

2000-2010 Report

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# One-Stop Efficiency Shop<sup>SM</sup>

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Center for Energy  
and Environment

*“The One-Stop Efficiency Shop is designed to save energy through the installation of energy efficient lighting retrofits.”*

## Table of Contents

Overview .....	1
Program History .....	2
Who We Serve .....	2-4
Contractor Participation .....	5
Implementation .....	5
Lighting Technology .....	6
Inspections & Surveys .....	7
Program Evaluation .....	8
Conclusion .....	8

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# One-Stop Efficiency Shop<sup>SM</sup>

## Overview

The *One-Stop Efficiency Shop*<sup>SM</sup> is a full-service rebate program available to small businesses in Xcel Energy's Minnesota service territory with an electric demand of 400 kW or less. The program is designed to save business owners energy and money through the installation of energy efficient lighting by specifically targeting barriers that prevent small businesses from investing in energy efficiency products: limited financial resources and time, limited knowledge of lighting products and lack of access to quality contractors. To address these issues the program offers:

- Substantial incentives combined with convenient and attractive financing
- Intensive marketing to bring the service to the customer, rather than relying on the customer to seek it out
- Objective recommendations backed by the credibility of Xcel Energy service
- A simple, one-stop service that holds customer time requirements to a minimum
- A computerized audit/data communication and reporting system that generates all site-specific paperwork
- Evaluation of customers' eligibility for Xcel Energy's Saver's Switch<sup>TM</sup> for Business project and survey of customers' motors, heating/air conditioning equipment and compressed air systems to determine if they are eligible for other Xcel Energy programs



Since 2000 the program has saved 62,100 kW and has disbursed \$25 million in rebates to 5,632 program participants. Participating business owners will save \$250 million over the life of the new lighting equipment they have installed.<sup>1</sup>

In addition to the benefits realized by participants, the program has also had significant impacts on electric rates in Minnesota. Conservation Improvement Programs (CIP), like the *One-Stop Efficiency Shop*, are directly responsible for reducing electric rates for all ratepayers. Through its CIP programs Xcel Energy has eliminated 2,290 MW of demand. This has allowed Xcel Energy to avoid building nine 250 MW gas fired power plants, providing a net savings of \$3.5 billion to Xcel Energy ratepayers. The *One-Stop Efficiency Shop* accounts for 62 MW of this reduction or \$115 million in avoided costs for ratepayers.

The *One-Stop Efficiency Shop* has also preserved and created high quality jobs for local vendors and Minnesota small business owners. Over the course of the program, the *One-Stop Efficiency Shop* has partnered with approximately 350 lighting suppliers and electrical contractors. An estimated \$62 million has been funneled back into the Minnesota economy through vendors who have worked with the program. In addition to direct jobs that are created from installing new lighting systems, there are jobs benefits for the businesses that receive services through the

*One-Stop Efficiency Shop*. By upgrading efficient lighting, participating businesses save money on utility bills which can be reinvested into the business and its employees.

The significant savings the *One-Stop Efficiency Shop* has generated for businesses and ratepayers confirms that the program's full-service design for implementing energy savings in the small business sector has been a successful approach. A performance evaluation of the program in 2010 further validated this design. An independent firm was hired to conduct the evaluation and found that the *One-Stop Efficiency Shop*'s combination of full-service and premium rebates is critical to high participation of small businesses; a sector which would likely not otherwise engage in lighting retrofits. The evaluators also found that compared to peer programs the *One-Stop Efficiency Shop* is one of the lowest cost, full-service lighting retrofit programs in North America.

CEE believes that it has found the right combination of incentives, technology and marketing to deliver an effective lighting retrofit program to the small business sector. This report provides a detailed evaluation of the *One-Stop Efficiency Shop* program from 2000-2010 and includes sections pertaining to program history, who we serve, contractor participation, implementation, inspections, customer satisfaction surveys and evaluation results.

## Program History

On February 7th, 2000 the Minnesota Department of Commerce approved the implementation of the *One-Stop Efficiency Shop* lighting program as part of Xcel Energy's 2000-2001 CIP. During the first few months of the program, CEE learned that although fundamental to the success of the program, attractive rebates and low interest financing were only one part of the equation. At \$437 per kW saved, up to 60% of the installation cost, the *One-Stop Efficiency Shop* offered one of the highest rebates available to Xcel Energy small commercial customers, but this alone was not enough to convince business owners to participate. Many business owners are not knowledgeable about lighting and are not easily convinced that efficient technology will provide adequate lighting. Others may have tried retrofitting previously when the technology was not as reliable, had a bad experience and are hesitant to try it again.

