

Commercial/Industrial Retrofit Programs

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*Commercial/Industrial Retrofit Programs
Exemplary Program*

***Energy FinAnswer and FinAnswer Express
Rocky Mountain Power
Pacific Power***

PROGRAM OVERVIEW

Energy FinAnswer is a comprehensive energy efficiency incentive program for commercial, industrial, and agricultural customers of any size in the Rocky Mountain Power's and Pacific Power's Washington and Utah service territories. New construction, expansion, major renovation and retrofit projects are eligible. The program offers high quality, vendor neutral technical services tailored to the project (at no cost to the customer) and cash incentives. Design assistance and design team incentives are available for new construction and major renovations. The program includes an energy commissioning requirement for more complex energy efficiency measures.

FinAnswer Express offers simple, prescriptive incentives for common lighting, HVAC, premium efficiency motor and other measures in retrofits and new construction or major renovation. It is a favorable option for customers who don't require energy engineering services to move forward with their projects.

The programs began in the 1990s and continue to evolve to changing market and company resource positions. They are a significant contributor to the company's growing investments in demand-side resources, representing two-thirds of the company's overall acquisitions.

Energy FinAnswer selects and pays for an independent energy engineer to provide the technical services. Design assistance and design team incentives are available for new construction and major renovations. Cash incentives are \$0.12/kWh annual savings plus \$50/KW average monthly demand savings. Incentives for retrofit projects and some new construction projects are capped at 50% of project cost and one year payback. (If the incentive would bring the payback to less than one year, the incentive is reduced so the payback equals one year.) The customer receives energy engineering services and signs an incentive agreement prior to signing purchase orders for new equipment.

The program includes an energy commissioning requirement for more complex energy efficiency measures. Customers pay for commissioning as part of project implementation.

Rocky Mountain Power and Pacific Power manage the programs, as well as the customer projects. The companies contract with energy engineering consulting firms for site specific work products such as scoping, energy analysis, and post-installation inspections. A contractor, Nexant, Inc., manages lighting, HVAC, motors and other trade ally networks and the FinAnswer Express projects from these trade allies. Nexant, Inc. also processes non-lighting FinAnswer

Express incentive applications and provides program design and market characterization services to support program filings.

Energy FinAnswer and FinAnswer Express complement each other in the market, providing a broad platform of services and incentives for a wide variety of energy efficiency projects from comprehensive to those involving a single measure and even a single piece of equipment. Between the two programs, there are options for new construction and major renovation projects that can be tailored to meet the needs of projects of any size and scope. Incentives and technical services are the most generous for projects where the whole building exceeds code by at least 10 percent. Prescriptive incentives are available for projects where budgets and schedules don't allow for integrated design solutions.

Design team incentives are available regardless of the project size:

- Design professional honorariums of \$1,000 per project are available for leads where program involvement begins before completion of schematic design (available in FinAnswer Express and Energy FinAnswer).
- Design team incentives (amounts vary from \$4,000 to \$12,000 depending on building size) are available for Energy FinAnswer projects where the whole building electric design in construction documents it is at least 10% better than code.

The programs incorporate energy performance commissioning into project implementation and provide support to guide the commissioning effort. In this way the programs are helping to advance commissioning to a level where it becomes part of normal project implementation. The commissioning results (e.g. control system trend log data, etc.) are reviewed as part of the final inspection and the energy savings are adjusted if needed. The commissioning requirements provided to customers are customized for each project.

PROGRAM PERFORMANCE

The program results have grown rapidly in a short time; the 2006 program results are seven times greater than the results in 2001—the first program year. In 2006 the total energy savings of Energy FinAnswer and FinAnswer Express for Utah and Washington customers was about 100 GWh (gross savings)---about 60 GWh in Utah and 40 GWh in Washington.

Energy FinAnswer also has helped foster the development of the market for energy engineering and related technical services. The Energy FinAnswer program energy engineering work is accomplished primarily via private consulting firms. The company contracts with approximately thirty, primarily small energy consulting firms and assigns projects to them based on expertise required, location and availability. These firms provide initial scoping visits, detailed energy analysis, quality control review of energy analysis reports, development of project-specific commissioning guidelines, and pre- and post-installation inspections. Through the program design, the company is helping to grow and develop the energy engineering infrastructure in the region. Several of the firms under contract with this program now provide energy engineering services under contract directly with end users.

