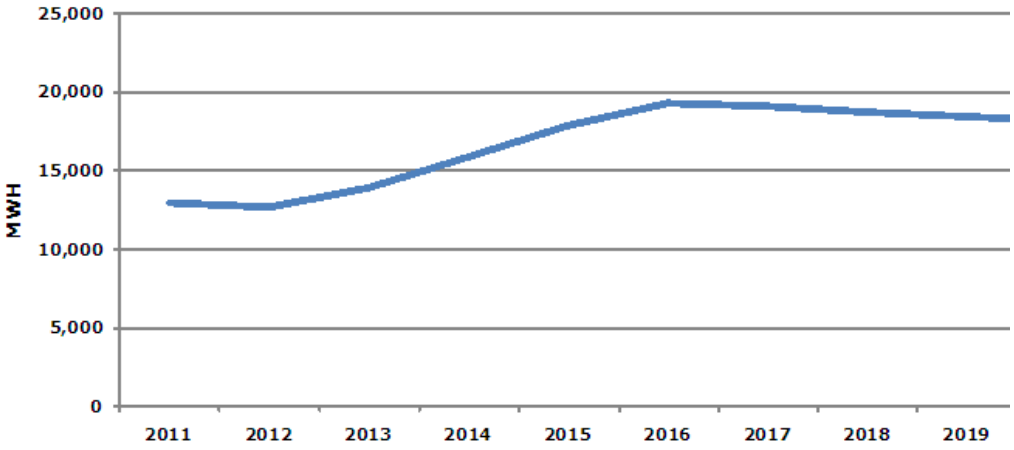
Time Period for Reporting Data: Calendar Year ending 12/31/2010

Turlock Idrrigation District		Resource Savings Summary						Cost Summary			
Program Sector (Used in CEC Report)	Category	Units Installed	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	1,104	11	11	25,613	256,128	142	$ 38,640		$ 836	$ 39,476
HVAC	Res Cooling	2,807	138	117	514,675	5,931,180	3,405	$ 197,101		$ 21,048	$ 218,149
Appliances	Res Dishwashers										
Consumer Electronics	Res Electronics										
HVAC	Res Heating										
Lighting	Res Lighting	842	24	3	18,299	91,493	49	$ 610		$ 269	$ 879
Pool Pump	Res Pool Pump										
Refrigeration	Res Refrigeration	1,117	56	56	243,266	2,569,051	1,394	$ 39,095	$ 21,974	$ 8,281	$ 69,350
HVAC	Res Shell	77	17	17	17,720	188,287	106	$ 7,742		$ 650	$ 8,392
Water Heating	Res Water Heating										
Comprehensive	Res Comprehensive	40,503			11,989	239,775	135	$ 16,201		$ 901	$ 17,102
Process	Non-Res Cooking										
HVAC	Non-Res Cooling	8	59	59	1,643,093	24,646,395	13,714	$ 82,155		$ 83,759	$ 165,914
HVAC	Non-Res Heating										
Lighting	Non-Res Lighting	29	722	722	3,791,732	41,709,052	23,114	$ 213,950		$ 135,979	$ 349,929
Process	Non-Res Motors	13	810	810	3,874,418	58,116,270	30,906	$ 179,407		$ 186,653	$ 366,060
Process	Non-Res Pumps										
Refrigeration	Non-Res Refrigeration	27	150	150	2,112,230	16,999,500	8,962	$ 95,760		$ 51,420	$ 147,180
HVAC	Non-Res Shell										
Process	Non Res Process										
Comprehensive	Non Res Comprehensive										
Other	Other										
SubTotal		46,526	1,986	1,945	12,253,034	150,747,130	81,927	$ 870,661	$ 21,974	$ 489,796	$ 1,382,431
T&D	T&D										
Total		46,526	1,986	1,945	12,253,034	150,747,130	81,927	$ 870,661	$ 21,974	$ 489,796	$ 1,382,431

EE Program Portfolio TRC Test	2.18

Excluding T&D

Energy Savings Targets 2011-2019



	2011	2012	2013	2014	2015	2016	2017	2018	2019
MWH	12,900	12,644	13,829	15,846	17,814	19,269	19,075	18,675	18,379
% of Load Forecast	0.63%	0.60%	0.64%	0.72%	0.79%	0.84%	0.82%	0.79%	0.76%

UKIAH PUBLIC UTILITY

History and Load Data

- The City of Ukiah is Mendocino County's only customer-owned electric utility.
- The City of Ukiah supplies electricity to approximately 16,000 plus residences and businesses.
- Peak demand: 36 megawatts – July 2006
- Annual energy use: 115,000 megawatt-hours
- Power content (2009): Geothermal 42 percent, small hydro 4.8 percent, large hydro 12.6 percent 40.6 percent Unspecified. [46.8 percent eligible renewable]
- Renewable generation from hydropower and Geothermal provide 60 percent of Ukiah's power needs.