At the beginning of the program these concerns were not adequately taken into account and too much emphasis was placed on completing audits with a lesser priority placed on follow-up and implementation. CEE realized that this approach was not productive and that the proposed energy savings were not being achieved. CEE reorganized the program in January 2001 and placed more emphasis on promoting implementation to the customer instead of making completion of the audit the primary focus.

The results of this refocused effort were almost immediate. During the first half of 2001, the sales rate increased 50% and the average kW saved per week almost doubled. CEE requested and the Department of Commerce approved a one-year extension of the *One-Stop Efficiency Shop* for 2002. The savings goal was set at 1,600 kW and two additional, full-time auditors were hired. Over the course of the year, the program generated savings that exceeded goals by 51%. In each of the following years, the *One-Stop Efficiency Shop* has continued to exceed program goals. In 2010, CEE saved 10,798 kW and 43,165,153 kWh.

**Table 1. One-Stop Efficiency Shop Goals (in kW saved)**

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
<b>Program Goal</b>	2100	2100	1600	1775	1625	5200	5200	5546	5546	5546	9000
<b>Actual Savings</b>	55	1272	2419	2998	3718	5972	6438	7805	8786	11,839	10,798

Although accurate audits and incentives are fundamental to the success of the program, educating the customer and marketing the program to address their specific needs is just as, if not more, important. Auditors do not assume that rebates and energy savings will be enough to convince customers to participate. Instead, they work closely with the customer to find out exactly what their lighting needs are and to explain how the *One-Stop Efficiency Shop* can meet these needs.

## Who We Serve

The purpose of the *One-Stop Efficiency Shop* is to serve the small business sector which has historically under utilized energy efficiency rebate programs. This sector includes the smallest businesses that have the fewest resources and greatest barriers to overcome in order to participate. Over the course of the program CEE has served a wide range of customers, including those with the smallest demands.

Since 2000, 16,285 audits have been scheduled for program auditors. Of these audits, 50% have been completed for customers with a rated demand of 50 kW or less. Of those less than 50 kW, 45% were customers with a demand of 20 kW or less. Figure 1 provides a profile of *One-Stop Efficiency Shop* customers from 2000-2010 with the average rated demand for each year.

Chart 1 shows the types of businesses that utilize the *One-Stop Efficiency Shop* and how much each class contributes to the overall kW and kWh savings for the program. Out of all classifications, service oriented businesses have contributed the most kW and kWh savings.<sup>2</sup> Overall, services, retail and manufacturing make up approximately 60% of the total for all classifications and savings, but as the chart indicates, the program continues to serve a full range of customers.

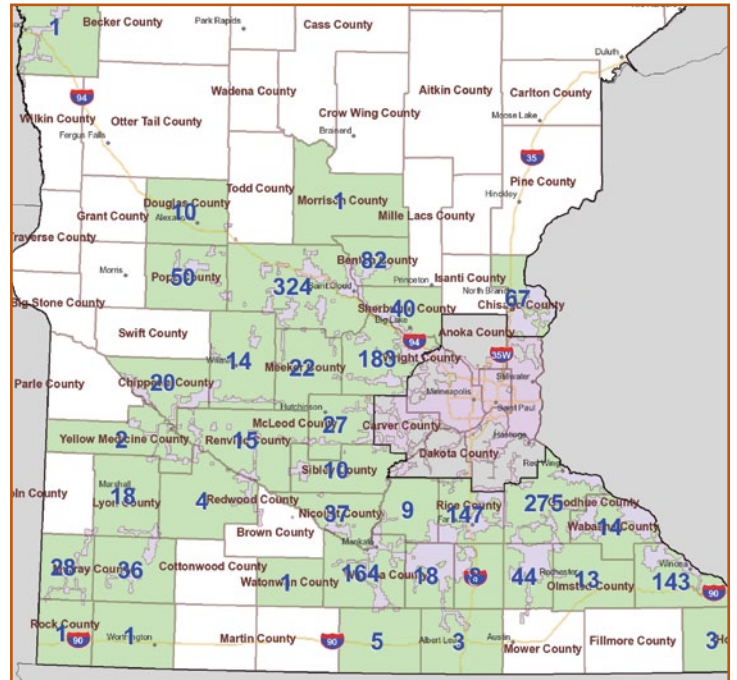
**Table 2. One-Stop Efficiency Shop Audits and Retrofits**

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
<b>Audits Completed</b>	215	844	1145	1236	1169	1578	1326	1724	2325	2348	2375
<b>Retrofits Completed</b>	12	135	250	282	332	402	525	617	817	1138	1122

Some of the most difficult to serve customers are located in Greater Minnesota and in economically strained corridors in Minneapolis and St. Paul. Program staff has made delivery of the program to these areas a priority. This not only includes scheduling audits and promoting implementation in individual businesses, but also working with local vendors to educate them about the program so they consider potential applications for energy efficiency when they are working with their customers.