The program design also builds on the vendor/contractor/supplier infrastructure in the region and integrates with their sales process. The company has formal trade ally networks in Utah, Washington and Idaho with over 200 participants. Trade allies meeting the screening criteria are listed on the Rocky Mountain Power and Pacific Power web sites and are also provided with program and technical training, program marketing materials, and energy efficiency-focused sales support on their projects. They promote the Energy FinAnswer and FinAnswer Express programs as part of their sales process. Trade allies bring the program leads from their own sales calls or receive leads from the company's marketing efforts. Lighting trade allies receive Excel-based software that calculates energy savings and incentive amounts for presentation to the customer. Trade allies improve their knowledge and gain experience through work on specific projects and with the support provided by Nexant, the company's contract project manager. As a result, the program gains participation and results.

Energy FinAnswer and FinAnswer Express have achieved significant energy savings very cost-effectively. In 2006 Energy FinAnswer in Utah achieved net annual energy savings of 29.3 GWh at a benefit-to-cost ratio of 1.2 (total resource cost test) and in 2006 Energy FinAnswer Express achieved net annual savings of 24.0 GWh at a benefit-to-cost ratio of 2.1 (total resource cost test).

LESSONS LEARNED

Energy FinAnswer began in the early 1990s and continues to evolve to changing market and company resource positions. It is a significant contributor to the company's growing investments in demand-side resources. Program modifications have included such items as adding a \$50/kw capacity incentive to encourage a greater focus on peak end-use savings and incorporating a design professional honorarium to generate greater penetration into the new construction market. While the introduction of the program dates back to the early 1990s, the program has successfully kept up with the rapidly changing marketplace and customers needs.

FinAnswer Express began as the small retrofit incentive program offered only to small existing customers in Oregon. It has continuously evolved over time to be available to customers of all sizes and in multiple states (currently offered in Utah, Washington, and Idaho; pending approval decision in Wyoming; a similar program is offered by the Energy Trust of Oregon for the company's Oregon customers). It has expanded eligibility to include new construction and major renovation. It also has expanded in terms of the eligible measures list and available delivery mechanisms to increase participation.

The innovative nature of this program design combines the best of many program attributes:

- One flexible program package that “does it all”—retrofits and new construction, large and small projects, commercial and industrial and agricultural projects, ranging from sustainable building design to simple 10-fixture lighting retrofits to complex upgrades of such systems as ammonia refrigeration and compressed air. Projects that change in scope mid-stream convert easily without starting over in a new program format or with new program staff.

- A standard offer incentive structure combined with streamlined prescriptive incentives for simpler, common measures;
- Varying incentive levels depending on type of technology and project: lower incentive levels for prescriptive lighting/HVAC/premium efficiency motors, higher incentives for other end-use technologies as well as for new construction, major renovation; and for measures that also reduce on-peak demand;
- A cap to retrofit incentive amounts: retrofit incentives are limited so they don't reduce the project payback below one year.
- High quality, customer-friendly energy engineering performed by private industry and reviewed by peers in that industry; since the program provides the energy engineering, customers are relieved of the time—and often hassles—of contracting for these services.
- Support of key private market actors, including vendors, suppliers, distributors and contractors; the program links customers with these actors and helps private businesses integrate program services into their sales processes.
- Commissioning requirements; the program integrates commissioning into project implementation while customers are required to pay for and complete these services, which is helping to build the private market for commissioning in the region.
- Low administrative costs; most of program costs go directly to customers for service incentives (energy engineering) and incentive payments for installing energy efficiency measures.

PROGRAM AT A GLANCE

Program Name: Energy FinAnswer and FinAnswer Express

Targeted Customer Segment: Commercial, industrial and agricultural customers

Program Start Date: early 1990s

Program Participants: Not available

Annual Energy Savings Achieved: About 100 GWh gross electricity savings total in 2006 for both program in both Washington and Utah; net savings in Utah for 2006 (both programs) were 53.3 GWh.

Peak Demand (Summer) Savings Achieved: Not available

Budget: The 2007 budget for Utah and Washington Energy FinAnswer and FinAnswer Express programs is approximately \$12 million.

