

Agricultural Programs

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*Agriculture Programs
Exemplary Program*

***Agriculture and Rural Business Program
Focus on Energy***

PROGRAM OVERVIEW

The Agriculture and Rural Business Program serves Wisconsin's agribusiness industry in a three pronged approach. First, the program offers direct services to end-use customers to identify projects with energy savings potential. Second, the program provides services via trade ally networks that serve customers with specialized equipment. Third, the program participates with agribusiness leaders with trade associations and state and federal government organized efforts. The totality of this approach allows the program to address broad industry shifts, specific corporate strategies, and barriers to energy efficiency technology installation and operations implementation.

The program began in 2001, serving primarily Wisconsin's dairy farms. However, as the program has matured and gained recognition other agribusinesses have been included, such as livestock (beef, swine and poultry), greenhouses, grain handling, crop irrigation, crop storage and, most recently, biofuel facilities and feedstock processors. Using a variety of marketing and outreach methods, as well as developing collaboratives among the many agriculture associations and state agriculture resources, the program has gained recognition as a primary source of unbiased energy information and grant funding throughout the state.

The Focus on Energy Agriculture and Rural Business program is part of the overall Focus on Energy program, which is a public-private partnership offering energy information and services to energy utility customers throughout Wisconsin. GDS Associates, Inc. provides the program planning and the on-the-ground implementation of the energy efficient projects for the Focus on Energy Agriculture and Rural Business program. GDS has overall responsibility for meeting the energy savings goals, outreach, education, and budget. Wisconsin Energy Conservation Corporation (WECC) is the overall administrator of the Focus on Energy program. Franklin Energy is a subcontractor to GDS Associates and provides field staff for implementation of on-farm projects in specific state territories.

PROGRAM PERFORMANCE

The Focus on Energy Agriculture and Rural Business program began in 2001 and to date has helped more than 2,000 Wisconsin farms and agribusinesses save over 87 million kWh and over 22 MW of electricity and nearly 1.9 million therms of natural gas and propane, annually. At today's (2007) energy prices, those savings amount to more than \$11.5 million annually in savings for Wisconsin energy consumers. According to the latest evaluation report (Feb. 2007) the net benefit/cost ratio for the program is 2.1.

In the dairy program, other benefits are improved milk quality, ability to increase milk production and ability to remain profitable and to stay farming. On the greenhouse side of the program, the program is able to cut energy costs significantly which helps greenhouses stay in operation and competitive. Energy is the second largest operating cost for greenhouses. Grain drying projects have cut energy use by a third in some cases. On one project, new technology was able to lower energy costs, provide an opportunity to dry larger amounts of grain, and increase the overall efficiency of the operation.

Customers show high satisfaction with the program. The Agricultural and Rural Business Programs recently surveyed 250 customers that were served since the beginning of the program year. Of those 250 customers the rate of return from the mailing was 52%, with 76% stating that they are very satisfied with the Focus on Energy Agricultural and Rural Business program. 74% said that Focus on Energy's grant incentive, information and/or audit helped them to decide to buy energy efficient equipment, and 83% said they are very satisfied with how the energy efficiency equipment is working.

LESSONS LEARNED

The program has taken a pioneering approach---prioritizing agricultural markets and systematically working with each market to provide energy efficient incentives and measures best suited to the particular market. In order to make the approach work the program involved multiple stakeholders within each market sector and worked collaboratively with the associations, equipment manufacturers, contractors, non-profits, and government agencies that already had established relationships within the markets.

The program's focus on education of customers and trade allies and the availability of both prescriptive and custom incentives have been important elements of the program's success. Education is important to create knowledge and awareness of the program's benefits, including available incentives and grants for energy-efficient equipment. The use of both prescriptive and custom incentives (rebates) allows the program to serve a greater number of customers. Prescriptive forms are completed and submitted by program allies or customers. Follow up is done to make sure installation has been completed. This delivery method requires less program resources and thereby allows the program to serve greater numbers of projects. Custom applications are available for more complex projects, extending program opportunities into larger and more complicated areas.