City of Ukiah Energy Efficiency Program Overview

The City of Ukiah manages a comprehensive energy efficiency incentive program for residential & commercial customers focusing on peak load reduction and energy conservation. For residential customers, rebates are offered for the installation of various energy efficiency measures. For commercial customers, rebates are available for upgraded lighting, HVAC equipment, and in cases where an analysis is performed rebates can be offered for additional equipment that reduces energy use and/or demand.

Residential Programs:

- Energy Efficiency Hotline: A toll free line with city personnel is available for our customers to answer questions and provide information on energy efficiency related matters.
- Energy Audits: On-site energy audits by city energy specialists are available to residential customers. Energy efficiency measures are recommended based on each audit and the city personnel follow up with additional visits to answer questions and make additional recommendations, if requested.
- Appliance Rebates: The city provides rebates for the purchase of several ENERGY STAR® Qualified appliances.
- Residential Heat Pump and Efficient Air Conditioning Rebates: The city offers rebates for residential and small business customers who install high performance heat pumps or air-conditioners that exceed current state efficiency requirements
- Residential Lighting Rebates: The city offers rebates to homeowners who install ENERGY STAR Qualified compact florescent lamps (CFLs) and fixtures.
- Weatherization Rebates: The city offers rebates to homeowners who invest in weatherization upgrades.

Commercial and Industrial Programs:

- Energy Audits and Rebates: This program offers complementary, on-site energy audits for both commercial and industrial customers. Energy efficiency recommendations and follow up visits

support implementation of recommended energy efficiency measures. Rebates are available for energy efficiency upgrades identified in these audits.

- Commercial Lighting: This program engages local lighting and electrical contractors to promote and install energy efficient lighting upgrades using technical assistance and financial incentives available from the city.
- Keep Your Cool: This offer provides a free, no obligation check of commercial refrigeration equipment. Castrovilla, the Keep Your Cool (KYC) contractor, examines the condition of fan motors, controls, case lighting, door gaskets, strip curtains and door closers. If Castrovilla finds that the current equipment is in need of replacement or upgrading, recommendations are made to customers to have the appropriate equipment installed. Most measures are installed at no cost to the customer, while other measures may require customer co-pay.

Public Facilities and Schools:

- Energy Audits: Complementary 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. Rebates are available for energy efficiency upgrades identified in these audits.

Performance Results for FY2010

The City of Ukiah's AB2021 Energy Savings Target for FY2010 was 197,900 kWh. In FY2010, the city exceeded their annual goal by 42%, with a total net energy reduction of 281,198 kWh.
The City of Ukiah's AB2021 Demand Reduction Target for FY2010 was 19.50 kW. In FY2010, the city surpassed their annual goal, with a total demand reduction of 74 kW.

Performance Results for FY2008-FY2010

The City of Ukiah's 3-year AB2021 Energy Savings Target for FY2008-FY2010 was 593,700 kWh. EE program activity during this period resulted in a total net energy reduction of 1,112,646 kWh, exceeding the cumulative goal by 87%.
The City of Ukiah's 3-year AB2021 Demand Reduction Target for FY2008-FY2010 was 58.50 kW. EE program activity during this period resulted in a total net demand reduction of 257 kW.

Revision to Annual Energy Savings Targets for FY2011-FY2020

A recent assessment of energy savings potential in the city's electric service territory indicated that an appropriate ten year target (spanning July, 2010 to June 2020) for the city's energy-efficiency programs would be 7,024 MWh. Utilities were encouraged by the CEC to use this recommendation when revising and adopting their AB2010 Targets for the next ten year period. The city was not confident that these targets could be met with the current economy and financial realities facing its customers.
In May of 2010, Ukiah City Council adopted a ten year AB2021 target of 4,045 MWh with a ramp up over the ten year period. The annual target for FY2011-FY2012 is 250,000 kWh and the annual targets increase each year for FY2013-FY2020. The city believes these targets are achievable in the current economic state. The city will acquire as many kWh savings as possible, and will not reduce its efforts if program activity exceeds the targets over the next ten year period.