Map 1 shows the work that CEE has done with the One-Stop Efficiency Shop in Greater Minnesota. Each number represents audits CEE has completed in a given county. Over the course of the program CEE has completed 1,840 audits and 1,025 businesses have participated for a total savings of 10,888 kW. In 2010, 239 businesses participated for a savings of 1,676 kW. Map 2 gives an overview of program activities in economically stressed corridors of Minneapolis and St. Paul.<sup>3</sup> To date CEE has conducted 648 audits and 296 businesses have participated for a savings of 3,576 kW. Participants in 2010 totaled 42 for 596 kW in savings.

Moving forward, CEE will continue to focus on these areas with the objective of generating a higher rate of implementation among businesses that complete audits through the program. CEE is currently in the process of developing additional marketing strategies for these businesses, including more innovative financing tools and more effective partnerships with local business associations and other entities working toward promoting energy efficiency.

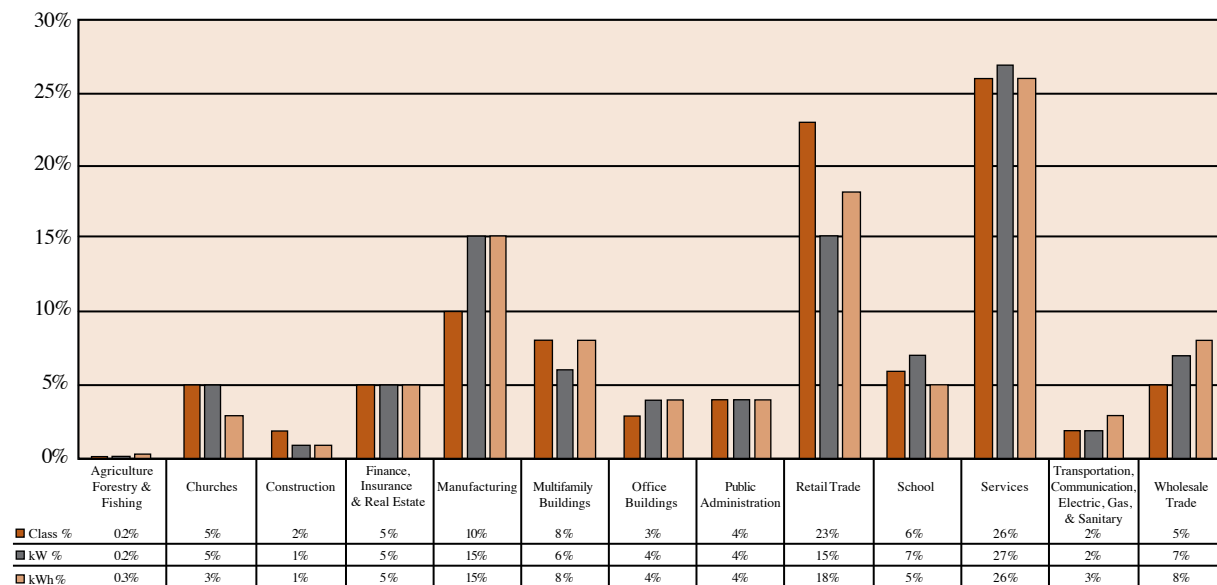


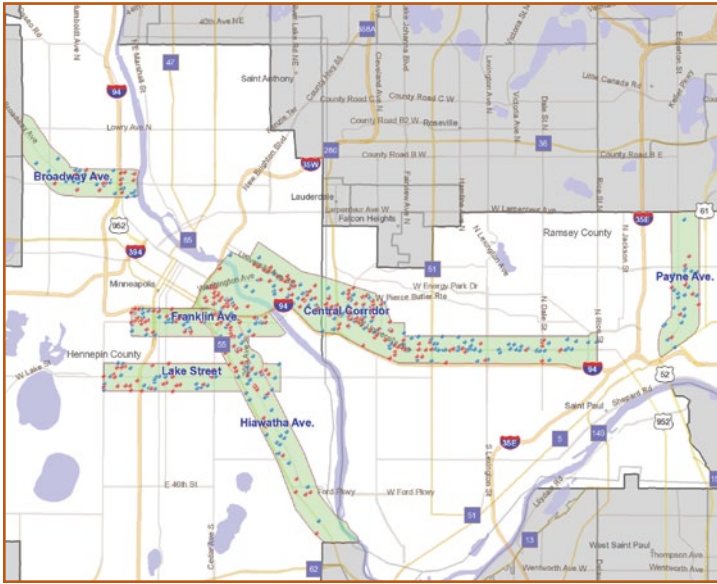
**Map 1. Participation in Greater Minnesota by County 2000-2010**