Effective marketing through a wide variety of channels that reach target markets also has been a key to the program's success. The program has done outreach and education by writing articles for association newsletters and agriculture periodicals such as: Dairy Business Association newsletter, Agri-view, and the Wisconsin Fruit and Vegetable Growers Newsletter. Program staff have also spoken at various functions including Energy Efficiency for Greenhouse Operations and Wisconsin Public Service Farm Technology Days. Staff have been active with the Dairy Business Association, Professional Dairy Producers of Wisconsin, Southwest Dairy Modernization Task Force, RENEW (a state renewable energy association), Wisconsin's

Governor's Office of Energy Independence, Wisconsin Farm Bureau, food processors such as Alto Dairy and Organic Valley, and the Wisconsin Biodiesel Association, to name a few.

The agricultural and rural business program has demonstrated the ability to work with multiple agricultural stakeholders utilizing current information distribution channels. The Focus on Energy program has looked at what is important to each market sector and used strategies to create value not only to customers but in the various markets. The program has aligned business strategies with value beyond energy savings. These strategies and lessons learned can be transferred to other sectors and to other areas of the country.

PROGRAM AT A GLANCE

Program Name: Agricultural and Rural Business Program

Targeted Customer Segment: Agricultural customers, rural businesses and trade allies

Program Start Date: 2001

Program Participants: Over 2000 customers and businesses since 2001

Annual Energy Savings Achieved: Since inception savings are estimated at 87 million kWh and 22 MW of electricity and nearly 1.9 million therms of natural gas and propane, annually

Peak Demand (Summer) Savings Achieved: Not available.

Other Measures of Program Results to Date: Net benefit to cost ratio is 2:1

Budget: July 1, 2006 to June 30, 2007 \$1.9 million for program implementation and incentives

Funding Sources: Public Benefits Charge collected from utility ratepayers

Best Person to Contact for Information about the Program

- Rich Hackner
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*Agriculture Programs
Exemplary Program*

***Dairy Farm Efficiency Services
Efficiency Vermont***

PROGRAM OVERVIEW

Prior to the establishment of Efficiency Vermont, utilities throughout the state were required by the Legislature to provide efficiency services to farms. These services included a facility audit, coordination of equipment installation, and making available financing and rebates. When Efficiency Vermont began providing statewide efficiency services in 2000, the utilities were no longer required to run efficiency programs. This change enabled all Vermonters to receive a single, comprehensive service.

In 2005 there were roughly 1,300 dairy farms in Vermont, with the number of farms declining approximately 5% per year. Electricity consumption in the Vermont agriculture sector is estimated at 67,000 MWh per year. Efficiency Vermont recognizes Vermont's dairy farms as an important and discrete market that can benefit dramatically from efficiency improvements. By working directly with farmers, Efficiency Vermont has designed and implemented services that would help overcome the common obstacles that farmers face, which include:

- Lack of capital and credit to invest in improvements;
- Insufficient time to complete improvements without assistance, and lack of information;
- Aversion to the risk of trying unfamiliar approaches and new technologies; and
- Difficulties of staying "afloat" as a farming operation, a problem closely tied to the uncertainty and fluctuations in agricultural markets.

To address these barriers Efficiency Vermont provides an integrated set of efficiency services to farmers, including:

- Site visits from a farm energy specialist;
- Preliminary analysis of energy efficiency improvements, including cost-effectiveness screening and analysis;
- Equipment recommendations;
- Provisions for service contracts that include cost quotes, final measure screening, incentive agreements, inspections, and terms of payment; and
- A cash financial incentive covering 70% of the cost of recommended investments, together with low- or no-cost financing for the remaining participant share of the cost. The loans are not secured and are guaranteed by Efficiency Vermont.

PROGRAM PERFORMANCE

In seven years of activity Efficiency Vermont has participated with 622 agricultural businesses, which now collectively save 6,600 MWh annually. These numbers suggest that this initiative is now saving 10% of farm energy use. In 2007 Efficiency Vermont's goal is to save an additional 325 MWh annually in the dairy farm market. Approximately 100 farms participate in the program each year.