Funding Sources: Tariff rider for DSM programs

Best Person to Contact for Information about the Program

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*Commercial/Industrial Retrofit Programs
Honorable Mention*

***Whole Building Assessment/Benchmarking
National Grid***

PROGRAM OVERVIEW

National Grid's Whole Building Assessment/Benchmarking Program is designed to provide building owners and operators with a better understanding and control over the energy related costs of their commercial buildings. It helps them reduce operating costs, increase energy efficiency and promote environmentally-friendly operations. Unlike similar initiatives National Grid has elected to go with a hybrid model that not only identifies and assesses potential energy efficiency improvements, but also develops and provides detailed engineering installation plans for the recommendations and assists customers with achieving the projected energy savings. The engineering plans build on determining the cost and saving strategies associated with the assessment and identifies specific actions to be taken to optimize the energy performance of customers' facilities. Financial incentives are available to help defray some of the capital costs identified in the plan.

National Grid's Whole Building Assessment/Benchmarking Program targets commercial and municipal customers. Industrial customers who use a significant portion of their energy for process operations are not eligible as no standards exist for energy use in these operations. This program combines a standard benchmarking service with a building survey and recommendations for efficiency improvements. The program offers end users a holistic approach with numerous benefits, both in the short-and-long term including:

- Reducing energy costs through low-cost no-cost measures,
- Tracking resource consumption and costs promptly,
- Stimulating resource efficiency interest among staff,
- Educational promotions, and
- Identifying and implementing cost-effective and efficient capital projects.

National Grid utilized contractors, Project Expeditors and T/A Consultants, to recruit and qualify large commercial customers in Massachusetts, New Hampshire and Rhode Island for 2006. Customers are provided with action plans and reports with estimated costs, savings and where eligible, incentives for the programs. Customers who express interest in greater comprehensiveness of potential energy efficiency services are provided with additional technical services and incentives to help build solutions for higher performing buildings.

The goals of the program are that participating customers will:

- Better understand the energy performance of their buildings using Energy Profiler Online (EPO) and compare performance to peers with the U.S. Environmental Protection Agency's (EPA) ENERGY STAR® Performance Rating System;

- Receive a comprehensive, free walk through by National Grid's Project Expeditor (PEX) and a Technical Assistance (T/A) consultant auditing energy efficiency opportunities for all fuels;
- Receive a menu of operational and capital projects and low cost/no cost options that can improve the energy and financial performance of the facility;
- Understand how to optimize National Grid's incentives and services to implement improvements; and
- Learn how to use the ENERGY STAR®'s Portfolio Manager & National Grid's Energy Profiler Online tools to track and measure energy consumption and costs going forward.

There are three main areas of concern that inspired the creation of National Grid's Whole Building Assessment/Benchmarking Program for Commercial and Municipal customers.

- Fuel costs have approached the highest amounts ever—rising beyond what New England business owners have seen in the past;
- Approximately 40% of National Grid's commercial customers have not taken advantage of available energy efficiency programs; and
- Concerns about climate change.

The Whole Building Assessment/Benchmarking Program was formed, in part, to assist National Grid commercial & municipal customers in combating the challenges mentioned above. National Grid wanted a holistic approach for exploring ways to reduce costs and improve its' customers' operations. Through this new program initiative National Grid offers an expanded menu of cost effective and environmentally responsible energy services that adds to its existing portfolio of commercial efficiency programs.

National Grid is partnered with EPA's ENERGY STAR® program to provide additional resources to help its customers find smart ways to manage the energy needed to run their businesses. National Grid uses EPA's Guidelines for Energy Management as the basis for its program. National Grid also uses the energy performance rating system as one of the benchmarking tools in its program in addition to its own instrument for identifying customers' hourly energy use through Energy Profiler On-Line. National Grid recognized that customers are likely to be highly motivated by both comparisons to peers and clear understanding on how energy is being used on a daily and hourly basis in their facilities.

PROGRAM PERFORMANCE

National Grid is working with 64 customers out of which 34 are implementing projects. These projects are estimated to save 2,461 MWh and 15,781 MMBtu annually.

LESSONS LEARNED

At the onset of the program National Grid faced a challenge with screening customers appropriately. To address this problem National Grid created a detailed screening questionnaire,

which is given to customers at their first meetings. This has helped ensure that correct building types – those that conformed to the space types available through ENERGY STAR’s Portfolio Manager – are targeted for the program.

National Grid has found other factors that contribute to the program’s success, including:

- Marketing the program to address the whole building (all fuels) with a solid team approach,
- Including customers as part of the project team,
- Providing regular follow-up with customers to acquire other fuel bills, and
- Presenting as clear a picture as possible to identify how energy is being used in customers’ facilities.