FY2011 Forecast

The City of Ukiah is forecasting that it will meet or exceed their revised AB2021 Energy Savings and Demand Reduction targets for FY2011. The city anticipates that commercial lighting and Keep Your Cool will deliver the vast majority of the energy savings.
The city's EE rebates were revised for FY2011 based on the Measure Quantification Report issued by KEMA in December, 2009. The FY2011 EE program reflects a comprehensive suite of measures which are cost-effective based on the rebate level offered and the quantified savings in the KEMA report. The forecasted cost of rebates in FY2011 is $103,000; the forecasted cost of administration in FY2011 is $46,000. The city's forecast indicates that the AB2021 goal of 250,000 kWh will be exceeded with this funding level as the forecast includes Phase II of Keep Your Cool which is projected to net 178,000 kWh for a cost of $50,000 (including administration).

Evaluation, Measurement and Verification

The process to hire a firm to perform an EM&V study for the 2009 – 2010 performance period is currently underway and is expected to be completed by spring of 2011. The report will likely assess program operations and calculations for the commercial lighting program, which yielded the most significant energy savings.

ARRA Activity

In the fall of 2009, the City of Ukiah joined in a coordinated proposal that included Biggs, Gridley, Healdsburg and Ukiah to install LED street lighting as a demonstration project to test their efficacy and energy savings. The proposal was coordinated by the Northern California Power Agency (NCPA) and submitted as an Energy Efficiency Conservation Block Grant to the California Energy Commission (CEC) under the federal stimulus - ARRA program. The proposal received CEC approval in the fall of 2010. By early 2011, an RFP for the program will be released and completed installation of the lighting in all four cities is expected by August of 2011.

UKIAH PUBLIC UTILITY

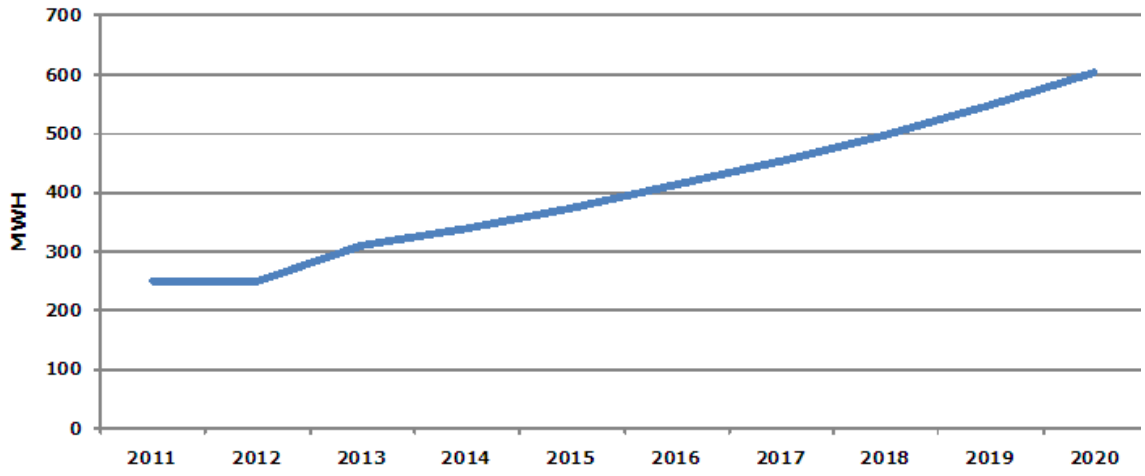
Time Period for Reporting Data: Fiscal Year ending 6/30/2010