LESSONS LEARNED

Efficiency Vermont's service to farmers has become increasingly successful for several reasons. Efficiency Vermont's approach to the market is aligned with the needs of the farmers and Efficiency Vermont's expertise. Most projects are custom, meaning the data surrounding the farm operation are taken into consideration so that a specific analysis can be done. Other key factors in the program's success include:

- Strong customer service and contract management,
- An emphasis on educating farmers about energy efficiency opportunities, and
- Availability of strong financial incentives to implement recommended measures.

Marketing of the program is done through a variety of channels, including the Efficiency Vermont web site, newsletter articles, trade publication advertisements, trade shows, brochures, referrals, and past participants. Through these means Efficiency Vermont is able to reach dairy farms across the state.

In addition to technical and financial support and direct energy savings, farmers receive numerous non-energy benefits from their efficiency upgrades. These include:

- Improved milk quality and quantity,
- Better-lit work areas,
- Decreased noise level, and
- Reduced milking time.

The energy saving results come from several innovative technologies that Efficiency Vermont supports and helps to implement. Efficiency Vermont has evaluated these technologies and determined that the most effective ones are:

- Units that recover and use waste heat from refrigeration systems;
- Plate coolers that utilize ground water to "pre-cool" milk;
- Variable speed controls for the vacuum pump that matches vacuum pump work output to vacuum need;
- Variable speed milk transfer systems to regulate milk flow to improve plate cooler effectiveness; and
- Replacing older lighting with newer technologies such as vapor proof high performance T8 fluorescent fixtures and pulse-start metal halide.

PROGRAM AT A GLANCE

Program Name: Dairy Farm Efficiency Services

Targeted Customer Segment: Dairy farms and related agricultural businesses and customers

Program Start Date: 2000

Program Participants: 622 farm customers since program began in 2000

Annual Energy Savings Achieved: 6,600 MWh cumulative annual savings; expect to achieve additional 325 MWh in 2007.

Peak Demand (Summer) Savings Achieved: Not available.

Budget: About \$200,000 in incentives annually

Funding Sources: Public benefits funds

Best Person to Contact for Information about the Program

- George Lawrence, Market Coordinator
- Phone: 888-921-5990
- Email: glawrence@veic.org

*Agriculture Programs
Exemplary Program*

***Interstate Power and Light Co. Agriculture Energy Efficiency Program
Interstate Power and Light Company, an Alliant Energy Company***

PROGRAM OVERVIEW

Interstate Power and Light (IPL) agricultural programs are available to IPL farm and agribusiness electric customers. Programs include prescriptive and custom rebate programs for customers who are replacing standard efficiency equipment or measures with components that provide energy or demand savings. Prescriptive and custom rebates are also available for customers expanding their farm or agribusiness or building new buildings or additions. In parallel with services offered directly to customers, IPL offers a Dealer Program that provides cash incentives and cooperative advertising to participating trade allies (dealers) who sell rebated equipment to IPL customers.

The primary services available to IPL agriculture customers are summarized below.

Farm Energy Audit

This is a free on-farm assessment that pinpoints energy waste on grain and livestock operations, identifies energy-efficient technologies that will reduce energy usage, makes energy-efficient equipment recommendations, and creates awareness of available agricultural rebate programs.

Energy Audit for USDA 9006 Energy Efficiency Grant Applications

This service provides an on-farm assessment that pinpoints energy waste on grain drying operations, identifies energy-efficient technologies that will reduce energy usage, makes energy-efficient equipment recommendations, and provides documentation for the USDA application.

Prescriptive Rebates

The Agriculture Program is designed to provide a comprehensive range of energy efficiency incentives targeted to farm and agribusiness customers via prescriptive rebates. IPL offers predetermined cash rebates to farm and agribusiness customers who purchase high-efficiency electric equipment and incentives to dealers and builders who sell or install this high-efficiency electric equipment. This program is comprised of a wide range of energy-efficiency measures, including lighting, ventilation, livestock waterers and heaters, low-pressure irrigation systems, tractor heater timers, NEMA Premium[®]-efficiency motors, dairy-specific equipment, and high-efficiency clothes washers. IPL agriculture representatives and IPL trade account managers promote the rebate program directly to end-use customers, manufacturers, builders, trade allies (dealers), extension personnel, educators, financial institutions, trade organizations, etc., via trade shows, community meetings, builder open houses, visits to dealers' businesses, and a wide variety of other community opportunities. IPL agriculture representatives also assist farmers, builders, and trade allies with application forms and promotional materials.