	Total Audits	kW Savings	kWh Savings	Installed Cost	Annual Savings	Rebate
<b>Audits</b>	1,840	16,949	58,741,798	\$17,280,574	\$4,179,868	\$6,875,624
<b>Installations</b>	1,025	10,888	37,849,155	\$10,597,609	\$2,649,176	\$4,342,575

1 Number of Audits Completed Xcel Energy Service Territory

**Chart 1. One-Stop Efficiency Shop Customer Classification**





*“One-Stop Efficiency Shop customers have received an average rebate of \$4,431 and are saving an average of \$2,873 per year.”*

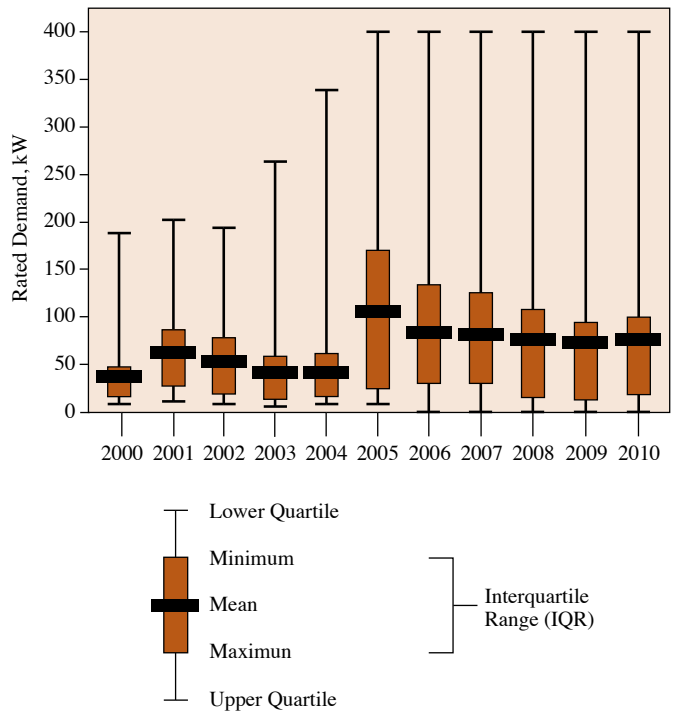
**Map 2. Participation in Priority Corridors 2000-2010**

	Total	kW Savings	kWh Savings	Installed Cost	Annual Savings	Rebate
● Audits	648	7,040	24,927,592	\$6,135,498	\$1,773,439	\$2,592,858
● Installations	296	3,576	12,684,474	\$3,177,226	\$874,578	\$1,261,197

Program audits are generated from several sources. Since the beginning of the program, CEE has employed a telemarketing firm, InTouch, to contact eligible customers and schedule audits. InTouch uses a database of qualified customers provided by Xcel Energy to generate audit leads. CEE has also provided InTouch with a calling script and has instructed callers on how to determine which customers are the best potential candidates for an audit. This screening process includes questions concerning hours of operation, whether the customer owns or leases and whether the business has had a lighting retrofit in the last 10 years.

Many program participants are also a result of referrals submitted by customers, Xcel Energy or contractors. Developing strong contractor relationships is critical to the implementation of the program and staff consistently makes an effort to promote the *One-Stop Efficiency Shop* to new contractors so they can pass the benefits on to their customers. Due to this, referrals have become a much more significant portion of program audits. As the *One-Stop Efficiency Shop* has become more widely known, more contractors have learned about the potential benefits of the program for their customers and referrals have become a significant portion of program audits.

**Figure 1. One-Stop Efficiency Shop Customer Profile**



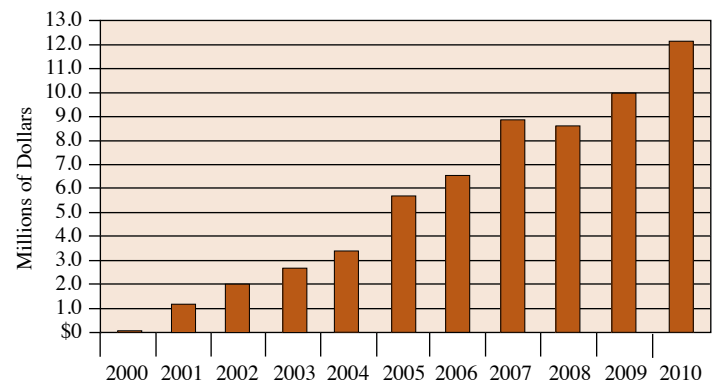
## Contractor Participation

When designing the *One-Stop Efficiency Shop*, CEE believed it was necessary to have a pool of qualified contractors available for program participants who did not have a contractor and who would not want to take the time to collect bids. CEE sent out a broadcast fax through the Minnesota Electrical Association to all electrical contractors in the metro area licensed by the state of Minnesota. Interested contractors were asked to attend a contractor orientation meeting.