Ukiah Public Utility		Resource Savings Summary						Cost Summary			
Program Sector (Used in CEC Report)	Category	Units Installed	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers	13	1	1	3,151	31,512	17	$ 1,300		$ 4,339	$ 5,639
HVAC	Res Cooling	103	26	8	10,110	176,135	113	$ 10,513		$ 12,796	$ 23,309
Appliances	Res Dishwashers	5			330	4,290	2	$ 250		$ 606	$ 856
Consumer Electronics	Res Electronics										
HVAC	Res Heating										
Lighting	Res Lighting	21	1		538	4,838	3	$ 53		$ 985	$ 1,037
Pool Pump	Res Pool Pump										
Refrigeration	Res Refrigeration	24	1	1	4,403	79,258	43	$ 1,838		$ 11,146	$ 12,984
HVAC	Res Shell	28	6	6	3,417	66,118	37	$ 5,471		$ 8,683	$ 14,153
Water Heating	Res Water Heating										
Comprehensive	Res Comprehensive										
Process	Non-Res Cooking										
HVAC	Non-Res Cooling										
HVAC	Non-Res Heating										
Lighting	Non-Res Lighting	9	38	38	259,249	2,836,473	1,572	$ 48,951		$ 5,909	$ 54,860
Process	Non-Res Motors										
Process	Non-Res Pumps										
Refrigeration	Non-Res Refrigeration										
HVAC	Non-Res Shell										
Process	Non Res Process										
Comprehensive	Non Res Comprehensive										
Other	Other										
SubTotal		203	74	54	281,198	3,198,624	1,787	$ 68,374		$ 44,463	$ 112,838
T&D	T&D										
Total		203	74	54	281,198	3,198,624	1,787	$ 68,374		$ 44,463	$ 112,838

EE Program Portfolio TRC Test	**1.55**

Excluding T&D

Energy Savings Targets 2011-2020



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
MWH	250	250	310	341	375	413	454	499	549	604
% of Load Forecast	0.20%	0.20%	0.25%	0.28%	0.31%	0.34%	0.37%	0.41%	0.45%	0.50%

CITY OF VERNON LIGHT & POWER

- Established in 1905, the City of Vernon began serving electric 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 2009/10, the electric system served approximately 1,890 customers, supplied approximately 1,134,000 Megawatt hours, and had a peak demand of 187.7 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:
LED Traffic Signal Retrofits: Over 70 percent of the City of Vernon traffic signals were converted to LED this fiscal year.

Current Commercial Customer Programs:

- 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.
- Time of Use Rate Programs: All customers loads exceeding 100 kilowatts demand are eligible to receive time-of-use rate; enabling them to reduce their energy cost through time management of their energy usage.

Proposed City of Vernon Energy Efficiency Programs and Services: (for FY 2010-2011)

- 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.
- Educate all existing customers on time-of use rate to utilize shifting load to off & mid peak hours.

Renewable Energy Program:

Solar Incentive Program: Solar Rebate Program provides performance-based incentives of $2.42 per installed watt.

Evaluation, Measurement & Verification:

The City of Vernon is currently in search of a consultant to perform an EM&V study.

Vernon Demand Reduction Programs:

- Interruptible Service Program**:** Reduce demand load in case of system emergencies. Can reduce over 12.65MW within 30 minutes.

Stimulus Funding:

The City of Vernon didn't receive any stimulus funds.

Economic Downturn:

The City of Vernon continues to be negatively impacted by the ongoing recession. Energy sales for this fiscal year have decreased more than 6 percent. Numerous customers are reluctant to invest in energy efficiency projects due to the uncertainty of the economy.

CITY OF VERNON LIGHT & POWER

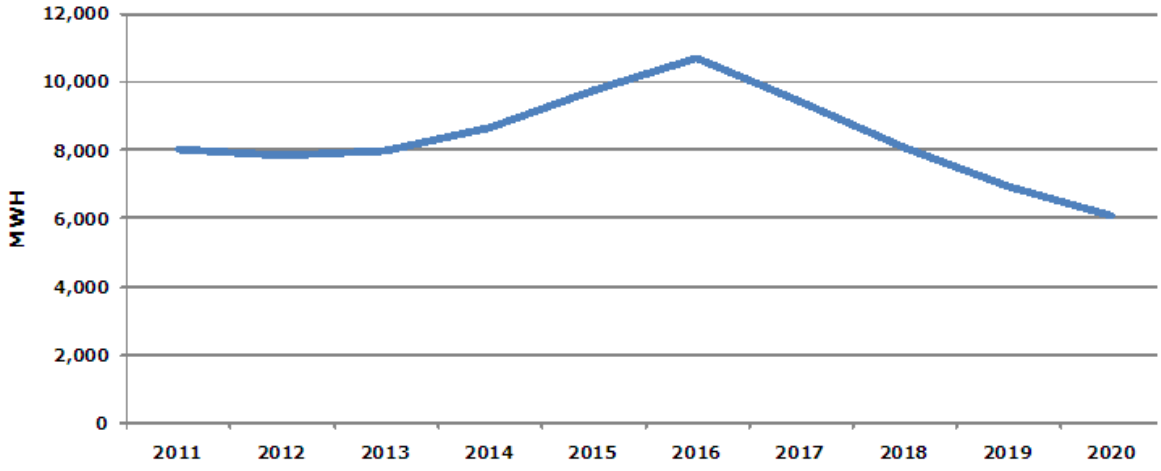
Time Period for Reporting Data: Fiscal Year ending 6/30/2010