Custom Rebates (Iowa only)

IPL offers custom rebates for projects that do not qualify for the prescriptive rebate program due to size, scope or unique characteristics of the energy-efficient equipment. IPL agriculture representatives promote the rebate program directly to end-use customers, manufacturers, builders, trade allies (dealers), extension personnel, educators, financial institutions, trade organizations, etc., via trade shows, community meetings, builder open houses, visits to dealers' businesses, and a wide variety of other community opportunities. Due to the unique and complex nature of custom rebates projects, IPL agriculture representatives assist farmers and builders with custom rebates application forms and calculate energy savings.

New Equipment Comparison

IPL provides customers comparisons of life-cycle energy consumption of different models of equipment. IPL agriculture representatives inventory proposed equipment customers are considering, make recommendations of higher efficiency equipment, calculate lifetime energy consumption of the equipment, and provide customers with an energy savings report.

In addition to the above services, IPL offers customer assistance with new electric service, stray voltage monitoring, energy use summaries and rate analysis.

Agriculture-specific rebates were introduced by IPL in 2002. Although the incentives were available, the agriculture customers were not taking advantage of the opportunities. In the IPL system, farmers and agribusinesses are not always easy to identify and segregate from residential and commercial customers, making direct marketing difficult to target effectively.

In an effort to better reach farm and agribusiness customers, in 2004 IPL hired agriculture field representatives (Ag Reps), who are dedicated to promoting DSM energy efficiency programs to farm customers and meeting IPL regulatory impact savings goals (kW and kWh). The Ag Reps launched a multi-pronged approach to the marketplace, forming direct relationships with key market stakeholders via promoting the program at trade shows, community meetings, builder open houses, commodity expos, fairs, retail store calls, and farm visits in order to make direct contact and form relationships with farm and agribusiness customers. The Ag Reps also speak at energy efficiency conferences and agricultural venues.

To overcome skepticism and bypass other hurdles when working one-on-one with customers, the Ag Reps have developed several tools, including various spreadsheets that demonstrate to the customer the energy and cost savings, as well as other benefits of investing in energy efficient improvements under consideration. In 2006 the Ag Reps developed a template for conducting energy efficiency audits, which is designed to correspond with the USDA 9006 Energy Efficiency Grant Applications.

PROGRAM PERFORMANCE

IPL has sparsely populated service territories in Iowa and Minnesota, with the greatest share of its customer base in Iowa. Results in each state are summarized below.

- *Iowa*: 2006 calendar year reported savings: 264 participants, 903 kW, and 4,333,586 kWh. 2007 performance through November (11 months) shows the program reaching over twice its goals, at 229%, of participant goal, 204% of the demand goal, and 232% of the kWh goal.
- *Minnesota*: 2006 calendar year reported savings: 142 kW and 684,070 kWh. 2007 performance will be above goal at year end.

IPL's agriculture program has had positive impacts on the markets for agricultural products—even on those who manufacture products for farm use. For example, a ventilation fan supplier based in the Midwest has changed its focus and modified its products to meet IPL energy efficiency standards.

Other broader market impacts of IPL's Agriculture Energy Efficiency Program include influences on design and construction practices. For example, builders of agricultural buildings, such as of hog confinement facilities, have changed their specifications to include compact fluorescent lighting (CFLs) as standard equipment. There is evidence that suggests the programs also are affecting non-participants who hear about the benefits of such products as CFLs from their neighbors and associates, and apply such products in their own operations independent of specific program participation.

Evaluation of the program shows that from a societal perspective, in 2006 in Iowa the program yielded \$1.99 in benefits for every \$1 spent on the program, and in Minnesota, the program yielded \$3.09 in benefits for every \$1 spent indicating that the program is very cost-effective.