PROGRAM AT A GLANCE

Program Name: Whole Building Assessment/Benchmarking Program

Peak Demand (Summer) Savings Achieved: Not available.

Targeted Customer Segment: : Commercial and municipal customers >200 kW average

Budget: \$75,000 annual budget

Program Start Date: The program start date was March 2005. We merged the two benchmarking programs in January 2006.

Funding Sources: Massachusetts state systems benefit charges

Program Participants: 64 customers are participating; of these 34 are implementing projects to date.

Best Person to Contact for Information about the Program

- Anita Hagspiel
- Phone: 508-521-7221
- Email: ANITA.HAGSPIEL@us.ngrid.com

Annual Energy Savings Achieved: 2,461 MWH and 15,781 MMBtu for projects to be completed

*Commercial/Industrial Retrofit Programs
Exemplary Program*

***Energy Opportunities Program
The Connecticut Light and Power Company
The United Illuminating Company
Connecticut Energy Efficiency Fund***

Note: Energy Opportunities is a program offered by each of the two largest investor owned distribution utilities in Connecticut: The Connecticut Light and Power Company (CL&P) and The United Illuminating Company (UI) with funding from the Connecticut Energy Efficiency Fund (CEEF). This profile is of the collaborative Energy Opportunities Program. Individual company program data are presented in the “Program at a Glance” section.

PROGRAM OVERVIEW

The Energy Opportunities Program (EO) takes a collaborative team approach by the Companies to promote the design and installation of cost-effective, energy-efficient measures at the time of retrofit design. The program’s objective is to eliminate energy inefficiencies in a customer’s existing commercial facility by capturing retrofit opportunities. These opportunities are realized by: (1) exchanging functioning yet inefficient equipment with higher efficiency equipment, (2) retrofitting existing equipment with energy-saving devices, modifications or controls, and (3) improving a facility’s building shell or facility’s performance.

The program’s retrofit services include, but are not limited to co-funded studies determining cost-effectiveness of potential measures, studies to qualify emerging technologies, and cash incentives to help cover implementation costs. EO incentives available to customers are the lesser of the following estimates:

- 50% of the installed costs,
- Utility measure cap, or
- A prescriptive amount.

In 2007 the Companies added a component to EO to promote comprehensiveness of energy savings measures in projects. Qualification is currently done on a project level instead of by each individual measure. A bonus incentive is available to customers who install multiple measures at the same time in order to give the overall project a net payback that is more likely to fit the customer’s investment criteria. In many cases measures that may not be cost-effective (or may be marginally cost-effective) when considered individually become cost-effective (or more cost-effective) when combined with other measures that have higher energy savings and relatively lower costs. This new component allows the program to implement measures that are typically not done because of relatively longer simple-paybacks if analyzed and implemented separately.

Another component added by the Companies in 2007 is the Accelerated Chiller Retirement Initiative, which is designed to offer additional incentives to customers who replace water-cooled

chillers that are 25 years old or older. This component was added to address summer demand on the system during the hottest days. More efficient chillers yield both energy (kWh) and demand (kW) savings for customers.

There are some minor differences in services available to customers by each collaborating company. For example, CL&P offers financing for efficiency projects. CL&P customers participating in EO may also receive assistance for financing recommended improvements via their Small Industrial & Commercial Loan Program. This related program is designed to finance the balance of energy efficiency improvement projects with no-interest loans.

PROGRAM PERFORMANCE

Statewide the Energy Opportunities served over 700 facilities (500 in CL&P's service territory and 200 in UI 's service territory) in 2007. These efforts yield savings of approximately 10.8 MW and 49.5 GWh (annual savings). Lifetime savings from these projects should yield about 677.2 GWh---or approximately \$102 million in net customer benefits.

Historically about 90% of the total energy savings and incentive amounts paid have been for lighting measures. Recent changes to the program to encourage more implementation of more comprehensive packages of measures and retirement of old, inefficient chillers are expected to increase the relative proportion of non-lighting measures taken as a result of the program.