City of Vernon Light & Power		Resource Savings Summary						Cost Summary			
Program Sector (Used in CEC Report)	Category	Units Installed	Net Demand Savings (kW)	Net Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh savings	Net Lifecycle GHG Reductions (Tons)	Utility Incentives Cost ($)	Utility Direct Install Cost ($)	Utility Mktg, EM&V, and Admin Cost ($)	Total Utility Cost ($)
Appliances	Res Clothes Washers										
HVAC	Res Cooling										
Appliances	Res Dishwashers										
Consumer Electronics	Res Electronics										
HVAC	Res Heating										
Lighting	Res Lighting										
Pool Pump	Res Pool Pump										
Refrigeration	Res Refrigeration										
HVAC	Res Shell										
Water Heating	Res Water Heating										
Comprehensive	Res Comprehensive										
Process	Non-Res Cooking										
HVAC	Non-Res Cooling										
HVAC	Non-Res Heating										
Lighting	Non-Res Lighting	2,285	348	312	1,736,568	27,785,088	14,691	$ 154,086		$ 60,838	$ 214,924
Process	Non-Res Motors										
Process	Non-Res Pumps										
Refrigeration	Non-Res Refrigeration										
HVAC	Non-Res Shell										
Process	Non Res Process										
Comprehensive	Non Res Comprehensive										
Other	Other										
SubTotal		2,285	348	312	1,736,568	27,785,088	14,691	$ 154,086		$ 60,838	$ 214,924
T&D	T&D										
Total		2,285	348	312	1,736,568	27,785,088	14,691	$ 154,086		$ 60,838	$ 214,924

EE Program Portfolio TRC Test	**6.88**

Excluding T&D

Energy Savings Targets 2011-2020



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
MWH	8,020	7,863	7,992	8,655	9,766	10,716	9,468	8,073	6,962	6,087
% of Load Forecast	0.64%	0.61%	0.61%	0.66%	0.74%	0.80%	0.70%	0.59%	0.50%	0.43%

VICTORVILLE MUNICIPAL UTILITY SERVICES

- The City of Victorville established the Victorville Municipal Utility Services (VMUS) in 2001 to provide safe, reliable and cost-effective service to retail customers that were building new facilities located in the designated service territory.
- VMUS began serving commercial and industrial customers in 2003.
- VMUS receives wholesale power through its 12 kV switchgear as well as on-site generation facilities.
- VMUS serves approximately 30 non-residential meters.
- Peak demand for the utility is 6.0 megawatts and annual energy sales were 33,000 megawatt-hours.
-

Victorville Energy Efficiency Program Highlights

Energy Efficiency Program Goals:

- Replace on-site generation facilities with power delivered from the wholesale transmission network.
- Design and install distribution facilities that reduce system losses.
- Provide information and analysis to VMUS customers that allow them to make informed decisions about reducing energy consumption.
- Prioritize energy efficiency technologies and opportunities.
- Provide direct assistance to qualified customers who are unable to otherwise implement cost-effective and approved savings energy efficiencies.

System Design

- Customers are served through 12,000 volts underground facilities with larger gauge ASCR conductors to improve system reliability and reduce system losses.
- VMUS evaluates circuit load performance to optimize performance and reduce system losses.
- VMUS purchases and installs efficient transformers to reduce system losses.

Commercial Customer Programs:

- Time-of Use Rates Program: All customers receive time-of-use pricing bills; enabling them to reduce their energy costs through the time management of their energy usage.

VMUS Demand Reduction Programs:

- On-Site Generation Program: – VMUS has available on-site emergency back-up generation systems.