A significant IPL innovation that has contributed to the program's success is the energy audit process that the IPL agricultural representatives developed for use with the USDA 9006 energy efficiency grant program, which specifically funds replacement of old equipment. The IPL process was nationally recognized by the USDA Rural Development Office for its effectiveness. In the first year, 2006, the IPL agricultural representatives provided audits for 15 farm customers, all of whom received grants, totaling \$475,000 in grants and loans from the USDA to complete electric and natural gas savings projects. In 2007, the IPL agricultural representatives provided energy audits for 80 farmers seeking USDA 9006 energy efficiency grants. Of those 80 farmers, 67 proceeded through the entire application process, 62 of whom were awarded assistance as follows: 21 were awarded a 25% project cost grant and 41 were awarded a combined 25% project cost grant and additional 25% project cost federal guaranteed federal loan. Federal assistance totaled almost \$3.1 million dollars.

LESSONS LEARNED

IPL's agriculture program approach—the use of and type of agricultural services representatives—has been the key to the program's success. Highly motivated, credible, compassionate agriculture representatives with direct agriculture experience are in the field working one-on-one with the end-use customers and with the critical stakeholders ensuring success of the program. These field personnel must be carefully selected and possess agriculture

background (both education and work experience) as well as demonstrate a strong personal aptitude and interest in agriculture. The agriculture representative must be highly motivated, credible, compassionate and empathetic to the agriculture customers, agriculture stakeholders and agriculture community in order to achieve results. The agriculture community wants their unique needs to be understood by “one of their own.”

IPL’s model of using field representatives was transferred from IPL’s successful approach to the Commercial and Industrial (C&I) customer segment, which also receives personal contact from field representatives. IPL’s C&I customer offerings include prescriptive and custom rebates, as well as audits and other offerings.

PROGRAM AT A GLANCE

Program Name: Interstate Power and Light Co. Agriculture Energy Efficiency Program

Best Person to Contact for Information about the Program

Targeted Customer Segment: Agriculture customers and trade allies

- Dorothy Landt, Product Manager
- Phone: 319.786.4522
- Email: DorothyLandt@alliantenergy.com

Program Start Date: Rebate program established in 2002. Agriculture representatives added to program in 2004.

Program Participants: Iowa: 264 participants in 2006.

Annual Energy Savings Achieved: Iowa: 4.3 GWh in 2006 and 4.9 GWh through November 2007; Minnesota: 0.68 GWh in 2006 and TBD for 2007.

Peak Demand (Summer) Savings Achieved: Iowa: 903 kW in 2006; Minnesota: 142 kW in 2006

Budget: Iowa: The 2007 IPL Energy Efficiency Plan total annual agriculture program budget is \$358,050, of which \$248,589 is allocated for customer incentive and the remainder is administration, design, promotion and evaluation expense.

Minnesota: The 2007 IPL Conservation Improvement Program total annual agriculture project budget is \$70,090, of which \$38,280 is allocated for customer grants and incentives and the remainder is management, design, promotion and evaluation expense.

Funding Sources: IPL Energy Efficiency Cost Recovery fund (demand side management fund that is included in the customer’s bill) (for energy efficiency offerings only)

*Agriculture Programs
Honorable Mention*

***Agriculture and Food Processing Energy Efficiency Program
Pacific Gas & Electric***

PROGRAM OVERVIEW

The Agriculture and Food Processing Energy Efficiency Program partners with industry, trade allies and others to promote integrated energy management solutions to end-use customers, including analysis, energy efficiency, self-generation, and demand response opportunities. While the primary program focus is energy efficiency, the program emphasizes integrated solutions in sequence to support the most cost-effective and satisfactory energy and financial results for all stakeholders.

In 2005 PG&E was asked by the California Public Utilities Commission (CPUC) to design programs that meet the new, aggressive goals set before the 2006-2008 program cycle. At the same time, PG&E was strongly encouraged by the CPUC and other stakeholders to be innovative in its approach. The 2006-2008 program design team, confident that the existing program model would not be able to adequately achieve the new goals, took a blank-slate approach to how to deliver PG&E's programs, evaluating different program models from around the country. The targeted markets approach, a concept being tested with success at Efficiency Vermont as well as by smaller efforts within PG&E such as the integrated schools outreach effort, was selected as a model that would allow for a deeper penetration into specific customer markets through alignment with industry and partner organizations, and through the development of industry expertise within PG&E and its consultants. In addition, a market-sector approach would allow third parties to bid into the portfolios utilizing their industry expertise to target specific markets.

