

FACET Lighting Services Software Application

One-Stop Lighting Audit, Reporting, Rebate and Program Administration Tool

Sample Report:

Customer Report

Prepared by:

Richard Szydlowski
Center for Energy and Environment
212 3rd Avenue North, Suite 560
Minneapolis, MN 55401
www.mncee.org

Ph. 612.335-5862
Cell 612.747-6726



Lighting System Analysis

Cost Saving Recommendations

Customer Report

November 13, 2008

Property Address:

Metal Works Inc (Demo)

123 Main St
Minneapolis, MN 55000

Prepared for:

Joe Brown

Metal Works Inc (Demo)
123 Main St
Minneapolis, MN 55000
Ph: (612) 555-5555 Fax: (612) 555-4444
Cell: (612) 555-3333



Prepared by Lighting Specialist:

Gary Schoonover
Center for Energy and Environment
212 3rd Avenue North, Suite 560
Minneapolis, MN 55401

Cell: (612) 819-8978
Phone: (612) 819-8978
Fax: (612) 335-5888
E-mail: gschoonover@mncee.org

Program Coordinator:

- Audits
- Financing
- Contractors
- Rebates

Kristen Funk
Center for Energy and Environment
212 3rd Avenue North, Suite 560
Minneapolis, Minnesota 55401

Phone: 612-335-3487
Fax: 612-335-5888
E-mail: kfunk@mncee.org

One-Stop Efficiency Shop Summary of Recommended Lighting Upgrades

Lighting Upgrades	Estimated Costs	Estimated Annual Savings	Payback
Total Installed Cost <i>Before rebate</i>	\$11,951.92		
One-Stop Efficiency Shop Rebate	\$5,920.09		
Your Final Cost <i>After rebate</i>	\$6,031.83	\$2,149.71 ^(a)	2.8 years
⇒ Rebate equals 50% of installed cost. (Including special orders)			
<i>The project cost is based on current equipment prices and rebate levels. This offer is valid for a period of 45 days from the date presented.</i>			

Xcel Energy Financing Option

Estimated monthly savings	\$179.14 ^(a)	
Monthly loan payments at 3.9% for 36 month term	\$185.12 ^(b)	3.1 years
<small>(b) Estimate based on a loan amount of \$6,231.83, including a \$200 loan processing fee. The loan term has a maximum of 5 years, with monthly payments not less than the estimated monthly savings. Final terms and conditions set by bank upon loan approval.</small>		<small>(Including Xcel Loan Financing Charges)</small>

Utility Cost Analysis	Demand (kW)	Energy (kWh)	Annual Cost	CO2 (lbs) *
Existing Lights	24.357	67,052	\$4,267.81	113,988
New Lights	10.893	36,743	\$2,118.10	62,463
Estimated Savings	13.464	30,309	\$2,149.71^(a) ◀	51,525 *

* How do CO2 emissions affect me and my business? ¶ Rising concentrations of greenhouse gasses (GHG) produce an increase in the average surface temperature of the Earth over time. Rising temperatures produce changes in precipitation patterns, storm severity, and sea level commonly referred to as "climate change." ¶ Carbon dioxide (CO2), methane, nitrous oxide and four groups of fluorinated gases (sulfur hexafluoride, HFCs, PFCs and CFCs) are the major GHG. In the U.S., GHG emissions come primarily from the combustion of fossil fuels in energy use. CO2 emissions from coal-fired electricity generation comprise nearly 80 percent of the total CO2 emissions produced by the generation of electricity in the U.S. ¶ Installing energy-efficient lighting and implementing other conservation measures that reduce electric energy use significantly reduces GHG emissions and mitigates global climate change. Read more at: www.eia.doe.gov or www.epa.gov

(a) Savings estimates are based on standard engineering calculations and are NOT guaranteed. Your actual savings may be higher or lower depending on various factors, including how you operate your lights and other electric equipment in your building.
Electric Utility Rates = \$0.0310/kWh and \$7.49/kW. (07 00,00 [0] 00,00 00)