Appendix B: Program Energy Savings Potential and Targets

Publicly Owned Utilities Energy Savings Targets 2011 - 2020

2010 Update of Annual Utility Energy Efficiency Savings Targets												
	Annual Targets (MWH)											% of Sales
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	10 yr Total	Forecast
Alameda	1,574	1,675	1,771	1,833	1,887	1,935	1,964	1,982	1,996	2,014	18,631	0.46%
Anaheim	24,264	22,542	26,296	32,291	37,785	36,956	34,802	32,568	30,339	28,238	306,081	1.12%
Azusa	2,068	1,904	2,071	2,367	2,591	2,736	2,738	2,715	2,692	2,669	24,551	0.89%
Banning	962	706	782	894	944	975	979	970	945	918	9,076	0.59%
Biggs	44	33	35	38	42	45	42	39	35	32	385	0.21%
Burbank	8,768	7,549	8,301	9,523	10,553	11,125	10,894	10,524	10,225	9,928	97,391	0.77%
Colton	3,162	2,902	3,508	4,594	5,064	5,043	4,827	4,574	4,317	4,092	42,082	1.05%
Corona	166	167	190	227	256	288	312	335	358	381	2,678	0.34%
Glendale	11,060	11,520	11,280	11,320	11,380	11,430	11,490	11,550	11,620	11,680	114,330	1.00%
Gridley	75	75	75	87	98	107	111	114	117	120	979	0.23%
Healdsburg	420	420	420	515	557	603	614	617	617	614	5,396	0.52%
Hercules	75	74	86	102	113	122	130	137	145	153	1,137	0.52%
IID	19,743	16,480	18,381	21,281	24,147	26,614	27,674	28,234	28,576	28,910	240,041	0.56%
Industry	-	-	-	-	-	-	-	-	-	-	-	
LADWP	255,000	252,000	252,000	252,000	252,000	252,000	252,000	252,000	252,000	252,000	2,523,000	
Lassen	375	375	375	501	650	849	1,043	1,177	1,203	1,219	7,767	0.49%
Lodi	2,296	1,667	1,905	2,242	2,587	2,873	2,948	2,985	3,019	3,053	25,575	0.51%
Lompoc	517	336	395	459	544	630	708	760	776	785	5,911	0.40%
Merced	1,316	1,117	1,258	1,483	1,765	2,054	2,143	2,191	2,242	2,297	17,866	0.33%
Modesto	16,207	15,136	16,154	18,161	20,252	21,857	21,102	20,074	19,258	18,623	186,824	0.67%
Moreno Valley	274	219	234	260	288	304	292	276	261	247	2,655	0.30%
Needles	205	160	181	211	246	280	299	312	323	334	2,549	0.33%
Palo Alto	5,799	6,290	6,782	7,276	7,906	7,927	7,950	7,973	7,999	8,026	73,929	0.75%
Pasadena	14,500	14,500	14,500	17,500	17,500	17,500	17,500	17,500	17,500	17,500	166,000	1.23%
Pittsburg Power/ Island	42	37	40	46	55	64	64	62	60	59	529	0.29%
Plumas Sierra	237	230	247	279	346	491	778	1,191	1,546	1,688	7,033	0.36%
Port of Oakland	406	420	424	430	437	488	523	529	533	541	4,731	0.53%
Rancho Cucamonga	46	49	55	65	74	85	93	101	110	118	796	0.12%
Redding	2,523	2,496	3,076	3,776	4,457	4,655	4,649	4,518	4,402	4,350	38,903	0.38%
Riverside	14,017	12,526	13,705	16,071	18,159	19,617	19,994	20,037	20,082	20,169	174,378	0.75%
Roseville	8,390	8,360	8,604	8,639	9,054	10,032	10,903	10,470	9,874	9,387	93,713	0.62%
SMUD	166,000	169,000	171,000	175,000	179,000	183,000	185,000	187,000	190,000	194,000	1,798,000	1.50%
Shasta Lake	300	300	300	713	833	934	1,016	1,073	1,108	1,143	7,719	0.29%
Silicon Valley Power	23,055	25,415	26,255	28,502	29,506	28,413	25,456	23,052	21,328	20,020	251,003	0.77%
Trinity	14	13	14	14	14	14	14	14	14	14	139	0.01%
Truckee Donner	1,978	1,640	1,706	1,727	1,762	2,017	2,257	2,317	2,214	2,263	19,880	1.13%
TID	12,900	12,644	13,829	15,846	17,814	19,269	19,075	18,675	18,379	18,172	166,603	0.73%
Ukiah	250	250	310	341	375	413	454	499	549	604	4,045	0.33%
Vernon	8,020	7,863	7,992	8,655	9,766	10,716	9,468	8,073	6,962	6,087	83,601	0.63%
Total	**186,049**	**178,089**	**191,538**	**218,268**	**239,807**	**249,462**	**245,305**	**238,221**	**231,723**	**226,444**	**2,204,905**	

Note: Targets for LADWP based on levels adopted in 2007. Period representing 2017-2020 extrapolated from 2016 estimate.
2020 target for TID is not board approved.
Tagets for Redding Electric are not board approved

Appendix C: References to Documents Supporting Report

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.