Since 2001 a core group of contractors has completed retrofits for the program and is essential to creating a true "one-stop" program. Program contractors remain a critical resource for businesses that do not work with an electrical contractor on a regular basis. However, *One-Stop Efficiency Shop* staff also makes a concerted effort to market the program to and educate other vendors and suppliers whose customers can benefit from the services and rebates the program offers. These relationships require time to build, as well as consistent attention to maintain a level of trust and service so that vendors know they can rely on the program to serve their customers effectively and efficiently.

Since 2000, the *One-Stop Efficiency Shop* has worked with over 350 different vendors to provide audit services and rebates to their customers. This has resulted in almost \$62 million being funneled back into the Minnesota economy. This influx of money into the state's economy has not only generated jobs for vendors who work with the program but also for participating businesses due to savings realized from reduced energy use. CEE estimates that for the past eleven years the *One-Stop Efficiency Shop* has supported the equivalent of a company that employs seventy-six full-time people.<sup>4</sup>

**Chart 2. Total One-Stop Efficiency Shop Installations**



## Implementation

Through 2010, the *One-Stop Efficiency Shop* has submitted 5,632 jobs for rebates for a total savings of 62,100 kW and 235,069,535 kWh. *One-Stop Efficiency Shop* customers have received an average rebate of \$4,431 and are saving an average of \$2,873 per year.

**Table 3. One-Stop Efficiency Shop Totals**

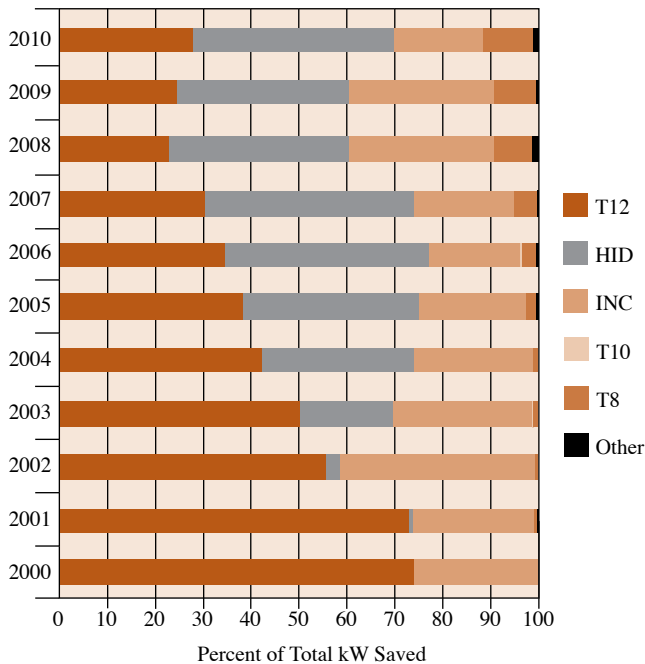
Program Totals	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Audits Completed	215	844	1,145	1,236	1,169	1,578	1,326	1,724	2,325	2,348	2,375
Jobs Installed	12	135	250	282	332	402	525	617	817	1,138	1,122
kW Saved	55	1,272	2,419	2,998	3,718	5,972	6,438	7,805	8,786	11,839	10,798
kWh Saved	198,591	4,578,549	8,662,670	10,153,114	12,716,334	22,178,170	24,907,227	31,046,958	33,199,376	44,263,393	43,165,153
Annual Savings	\$10,888	\$274,762	\$482,410	\$585,989	\$719,455	\$1,179,607	\$1,374,978	\$2,001,396	\$2,258,481	\$3,543,063	\$3,750,750
Total Rebate	\$22,390	\$475,982	\$834,308	\$1,079,837	\$1,495,273	\$2,425,807	\$2,619,375	\$3,209,717	\$3,297,881	\$4,471,000	\$5,021,370
Avg. per Customer	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
kW Saved	4.6	9.4	9.7	10.6	11.2	14.9	12.3	12.6	10.8	10.4	9.6
kWh Saved	16,549	33,915	34,651	36,004	38,302	55,170	47,442	50,319	40,636	38,896	38,472
Annual Savings	\$907	\$2,035	\$1,930	\$2,078	\$2,167	\$2,934	\$2,619	\$3,244	\$2,764	\$3,113	\$3,343
Rebate	\$1,866	\$3,526	\$3,337	\$3,829	\$4,504	\$6,034	\$4,989	\$5,202	\$4,037	\$3,929	\$4,475