One-Stop Efficiency Shop Recommended Lighting Projects

Recommended Lighting System Upgrades	Schedule Name & Hours/year of Operation	Installed Cost (Without Rebate)	Estimated Annual Savings	Selected
Area A: Exit Signs				
Project: #1	A: Exits 8,760 hrs/yr	\$151.90	\$26.03	<input checked="" type="checkbox"/>
Qty Watts EXISTING Luminaire	Qty Watts NEW Luminaire			
2 40 Exit 20W, 2L	2 4 Exit-LED 2W, 2L			
Area B: Multi-purpose Space				
Project: #2	A: Exits 8,760 hrs/yr	\$1,868.56 Incl Special Order	\$450.71	<input checked="" type="checkbox"/>
Qty Watts EXISTING Luminaire	Qty Watts NEW Luminaire			
16 220 T12 HO 8' 95W, EEM-2, 2L	16 149 ST8 4' 36W, ELC4, 4L*w/Kit			
3 78 T12 4' 34W, STD-2, 2L	1 94 T8 LPO 4' 32W, ELC4, 4L*/tandem			
1 48 T12 4' 34W, STD-1, 1L	1 51 T8 LPO 4' 32W, ELC2, 2L*			
	1 26 T8 LPO 4' 32W, ELC1, 1L*			
Area C: Offices and Restrooms				
Project: #3	B: Offices 2,816 hrs/yr	\$246.30 Incl Special Order	\$112.86	<input checked="" type="checkbox"/>
Qty Watts EXISTING Luminaire	Qty Watts NEW Luminaire			
13 65 INC 65W-R, 1L	13 16 CFL-S 16W-Flood-1L			
Project: #4	B: Offices 2,816 hrs/yr	\$544.20 Incl Special Order	\$14.88	<input checked="" type="checkbox"/>
Qty Watts EXISTING Luminaire	Qty Watts NEW Luminaire			
6 65 INC 65W-R, 1L	6 51 T8 LPO 4' 32W, ELC-2, 2L New Fixt Wrap			
Project: #5	B: Offices 2,816 hrs/yr	\$1,046.96	\$131.11	<input checked="" type="checkbox"/>
Qty Watts EXISTING Luminaire	Qty Watts NEW Luminaire			
20 88 T12 4' 40W, STD-2, 2L	20 51 T8 LPO 4' 32W, ELC-2, 2L			
Area D: Shop: High-Bay				
Project: #6	C: Shop 2,607 hrs/yr	\$2,643.55 Incl Special Order	\$685.18	<input checked="" type="checkbox"/>
Qty Watts EXISTING Luminaire	Qty Watts NEW Luminaire			
15 460 MH MOG 400W, STD-1, 1L	13 222 ST8 4' 36W ELC3 6L-New Fixture			
Area E: Warehouse: High-Bay				
Project: #7	D: Rental Warehouse 626 hrs/yr	\$5,450.45 Incl Special Order	\$728.94	<input checked="" type="checkbox"/>
Qty Watts EXISTING Luminaire	Qty Watts NEW Luminaire			
23 460 MH MOG 400W, STD-1, 1L	23 170 T8 4' 32W ELC3 6L-New Fixture			
Totals <i>(Including special orders)</i>		\$11,951.92	\$2,149.71	

One-Stop Efficiency Shop Customer Participation Agreement

Option for ANY Contractor

I, the undersigned, agree that to the best of my knowledge the lighting schedule below accurately describes how the lights are operated at the facility listed in this document. I understand that the energy or cost savings reflected in this analysis are estimates, and that Center for Energy and Environment (CEE) and Xcel Energy do not guarantee that a specific level of energy or cost savings will result from the implementation of energy conservation measures or the use of products funded under this program. I also give CEE permission to submit, on my behalf, all Xcel Energy rebate and financing forms required for the One-Stop Efficiency Shop program.

I understand that all electrical code violations that are found during the lighting system inspection or during installation must be brought up to code at the customer's expense. Costs for correcting code violations are NOT included in the installation costs quoted in this document.