California Energy Commission, 2007 Integrated Energy Policy Report, CEC Publication CEC-100-2007-008-CMF, November 2007.

California Energy Commission, 2008 Integrated Energy Policy Report Update, CEC Publication CEC-100-2008-008-CTF, November 2008.

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California Energy Commission, 2006, *California Commercial End-Use Survey*

California Energy Commission, 2004, *California Statewide Residential Appliance Saturation Study*

California Institute for Energy and Environment, 2009, *Behavioral Assumptions in Energy Efficiency Potential Studies*

California Municipal Utilities Association, *Energy Efficiency in California's Public Power Sector: A Status Report. Published in* December 2006, March 2008, March 2009, and March 2010

California Public Utilities Commission, *Rulemaking R.04-04-025, Various Decisions D.05-04-024, D.06-06-063, and Decision D.08-01-006* regarding avoided cost methodologies and the Total Resource Cost test.

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

Itron, 2008, *California Energy Efficiency Potential Study*

KEMA Incorporated. *Measure Quantification Methodology: Statewide Savings and Costs,* 2006 Report, August 2006. Available at http://www.ncpa.com/energy-efficiency-reports.html

KEMA Incorporated. *Measure Quantification Methodology: Statewide Savings and Costs,* 2008 Supplement, Addendum 2008-1, February 2008. Available at http://www.ncpa.com/energy-efficiency-reports.html

KEMA Incorporated. *Measure Quantification Methodology: Statewide Savings and Costs,* 2009 KEMA Report, December 2009

U.S. Environmental Protection Agency, *Model Energy Efficiency Program Impact Evaluation Guide*, A Resource of the National Action Plan for Energy Efficiency, November 2007.

California Air Resources Board AB 32 Scoping Plan, adopted December 11, 2008. Available at http://www.arb.ca.gov/cc/scopingplan/scopingplan.htm

Appendix D: List of Available Evaluation Reports

The below listed evaluation reports are available (unless otherwise noted) for download at: http://www.ncpa.com/energy-efficiency-m-v-reports.html

Utility Name	Evaluation Report(s)
Alameda	1. *Evaluation, Verification, and Measurement Study*, May 2009, Summit Blue Consulting 2. FY 2009 Evaluation Report, Residential CFL Program, September 2010, Global Energy Partners
Biggs	3. *2008 Energy Efficiency Program Evaluation Plan*, June 2008, Summit Blue Consulting 4. *FY 2008 Energy Efficiency Program Evaluation,* February 2010, Navigant Consulting 5. *FY 2009 Energy Efficiency Program Evaluation,* September 2010, Navigant Consulting 6. *FY 2010 Energy Efficiency Program Evaluation,* November 2010, Navigant Consulting
Burbank	*7. Energy Efficiency Evaluation Report,* July 2010, Lincus Energy, Inc.
Gridley	8. *2008 Energy Efficiency Program Evaluation Plan*, June 2008, Summit Blue Consulting 9. *Evaluation, Measurement & Verification Report*, February 2010, Optimized Energy and Facilities Consulting
Healdsburg	10. *2008 Energy Efficiency Program Evaluation Plan*, June 2008, Summit Blue Consulting 11. *Evaluation, Measurement & Verification Report*, Optimized Energy and Facilities Consulting, August 2010
Lassen	*12. Evaluation, Measurement & Verification Report*, March 2010, Optimized Energy and Facilities Consulting
Lodi	13. *2008 Energy Efficiency Program Evaluation Plan*, May 2008, Summit Blue Consulting 14. *Process Evaluation of Lodi Electric Utility's Efficiency Program and Impact Evaluation of the Non-Residential Custom Program-Lighting and Appliance Rebate*, November 2008, Summit Blue Consulting 15. *Impact Evaluation of the Nonresidential Customer Program and the Residential Home Improvement Program, FY 2008/09,* November 2009, Summit Blue Consulting 16. *Energy Efficiency Program Evaluation, Verification, and Measurement Study FY 2009/10,* November 2010, Navigant Consulting
Lompoc	17. *Energy Efficiency Program Evaluation Plan*, June 2008, Summit Blue Consulting 18. *FY 2008 Evaluation, Verification, and Measurement Study*, March 2009, Summit Blue Consulting