# Lighting Technology

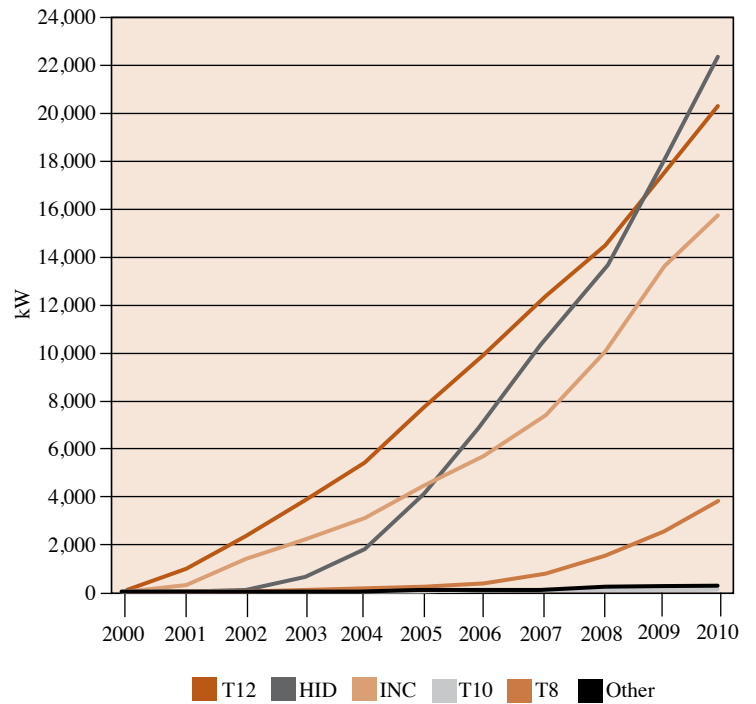
The equipment most frequently retrofitted in the One-Stop Efficiency Shop program includes: fluorescent T12's, fluorescent T8's (in circumstances where the lamp wattage is reduced), high intensity discharge lamps (HIDs) and incandescents. During the first three years of the program, the most common lighting systems targeted for replacement were T12 standard fluorescents and incandescents. However, in 2003 the replacement of HID technology, particularly metal halides, became much more prevalent due to improvements in 6-lamp and 8-lamp T8 fixtures. In 2010, replacement of HIDs with T8 technology represented 42% of program savings the largest overall contributor to program kW savings.

Chart 3 shows the total savings contribution of each type of change out through 2010. HID retrofits currently represent 36% of the total kW saved over the course of the program. T12 change outs represent 32% and incandescent retrofits represent 25% of the total.

**Chart 3. One-Stop Efficiency Shop Lighting Technologies**



**Chart 4. kW Saved by Technology**



*“ In 2010, HID retrofits were the largest over-all contributor to program kW savings.”*

## Inspections & Surveys

To ensure quality installations and customer satisfaction, CEE performs random inspections on a minimum of 10% of program participants. The inspections include verifying that all specified equipment is installed and installed properly, as well as surveying the customer on the performance of their auditor and contractor.

Since 2000, CEE has performed inspections on 14% of the installations.<sup>5</sup> Of those participants inspected, less than 1% experienced some minor equipment failure or had some equipment that did not match the original specifications. In all cases defective equipment was replaced or the specifications were modified to reflect what was installed.