LESSONS LEARNED

Energy Opportunities is a merger of several programs that each addressed aspects of the commercial retrofit market. The merger of these programs under EO has systematically simplified program delivery, maximized cost-effectiveness, and minimized customer confusion regard the prior menu of retrofit programs. The program offers one-stop conservation services for commercial/industrial customers renovating or retrofitting their existing facilities. The decision to streamline the program benefits customers by giving them a single program to serve all their retrofit needs and opportunities. Merging all prior programs into a single comprehensive program has yielded a number of benefits, including:

- Elimination of redundancies in program staff and tracking methods/systems, and
- Streamlined program marketing efforts and reduced overall management resources required for program oversight.

The overall reductions achieved in duplicative capital and labor costs have allowed EO to deliver more energy-efficient retrofit services to commercial/industrial customers.

EO is the most successful program offered by the Companies because it allows its customers the flexibility to propose any idea that results in energy savings. Working within the EO framework allows the Companies to offer their customers incentives to implement the project by offsetting the cost of installation.

PROGRAM AT A GLANCE

Program Name: Energy Opportunities Program

Funding Source: Connecticut Energy Efficiency Fund (3 mils / distributed kWh)

Connecticut Light & Power

Targeted Customer Segment: Commercial, industrial and municipal customers with an average peak demand greater than 200 kW; smaller customers may also qualify who have unique needs and who otherwise do not qualify for CL&P's Small Business Energy Advantage Program.

Program Start Date: Energy Opportunities was created in 2006 based on merging of earlier programs.

Program Participants: About 500 facilities received services in 2007.

Annual Energy Savings Achieved: 49.5 GWh in 2007

Peak Demand (Summer) Savings Achieved: 7.7 MW in 2007

Other Measures of Program Results to Date: Measures installed in 2007 will yield 677 GWh lifetime savings—about \$81 million total customer savings.

Budget: \$10 million

Best Person to Contact for Information about the Program

- Jim Motta, Supervisor, Conservation & Load Management, CL&P
- Phone: 860-665-3098

- Email: mottaj@nu.com

The United Illuminating Company

Targeted Customer Segment: Commercial, industrial and municipal customers with an average peak demand greater than 150 kW; smaller customers may also qualify who have unique needs and who otherwise do not qualify for UI's Small Business Energy Advantage Program.

Program Start Date: Energy Opportunities was re-designed in 2000 and in modified in 2006 based on the collaborative partnership with CL&P.

Program Participants: Approximately 600 facilities received services with approximately 200 (30%) implemented projects in 2007.

Annual Energy Savings Achieved: 16.3 MWh in 2007

Peak Demand (Summer) Savings Achieved: 3.1 MW in 2007

Other Measures of Program Results to Date: Measures installed in 2007 will yield 233 MWh lifetime savings—about \$21.3 million customer savings.

Budget: \$2.2 million

Best Person to Contact for Information about the Program

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*Commercial/Industrial Retrofit Programs
Exemplary Program*

***Flexible Technical Assistance Program
New York State Energy Research and Development Authority***

PROGRAM OVERVIEW

Flexible Technical Assistance (FlexTech) provides technical assistance to help New York State facility owners and operators to make informed energy decisions. This service is provided by consulting engineers under contract to the New York State Energy Research and Development Authority (NYSERDA). Each project receives a customized scope of work specially designed to meet the individual customer's needs. Customers wishing to work more closely with their own selected contractor may also receive cost sharing for consulting services. Projects range widely in size and scope--from general energy audits to very specific feasibility studies to campus wide investigations.

The primary focus of the FlexTech program is to increase productivity and economic competitiveness by identifying and encouraging the implementation of cost-effective energy efficiency measures. The FlexTech Program provides customers with objective, customized information to facilitate better energy decisions through cost-shared studies. The FlexTech Program also provides assistance with the following energy related issues: rate analysis and aggregation, long term energy management, energy efficient retro-commissioning, peak load reduction, load management and implementation assistance. FlexTech services are available to the full range of non-residential customers, including commercial, industrial, schools, health care and government customers.

PROGRAM PERFORMANCE

To date FlexTech's technical assistance has led to \$200 million dollars worth of energy efficiency improvements installed by customers that annually save 1.8 million MMBtu of fossil fuels, 290 GWh of electricity, and reduce peak demand by 54 MW. FlexTech's approach as proven to be very cost-effective—achieving a high return on investment for program dollars. Evaluations show that every dollar spent by FlexTech leverages a \$17 investment by customers on energy efficiency improvements. Further, every dollar spent by FlexTech results in \$5 energy savings by customers.