	19. *FY 2010 Evaluation, Verification, and Measurement Study*, February 2011, Navigant Consulting
LADWP	20. *2006-2007 Evaluation Report,* Expedient Energy, August 2008 *21. 2007-2008 Evaluation Report,* Expedient Energy, December 2009 *22. 2008-2009 Evaluation Report,* Expedient Energy, January 2011
Merced	*23. 2008 Evaluation, Verification, and Measurement Study,* December 2009, *Summit Blue Consulting*
Modesto Irrigation District	24. *Evaluation, Measurement and Verification Plan for Modesto Irrigation District*, April 2009, Summit Blue Consulting 25. *Energy Efficiency Program Evaluation, Verification and Measurement FY2009 Programs,* November 2010, Navigant Consulting
Palo Alto	26. *Evaluation, Verification, and Measurement Study*, February 2009, Summit Blue Consulting 27. *FY 2008/2009 Energy Efficiency Program Evaluation,* March 2010, Navigant Consulting
Pasadena	28. *2009 Energy Efficiency Program Evaluation Plan,* October 2009, Summit Blue Consulting
Plumas Sierra REC	29. *2008 Energy Efficiency Program Evaluation Plan*, May 2008, Summit Blue Consulting 30. *Engineering Evaluation of GeoExchange Program,* February 2010, Efficiency Services Group 31. *Evaluation, Measurement, & Verification Report for PSREC 2009,* February 2010, Efficiency Services Group
Port of Oakland	32. *Evaluation, Verification, and Measurement Study*, February 2009, Summit Blue Consulting
Redding	33. *2008 Energy Efficiency Program Evaluation Plan*, June 2008, Summit Blue Consulting 34. *Evaluation, Verification, and Measurement Study*, March 2009, Summit Blue Consulting 35. *Evaluation, Verification, and Measurement Study*, July 2009, Efficiency Services Group
Riverside	36. *Evaluation, Verification, and Measurement Plans for Riverside Public Utilities*, March 2010, Summit Blue Consulting 37. *Review of Non-Residential Program Application Forms*, November 2010, Navigant Consulting
Roseville	38. *Evaluation, Measurement and Verification Plans for Roseville Electric*, December 2008, Summit Blue Consulting 39. *Process and Impact Evaluation of Roseville Electric's Residential New Construction, HVAC Retrofit, and Commercial Custom Rebate Programs*: FY2007/08, February 2009, Morrison Energy Services 40. *Evaluation, Measurement & Verification Report*, FY08/09, May 2010, Efficiency Services Group
Shasta Lake	*41. Evaluation, Measurement & Verification Report*, March 2010, Optimized Energy and Facilities Consulting

Silicon Valley Power	42. *Evaluation, Measurement and Verification Plans for SVP Electric*, August 2008, Summit Blue Consulting 43. *Evaluation, Verification, and Measurement Study,* March 2009, FY 2007/2008 Program, Summit Blue Consulting 44. *Evaluation, Verification & Measurement Study, FY 2008/2009 Program,* December 2009, Summit Blue Consulting
SMUD	45. *Evaluation of Prescriptive Lighting Program*, November 2007, ADM Associates, Inc. 46. *Measure and Verify Savings of Refrigerator Recycling Program*, May 2007, ADM Associates, Inc. 47. *Residential HVAC Program Evaluation*, March 2008, RLW Analytics, Inc. 48. *The Impact of Home Electricity Reports,* September 2009, ADM Associates, Inc.
TID	49. *2008 Energy Efficiency Program Evaluation Plan*, May 2008, Summit Blue Consulting 50. *Evaluation, Verification, and Measurement Study*, March 2009, Summit Blue Consulting 51. Energy Efficiency Program Evaluation – FY2009 Program, Navigant Consulting, July 2010
Truckee Donner PUD	52. *Evaluation, Measurement and Verification Plan for Truckee Donner Public Utility District 2008 Energy Efficiency Programs*, February 2009, Robert Mowris and Associates 53. *Truckee Donner Public Utilities District Calculation Evaluation, Measurement & Verification Report,* February 2010, Optimized Energy & Facilities Consulting, Inc. 54. *Evaluation, Measurement and Verification Report for Truckee Donner Public Utility District 20010 Energy Efficiency Programs*, March 2011, Robert Mowris and Associates
Ukiah	55. *2008 Energy Efficiency Program Evaluation Plan*, August 2008, Summit Blue Consulting