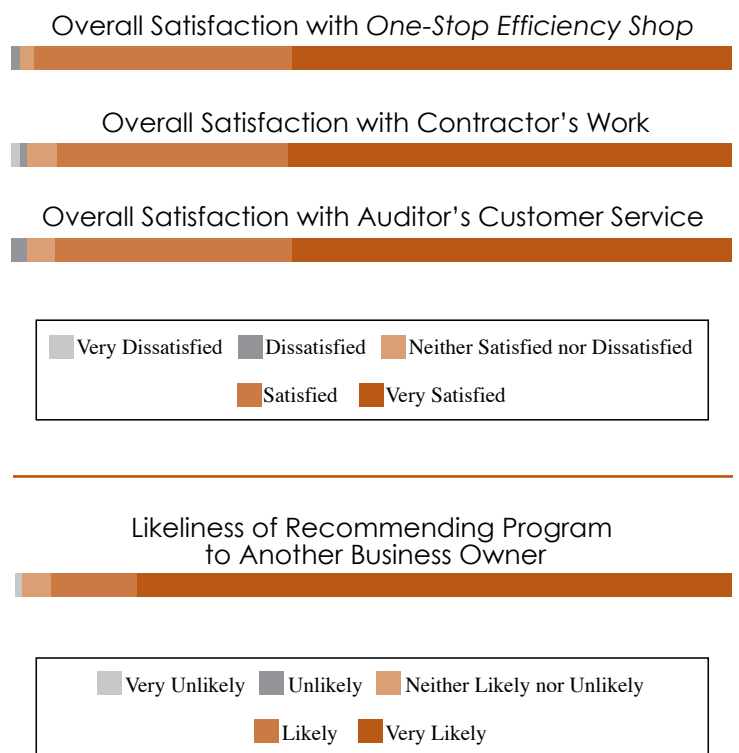
**Table 4. One-Stop Efficiency Shop Retrofits and Inspections**

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
<b>Retrofits Completed</b>	135	250	282	332	402	525	617	817	1138	1122
<b>Inspections Completed</b>	18	66	30	35	89	79	86	90	158	141
<b>Percentage</b>	13%	26%	11%	11%	22%	15%	14%	11%	14%	13%

CEE also sends a post-installation questionnaire to *One-Stop Efficiency Shop* participants who complete a retrofit. The questionnaire is normally sent out after the customer has had several months to experience the new lighting and can provide an informed response as to whether or not the *One-Stop Efficiency Shop* was beneficial. Overall, satisfaction with the program has remained consistently high. In 2010, 879 surveys were returned and 96% of respondents reported being “very satisfied” or “satisfied” with the *One-Stop Efficiency Shop*. Since the beginning of the program 3,637 surveys have been returned and of the participants who answered the question, 97% are either “very satisfied” or “satisfied” with the program. Chart 5 shows a summary of survey results from 2000-2010.



**Chart 5. One-Stop Efficiency Shop Post-Installation Questionnaire Results for 2000-2010**



## Program Evaluation

In 2010, the *One-Stop Efficiency Shop* was selected to undergo a program evaluation. An independent firm was hired to evaluate all aspects of the program including: data collection, participant timeline and process, invoicing, tracking, quality control, budget forecasting, cost-effectiveness compared to peer programs and the necessity of the full-service model for the small business sector. Overall, the evaluators found that the full-services of the *One-Stop Efficiency Shop* are essential to generating implementation of lighting retrofits in the small business market. Another key finding is that the *One-Stop Efficiency Shop* is one of the least expensive, full-service programs in North America.

Following is a summary of key findings and recommendations from the evaluation:

- The *One-Stop Efficiency Shop's* program cost for 2010-2012, as measured in \$/kWh, is lower than any of the seven peer full-service lighting retrofit programs to which it was compared.
- The full-services of the *One-Stop Efficiency Shop* are essential for addressing the market barriers faced by the small business market. Without services to overcome these barriers, many small businesses would likely not engage in lighting retrofits.
- The *One-Stop Efficiency Shop* should focus on the smallest customers that have little information on energy efficiency and more need for incentive packages. Consider a higher rebate formula that buys down the payback period to an attractive length.
- Although the *One-Stop Efficiency Shop* has been very successful in engaging many participants, there remains a large untapped consumer base. CEE should conduct a stronger market characterization and forecasting of potential customers in order to more accurately set program energy savings goals and budgets.
- The *One-Stop Efficiency Shop* should make the program more visible to participants during the process, as well as engage customers with information concerning warranties, disposal guidelines and their rights as consumers.
- The premium rebate was perceived as the most important program offering. Based on a small survey sample size ( $\pm 50\%$  margin of error), a 10% reduction in rebate would result in a 12% to 36% reduction in participation, which would have translated to a loss of 150 to 430 participants in 2009.

- The *One-Stop Efficiency Shop* has developed a good relationship with lighting contractors, with 90% of surveyed contractors responding that they were satisfied or very satisfied. The *One-Stop Efficiency Shop* needs contractors to actively use the program's services to convince customers to make efficient lighting retrofits.
- Customer satisfaction with the *One-Stop Efficiency Shop* is very high, with 93% of surveyed participants responding that expectations were met or exceeded. The majority of customers are satisfied with their lighting and very few replace the lighting due to dissatisfaction or failure.

The evaluation has found the *One-Stop Efficiency Shop* to be a well-designed, cost-effective program that has successfully helped businesses save energy and money. Satisfaction with program services is high and this type of full-service approach is necessary to convince small businesses to implement energy efficient measures in their buildings.