I understand that my lighting contractor must contact the auditor in order to participate in the One-Stop Program, and that I WILL NOT BE ELIGIBLE FOR THE REBATE UNLESS MY CONTRACTOR CONTACTS THE AUDITOR. (One-Stop Auditor: Gary Schoonover, Cell Ph. (612) 819-8978)

Select One

Financed

Cash

Signature Joe Brown Date _____
Customer Cost: \$6,031.83 (Including special orders)

Lighting Schedules

Your lighting savings are based on the following average hours of operation							
Lighting Schedule Name	Mon	Tues	Wed	Thur	Fri	Sat	Sun
A: Exits 8,760 hrs/yr	12:00 AM to 12:00 AM	12:00 AM to 12:00 AM	12:00 AM to 12:00 AM	12:00 AM to 12:00 AM	12:00 AM to 12:00 AM	12:00 AM to 12:00 AM	12:00 AM to 12:00 AM
B: Offices 2,816 hrs/yr	7:00 AM to 5:00 PM	7:00 AM to 5:00 PM	7:00 AM to 5:00 PM	7:00 AM to 5:00 PM	7:00 AM to 5:00 PM	8:00 AM to 12:00 PM	
C: Shop 2,607 hrs/yr	7:00 AM to 5:00 PM	7:00 AM to 5:00 PM	7:00 AM to 5:00 PM	7:00 AM to 5:00 PM	7:00 AM to 5:00 PM		
D: Rental Warehouse 626 hrs/yr	8:00 AM to 10:00 AM	8:00 AM to 10:00 AM	8:00 AM to 10:00 AM	8:00 AM to 10:00 AM	8:00 AM to 10:00 AM	8:00 AM to 10:00 AM	

XCEL ENERGY ONE-STOP EFFICIENCY SHOP PROGRAM RULES

CUSTOMER QUALIFICATIONS

- One-Stop Efficiency Shop Lighting Efficiency Program rebates apply only to lighting retrofits for Xcel Energy electric business customers in Minnesota.
- This program applies only to lighting systems (equipment) operating during normal business hours or peak demand periods.

REBATE PROGRAM GUIDELINES

- Xcel Energy offers cash rebates to customers who purchase and install qualifying energy-efficient lighting products in existing buildings. The rebate check will be sent to the contractor listed on the retrofit invoice. Maximum rebate amount is 60% of installation and equipment costs. The rebates are based on calculated electric demand (KW) savings.
- Energy-efficient equipment must result in load reduction.
- One-Stop Efficiency Shop recommends Illuminating Engineering Society (IES) light levels.

C&I Lighting incentives cover:

- Fluorescent T12s to T8 or T5 with electronic ballasts
- Mercury vapor to metal halide or high pressure sodium
- Incandescent to fluorescent, T8, T5, MH, HPS or CFL
- Incandescent exit signs to LED exit signs
- Metal halide or T12 strips to industrial multi-CFL fixture
- Metal halide or high-pressure sodium to pulse-start metal halide (must result in lamp wattage reduction)
- HID sources to fluorescent

C&I Lighting incentives do not cover

- Incandescent to tungsten halogen
- Conversions to energy saving T12 fluorescent products
- Incandescent exit signs to compact fluorescent exit signs
- Compact fluorescent exit signs to LED exit signs

- See your One-Stop Efficiency Shop representative to determine qualification of custom or specialty lighting projects.
- Energy-efficient electronic and cathode-disconnect ballasts must meet the following minimum performance criteria:
 - Power factor greater than 90%
 - Current Crest Factor (CCF) less than 1.7
 - U.L. –approved Class ‘P’
 - Total Harmonic Distortion (THD) less than 20%
 - Class ‘A’ sound rating
 - Three-year warranty
 - Ballast factor greater than 0.7
- Reflectors must be installed permanently in the fixture, have a minimum 4-year manufacturer’s product warranty, be U.L.-approved and result in the permanent removal of fluorescent lamps from the existing fixture and permanent repositioning of remaining lamps, when required for optimum lighting performance.
- Compact fluorescent lamps must meet the following minimum criteria:
 - Power factor > 90%
 - Total Harmonic Distortion (THD) < 35%