FlexTech provides a high degree of individualized customer service---tailoring the analyses and recommendations specifically to customer circumstances and needs. As a result, FlexTech has achieved a high rate of customer implementation: 60% of customers participating in FlexTech have implemented recommendations from the technical analyses. Customers also report high satisfaction with the program: 83% stated that FlexTech consultants exceeded their expectations and 88% stated that the NYSERDA FlexTech staff and service exceeded their expectations.

LESSONS LEARNED

NYSERDA's technical assistance programs cost share energy studies of: energy efficiency improvements, process and productivity improvements, waste minimization opportunities, energy operational procedures, energy planning, existing system commissioning; performance contracting and project-financing proposals, strategic energy plans, rate analysis, load shapes, and aggregation opportunities.

To improve on the technical assistance services provided by NYSERDA, recipients of these services are regularly surveyed. Five such evaluations have been completed to date; the first was completed in 1995 and the latest was completed in 2006. These assessments are used to determine whether recommendations made from technical assistance programs are implemented and customer satisfaction with NYSERDA and the third party consulting firms which conduct the studies. Key findings from these evaluations include:

- Studies provided from the FlexTech Program provide customers the tools to make informed energy decisions in today's competitive market place.
- FlexTech's innovative approach makes it an extremely customer-friendly program. There is no paperwork or forms for the customer to complete. Since the contracts are already in-place between NYSERDA and the FlexTech consultants, individual projects can be initiated within days. The NYSERDA RFP process can meet an organization's need to competitively procure services. During 2005 there were 116 projects initiated.
- FlexTech consultants are selected for three-year contracts, a period that helps promote consistency and continuity for program service providers. NYSERDA staff also are actively involved in projects. Collaboration between the consultants and NYSERDA staff improves the quality of services provided to participating customers. Such collaboration begins with reviewing scopes-of-work for projects and continues to reviewing final reports. Many of the consultants use their NYSERDA affiliation as part of their corporate advertising—another benefit to their involvement in the program.
- The strength of this program comes from the objectivity, credibility and diversity of assistance it can offer.
- This program is a good example of the flexible, customer-friendly government.

PROGRAM AT A GLANCE

Program Name: Flexible Technical Assistance Program

Targeted Customer Segment: Commercial, industrial, government, not-for-profit, K-12 school, university and hospital facilities

Program Start Date: 1992

Program Participants: 116 projects initiated in 2005.

Annual Energy Savings Achieved: 290 GWh since program inception; 1.8 MMBtu fossil fuel savings

Peak Demand (Summer) Savings Achieved: 54 MW since program inception

Budget: \$10 million for 2004-07 (3-year budget).

Funding Sources: New York State System Benefit Charge (SBC); U.S. DOE State Energy Program Base Grant (SEP); SEP Competitive Grants; Other

miscellaneous federal and state grants and program funds.

Best Person to Contact for Information about the Program

- Mark Gundrum, Project Manager
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*Commercial/Industrial Retrofit Programs
Honorable Mention*

***Custom Efficiency
Xcel Energy***

PROGRAM OVERVIEW

The Custom Efficiency program is available to all of Xcel Energy's business customers in its Minnesota and Colorado service territories. The program offers rebates for projects that offer energy savings not covered by Xcel Energy's other rebate programs. The rebate is offered to offset the incremental cost of the higher efficiency option versus the standard.

Each application is reviewed for cost-effectiveness before a rebate is offered. Projects must have payback periods of 1-15 years. Projects must also pass the participant and societal cost-effectiveness tests. Non-energy benefits such as maintenance and process improvements are also considered in the analysis. Rebates are up to \$200 per kW saved or up to \$2 per MCF saved. In order to qualify for rebates, customers must receive preapproval prior to purchasing or installing equipment.

Large projects undergo pre- and post-measurement and verification (M&V) to access actual savings. The M&V results are valued by customers as they assess and document actual project results.

The Custom Efficiency program addresses the diverse needs of Xcel Energy's customers not met by other programs. Since energy applications, processes and building system complexity can vary greatly by customer type, this program encourages customers to develop and implement innovative, cost-effective energy-efficient measures unique to their operations and circumstances.

This program was first launched in Minnesota in 1994. At that time it was called Business Energy Grants. The program was launched in Colorado in 2006 as part of Xcel Energy's expanded DSM offering in that state. Custom Efficiency was developed because there were a significant number of technologies that offered energy savings not covered by Xcel Energy's standard programs (such as those targeting specific technologies, including boilers, lighting, cooling, motors, and compressed air). This program also serves as the starting point for new technologies until flat (or prescriptive) rebate programs can be developed. The types of technologies that have received rebates have grown over time.