The Agriculture and Food Processing Energy Efficiency Program was designed as a targeted market to encompass the full spectrum of agriculture and food processing in PG&E's territory - from the fields to the table - including farms, dairies, greenhouses, wineries and vineyards, food processors, and refrigerated warehouses. Existing market research on each "sub-market" segment was used to develop a detailed program proposal that defined the market(s), their opportunities and barriers, and program elements PG&E would deliver to them. Target technologies, industry partners, demand response strategies, self-generation incentive strategies, estimated project type projections, and other implementation details were also specified. This proposal, submitted to the CPUC, formed the roadmap for the program that was launched. The program has stayed, for the most part, true to its design concept but has naturally grown as new products or new technologies have been discovered and developed.

The agriculture and food processing market is very diverse. While food processors act much like industrial energy users and demand a high level of customer touch, farmers are in many senses hard to reach and have unique behavioral barriers. Each market sector has very unique market pressures, cost thresholds, opportunities and barriers that have impacted the specifics of how to approach the market with programs and services. For the large food processors, PG&E provides

consultants for audits, integrated audits, design assistance, and other facility-specific consulting. For farmers, PG&E takes a more “mass market” approach with postcard marketing, some phone call marketing, and a pump test and repair program administered by a third party, CSU Fresno. For large refrigerated warehouses, PG&E’s key strategy is to work with design engineering firms to build energy efficiency options and programs into their work. Strong project managers and successful projects bring these market actors back to PG&E’s programs regularly. Primarily, research and outreach through industry associations provides guidance for the type of support PG&E brings to these markets.

The primary program strategies are twofold: (1) to identify and develop a group of PG&E energy efficiency project managers, reporting to the Ag and Food Processing Program Manager, who act as local specialists for the account services sales force in the ag and food processing market, technologies, and projects; and (2) to foster industry partnerships aligned with the targeted markets in order to harness the existing market forces to promote the programs.

The Agriculture and Food Processing Program provides integrated energy management solutions for a variety of industries in this market segment. The program seeks to be a “one-stop energy center” for customers who want to increase the energy efficiency of their facilities, explore self-generation opportunities, or enroll in demand response programs.

The program serves customers in PG&E’s service territory throughout northern and central California. Specific targeted segments include farm irrigation, greenhouses, dairies, wineries/vineyards, refrigerated warehouses, and food processors (dried, fresh, frozen, processed, meats, etc).

Energy efficiency services include:

- **Information to customers on web-based account analysis tools and resources:** Through the website in development and customer workshops, the Program educates customers on how to read their bill online, get a rate analysis, and analyze their energy usage patterns.
- **Information to customers on energy efficiency, demand response and self-generation opportunities unique to each market sector:** Through the website and customer workshops, the Program brings targeted information to customers through customer testimonials, case studies, fact sheets, and technical briefs.
- **Audits, integrated audits (include demand response and distributed generation), and system assessments:** All agriculture and food processing customers are eligible for an on-site audit from PG&E at no cost.
- **Subsidized pump tests for irrigation pumps and municipal pump:** Through a contract with the California State University Fresno Center for Irrigation Technology, the program offers subsidized pump tests to irrigation and municipal pumping customers.
- **Benchmarking tools and support for wineries, food processing, and refrigerated warehouses (tools developed by CEC PIER funds and EPA):** The program distributes existing benchmarking tools to customers and will be developing more integrated methods to deliver and track results for the program.