CEE agrees that the program can be further improved by increasing educational and marketing efforts for potential participants, particularly for the smallest businesses that are most reluctant to participate in efficiency programs. Although the *One-Stop Efficiency Shop* has historically served this sector, CEE believes that it is important to continually assess participation and how implementation rates might be increased. With that in mind, CEE is currently developing more targeted marketing efforts, offering new financing tools and leveraging local partnerships to address the needs of businesses facing the most barriers to participation.

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## Conclusion

CEE is happy to provide this evaluation of the *One-Stop Efficiency Shop*. We value the strong working relationship we have developed with Xcel Energy and believe the program provides excellent energy efficiency services to small business customers. If you have any questions or require additional information about the program, contact Kristen Funk at (612) 335-3487 or [kfunk@mncee.org](mailto:kfunk@mncee.org).

## Appendix A

The job creation numbers calculated by CEE are a conservative estimate. They do not include the jobs that are created from administering the *One-Stop Efficiency Shop*, primarily at CEE and Xcel Energy. They also do not include the indirect jobs that result from the manufacturing and sales of lighting equipment, which accounts for more than half of the total installed costs.

The number of contractor jobs is derived from the portion of the total installed cost that is attributable to labor. The number of jobs is calculated by dividing the total billed labor by the cost of employment in the relevant trades using the following assumptions:

- It is assumed that hourly rates cover the wages of one full-time technician, 1/8 of an administrative job, and 1/10 of a field supervisor job.
- Average wages in 2010 (including base and fringe) are \$57/hr for a field technician, \$74/hr for a field supervisor, and \$40/hr for an administrative staff. The escalation rates for wages between 2000 and 2010 were derived from the Bureau of Labor Statistics Employment Cost Index. These assumed wages are commensurate with prevailing wages in higher-paying Minnesota counties, as reported by the Minnesota Department of Labor. For comparison, CEE assumptions for billed labor rates (not wages) are \$76/hr in 2010.
- Total billable hours are assumed to be 90 percent of working hours, and a full-time employee works for 1,960 hours per year (3 weeks of holidays and time off).

In addition to the direct jobs that are created from installing new lighting systems, there are jobs benefits realized at the businesses that receive services from the *One-Stop Efficiency Shop*. Participating businesses save money on electricity bills and the savings that result from a lighting upgrade in one year are realized continuously every year that the more efficient technology operates (the average measure life is 15 years). Therefore as new customers are added each year, they add to the cumulative savings from previous projects that are still accruing in businesses.

The jobs benefits at participating businesses are calculated using a CEE database of the industry classes that have been served by the program. We calculated the cumulative electricity and dollar savings per industry per year, which amounts to approximately \$63 million over 11 years.<sup>6</sup> It is assumed that labor is 50 percent of a businesses' budget, so that 50 percent of the savings can be used to hire or retain personnel. This is a rough assumption, but reasonable given that *One-Stop Efficiency Shop* participants are small and a majority are in the service trades, which have a higher percentage of employee costs compared to heavy industry and manufacturing.<sup>7</sup> The Minnesota average wages per industry are determined from the Bureau of Labor Statistics Quarterly Census of Employment and Wages, and fringe costs are assumed to be 30 percent of the total cost of the employee (this is equivalent to multiplying wage rates by 1.4 to determine the total cost of the employee to a business).

<sup>1</sup> Equipment lifetime is estimated at 15 years.

<sup>2</sup> Service industries include: amusement and recreation, automotive dealers, gasoline service stations, automotive repair, business services, engineering, accounting, research, management, health services, investment offices, hotels, legal services, membership organizations, personal services, real estate and social services.

<sup>3</sup> Priority corridors were defined by the McKnight Foundation and include Broadway, Lake, Central, Franklin, Payne and Hiawatha.

<sup>4</sup> Based on a total of 831 Full Time Equivalent person years averaged over eleven program years. See Appendix A for assumptions used to calculate job creation.

<sup>5</sup> No inspections were completed in 2000 due to the small number of installations.

<sup>6</sup> This dollar figure is the sum over the years 2000-2010 of each year's total annual savings of all participant businesses to date. The total savings in each year is a combination of the same-year savings of businesses that participated that year, as well as the continued savings of businesses that participated in previous years.

<sup>7</sup> Further refinement could establish labor as a percent of budget for each industry served.



**Center for Energy  
and Environment**

**212 3rd Avenue North, Suite 560  
Minneapolis, MN 55401**

**Phone (612) 335-5858  
Fax (612) 335-5888**

**[www.mncee.org](http://www.mncee.org)**