Custom Efficiency in each state (Minnesota and Colorado) is managed by a full time product manager. In-house technical resources supplemented with outsourced consulting engineers evaluate the Custom Efficiency projects. The programs are similar across states. However, the cost benefit analysis varies slightly to account for each state's unique rate structure and climate differences.

PROGRAM PERFORMANCE

In Minnesota the 2007 program target is 41 GWh savings for electricity savings measures and 310,000 MCF for natural gas savings measures. In Colorado the program target is 9 GWh electricity savings only. Conservation rebates for natural gas savings are not yet offered in Xcel Energy's Colorado service territory.

Monitoring is conducted on large, complex and repeatable projects to validate the savings. The monitoring and verification (M&V) plan is project and customer specific.

LESSONS LEARNED

Some key lessons learned by Xcel Energy include:

- Technical analysis helps the customer build a business case to move forward on projects.
- Templates for repeatable technologies have been developed to ensure consistency and reduce turnaround time.
- Trade prefers turnaround times of less than 48 hours.

PROGRAM AT A GLANCE

Program Name: Custom Efficiency

Targeted Customer Segment: All business customers

Program Start Date: 1994 in Minnesota; 2006 in Colorado.

Program Participants:

Minnesota Program – 2006

- Electric participants: 110
- Gas participants: 40

Colorado Program – 2006

- Electric participants: 9

Annual Energy Savings Achieved:

Minnesota Program – 2006

- 40 GWh and 109,000 MCF

Colorado Program – 2006

- 2.0 GWh

Peak Demand (Summer) Savings Achieved:

Minnesota - 2006

- 2.8 MW generator saved

Colorado – 2006

- 0.4 MW generator saved

Budget:

Minnesota

- Electric: \$3.9 million
- Natural gas: \$0.8 million

Colorado

- CO electric: \$0.9 million.

Funding Sources: DSM program costs are recovered through rate base

Best Persons to Contact for Information about the Program

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- Email: kim.Lidbeck@xcelenergy.com
- Andre Gouin, Xcel Energy, Colorado
- 303-294-2975
- Email: andre.gouin@xcelenergy.com

*Commercial/Industrial Retrofit Programs
Honorable Mention*

***Whole Building Assessment/Benchmarking
National Grid***

PROGRAM OVERVIEW

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- Concerns about climate change.

The Whole Building Assessment/Benchmarking Program was formed, in part, to assist National Grid commercial & municipal customers in combating the challenges mentioned above. National Grid wanted a holistic approach for exploring ways to reduce costs and improve its' customers' operations. Through this new program initiative National Grid offers an expanded menu of cost effective and environmentally responsible energy services that adds to its existing portfolio of commercial efficiency programs.

National Grid is partnered with EPA's ENERGY STAR® program to provide additional resources to help its customers find smart ways to manage the energy needed to run their businesses. National Grid uses EPA's Guidelines for Energy Management as the basis for its program. National Grid also uses the energy performance rating system as one of the benchmarking tools in its program in addition to its own instrument for identifying customers' hourly energy use through Energy Profiler On-Line. National Grid recognized that customers are likely to be highly motivated by both comparisons to peers and clear understanding on how energy is being used on a daily and hourly basis in their facilities.

PROGRAM PERFORMANCE

National Grid is working with 64 customers out of which 34 are implementing projects. These projects are estimated to save 2,461 MWh and 15,781 MMBtu annually.

LESSONS LEARNED

At the onset of the program National Grid faced a challenge with screening customers appropriately. To address this problem National Grid created a detailed screening questionnaire,

which is given to customers at their first meetings. This has helped ensure that correct building types – those that conformed to the space types available through ENERGY STAR’s Portfolio Manager – are targeted for the program.

National Grid has found other factors that contribute to the program’s success, including:

- Marketing the program to address the whole building (all fuels) with a solid team approach,
- Including customers as part of the project team,
- Providing regular follow-up with customers to acquire other fuel bills, and
- Presenting as clear a picture as possible to identify how energy is being used in customers’ facilities.