- **Calculation assistance for retrofit projects:** For customers who don't have the staff to do their own calculations for PG&E, the program offers engineers who help with retrofit project calculations and application submittal.
- **Design Assistance for new construction projects:** For new construction and expansion projects, the program offers engineers to customers to review design plans and evaluate alternative design strategies. Reports with calculations, ROI, payback and incentives are provided to the customers to support implementation of energy efficiency.
- **Rebates and Incentives for new construction and retrofit:** PG&E offers new construction incentives up to \$500,000 per project and up to \$3.6 million per project on retrofit.
- **Third Party programs:** Third party programs, contracted out via a competitive bid, support dairy retrofits (1), winery retrofits (1), solar and energy efficiency at wineries (1), industrial refrigeration retrofits (2), and boiler retrofits (1). These stand-alone programs test out different services and incentive packages in the market and complement PG&E's core portfolio.
- **Retro-commissioning (RCX) offered in 2007 on a pilot basis:** The Ag and Food Processing program will be piloting RCX services to a handful of customers in 2007, as an offshoot of a commercial RCX program.
- **Product development and emerging technologies research and demonstration:** With the support of its Product Development and Emerging Technologies Programs, PG&E is continuing to explore, develop, and bring to market new tools, resources and technologies that fit with the Agriculture and Food Processing program.
- **Extensive education and outreach:** Through industry-specific workshops and training, the program provides targeted education and outreach on energy management strategies and energy efficient technologies.

PG&E is also in the beginning stages of developing specialized energy efficiency guides for this customer segment, as well as a pilot to support large customers by providing in-depth energy management planning in order to target available programs and resources for their needs. This will be targeted at the largest food processing customers who show leadership in other areas but need support with energy planning.

PROGRAM PERFORMANCE

The Agriculture and Food Processing Energy Efficiency Program exceeded its 2006 energy goals by a significant margin, as shown in the table below.

2006 Agriculture and Food Processing Performance – Tracking Data

	2006 Goal	2006 Achieved	% of Goal
Kilowatts	350	3,521.01	1100%
Kilowatt-Hours	4,330,000	11,941,832	366%
Therms	660,000	1,340,098	216%

In 2007, the Agriculture and Food Processing program exceeded its annual kW, kWh, and therm goals by the end of July 2007. The program is on target to exceed its 2008 goals, significantly exceeding the accomplishments of both 2006 and 2007, as well.

	2007 Goal	2007 YTD (as of 12/19/07)	% of Goal
Kilowatts	4,575	9,596	210%
Kilowatt-Hours	22,400,000	51,338,431	229%
Therms	1,480,000	1,730,659	117%

In addition, these energy savings projects can offer numerous non-energy benefits, such as greenhouse gas reductions, improved automation and controls, reduced water usage, and the facilitation of participation in programs such as the demand response programs through technologies implemented.

LESSONS LEARNED

This targeted program approach has allowed PG&E to significantly increase its market penetration to specific customer groups. For example, in 2005, before the targeted markets approach was initiated, PG&E paid a total of 11 winery projects through the calculated retrofit and new construction programs. In 2007, the number jumped 273% to 30 despite starting the year at zero with an empty pipeline. In addition, PG&E paid 228 applications to wineries in 2006 and 2007 for rebate measures such as wine tank insulation and lighting and refrigeration retrofits, a large increase from prior years.

Similar increases in projects delivered, services provided, and energy claimed occurred in all other sub-market sectors.

PROGRAM AT A GLANCE

Program Name: Agriculture and Food Processing Energy Efficiency Program

Targeted Customer Segment: Farm irrigation, greenhouses, dairies, wineries/vineyards, refrigerated warehouses, and food processors

Program Start Date: 2006

Program Participants: Not available

Annual Energy Savings Achieved: 11.9 GWh in 2006 and 51.3 GWh in 2007 (as of 12/18/07)

Peak Demand (Summer) Savings Achieved: 3.5 MW in 2006 and 9.6 MW in 2007 (as of 12/18/07)

Other Measures of Program Results to Date: The program has greatly exceeded its goals in both 2006 and 2007. Cumulatively, peak demand savings were 266% of goals, electricity (kWh) savings were 237% of goals and natural gas savings (therms) were 143% of goals.

Budget: Approximately \$49,862,829 budget for 2006-2008 (as revised and increased in 2007), which includes funds for Third-Party programs contracted out via a competitive RFP. The specific budget amounts in each major category are as follows:

- \$20,723,118 for the core PG&E program portfolio serving Agriculture and Food Processing markets

- \$29,139,711 for the third-party contracts serving agriculture and food processing markets

Funding Sources: California ratepayers through public goods charge (PGC) funds

Best Person to Contact for Information about the Program

- Patsy Dugger, Senior Program Manager
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