PROGRAM AT A GLANCE

Program Name: Whole Building Assessment/Benchmarking Program

Targeted Customer Segment: Commercial and municipal customers >200 kW average

Program Start Date: The program start date was March 2005. We merged the two benchmarking programs in January 2006.

Program Participants: 64 customers are participating; of these 34 are implementing projects to date.

Annual Energy Savings Achieved: 2,461 MWH and 15,781 MMBtu for projects to be completed

Peak Demand (Summer) Savings Achieved: Not available.

Budget: \$75,000 annual budget

Funding Sources: Massachusetts state systems benefit charges

Best Person to Contact for Information about the Program

- Anita Hagspiel
- Phone: 508-521-7221
- Email: ANITA.HAGSPIEL@us.ngrid.com

*Commercial/Industrial Retrofit Programs
Honorable Mention*

***Workplace Retrofit Program
Vermont Gas Systems, Inc.***

PROGRAM OVERVIEW

The WorkPlace Retrofit Program is designed to reduce natural gas consumption and peak day demand by encouraging Vermont Gas System's (VGS) commercial and industrial customers to install cost-effective, natural gas-saving space, water and/or process heating measures.

VGS provides customers with a free walk-through audit of their facility to identify potentially cost-effective energy efficiency measures. Engineering assistance is provided by VGS to customers where potentially cost-effective measures are identified in the walk-through evaluation. When outside engineering assistance is required or requested by customers, VGS may assist with the cost of the engineering study. This is determined on a case-by-case basis.

VGS offers and pays financial incentives to customers who install cost-effective energy efficiency projects, typically in the form of rebates. Rebate amounts vary and are project specific—based on the customer's savings and payback for the investment, as well as figuring in the avoided cost savings to VGS ratepayers.

Energy efficiency projects for interruptible customers are treated no differently than projects for firm customers in the WorkPlace Retrofit program, with the exception that no peak day savings are projected for interruptible customers. VGS encourages both interruptible and firm customers to participate in its WorkPlace Retrofit program.

PROGRAM PERFORMANCE

The Workplace Retrofit program had an annualized Mcf savings of 20,589 Mcf in 2006; the budget for the program in 2006 was \$255,234. A total of 12 projects were completed by a small group of VGS's commercial and industrial customers. Another 35 energy audits were completed by customers during the period as well. Since program inception, 163,514 Mcf has been saved through 155 project completions for a total expenditure of \$2,143,312. Many projects continue to make best use of high efficiency heating and hot water systems, as well as process and heating steam management through orifice style steam traps.

LESSONS LEARNED

VGS Key Account Representatives play an important role in the program by encouraging larger commercial and industrial customers, as well as schools and municipal customers, to take advantage of VGS's efficiency programs, such as WorkPlace Retrofit.

VGS actively promotes its programs through numerous channels, such as the Vermont Business and Industry Expo, the Better Buildings by Design Conference, and the Association of Facilities Engineers Expo. VGS also meets with various mechanical contractors, consulting engineers and architectural firms to introduce the WorkPlace programs and invite these firms to refer projects to VGS for screening. Contractors frequently refer customers to VGS for participation in its programs. Manufacturers' representatives who handle high efficiency equipment provide information on WorkPlace Retrofit to potential customers.

Coordination with related programs also has been important to the program. VGS coordinates potential client contacts with Burlington Electric and Efficiency Vermont to ensure that customers are aware of savings opportunities for all regulated fuels and that incentives are allocated in an efficient manner. Through such coordination of programs and benefits, customers receive optimal results for reducing energy costs for both electricity and natural gas.

PROGRAM AT A GLANCE

Program Name: Workplace Retrofit Program

Targeted Customer Segment: All existing firm commercial and industrial customers that use natural gas for space, water and/or process heating.

Program Start Date: 1993

Program Participants: Since inception there have been 155 completions and 531 audits.

Annual Energy Savings Achieved: 20,589 Mcf for calendar year 2006.

Peak Demand (winter demand day) Savings Achieved: 33.4 Mcf 2006; 589 Mcf since program inception.

Other Measures of Program Results to Date:

VGS benefit-to-cost ratio for the program is 13.29

Budget: \$255,234 for calendar year 2006

Funding Sources: VGS ratepayers

Best Person to Contact for Information about the Program

- Raymond Keller or Scott Harrington
- Phone: 802-863-4511 ext 389 or ext 372
- Email: rkeller@vermontgas.com or sharrington@vermontgas.com