WARRANTY INFORMATION

Warrantees are between customer and equipment manufacturer(s) and lighting retrofit vendors. Xcel Energy and the Center for Energy and Environment (CEE) make no warranties, expressed or implied, with respect to equipment operation, material, workmanship or manufacturing. Xcel Energy and CEE do not guarantee that a specific level of energy or cost savings will result from the implementation of energy conservation measures or the use of products funded under this program. In no event shall Xcel Energy or CEE be liable for any incidental or consequential damages. Xcel Energy and CEE are not responsible for the disposal of lamps and/or ballasts replaced as a result of this program, when required for optimum lighting performance.

OTHER IMPORTANT REBATE PROGRAM RULES

- Installation must be complete before submitting rebate.
- Xcel Energy will issue rebates in the form of checks, not utility bill credits. Rebate and financing checks will be sent directly to the lighting contractor that submits an invoice. The minimum rebate is \$5.
- Customers and vendors must submit itemized equipment invoices along with rebate applications. To ensure that the equipment installed meets One-Stop Efficiency Shop's performance standards, these invoices must itemize labor charges, quantity and price of the equipment installed, and information regarding the manufacturer and model numbers for all lamps, ballasts and fixtures included in the
- Xcel Energy and CEE reserve the right to conduct random inspections of installations. Retain one sample of each type of old lamp or ballast for at least 90 days.
- Customers must apply for rebates within one year of the purchase date shown on the equipment invoice.

One-Stop Efficiency Shop's conservation rebate programs are subject to 60 days' notice of cancellation. The customer is responsible for checking with a One-Stop Efficiency Shop representative to ask whether or not the program is still in effect and to verify program parameters.

REBATE CHECKS WILL BE SENT TO YOUR CONTRACTOR IN 6-8 WEEKS

One-Stop Efficiency Shop Customer Participation Agreement

Option for Program Contractor

I, the undersigned, agree that to the best of my knowledge the lighting schedule below accurately describes how the lights are operated at the facility listed in this document. I understand that the energy or cost savings reflected in this analysis are estimates, and that Center for Energy and Environment (CEE) and Xcel Energy do not guarantee that a specific level of energy or cost savings will result from the implementation of energy conservation measures or the use of products funded under this program. I also give CEE permission to submit, on my behalf, all Xcel Energy rebate and financing forms required for the One-Stop Efficiency Shop program.

I understand that CEE and its staff do not perform lighting installation services. I agree to have CEE contact a participating contractor who will contact me to schedule a time to perform a walk-through inspection, and, if I agree to hire the contractor, to schedule a time to complete the lighting installations that are checked under the "Selected" column of this document. I understand that I must enter into a separate agreement with the contractor to receive lighting installation services. I understand that contractors generally perform installation during weekdays and labor will be charged accordingly. I understand that the contractor will provide a one-year warranty on all labor and equipment that will be installed as part of this program and that the terms of the warranty will be part of my agreement with the contractor. I understand that the contractor alone, and not CEE, provides a warranty on the installation services. I further understand that all electrical code violations that are found during a contractor's inspection or during installation must be brought up to code at my expense. Costs for correcting code violations are NOT included in the installation costs quoted in this document.

Select One

Financed

Cash

Signature Joe Brown Date

Customer Cost: \$6,031.83 (Including special orders)

Lighting Schedules

Your lighting savings are based on the following average hours of operation							
Lighting Schedule Name	Mon	Tues	Wed	Thur	Fri	Sat	Sun
A: Exits 8,760 hrs/yr	12:00 AM to 12:00 AM	12:00 AM to 12:00 AM	12:00 AM to 12:00 AM	12:00 AM to 12:00 AM	12:00 AM to 12:00 AM	12:00 AM to 12:00 AM	12:00 AM to 12:00 AM
B: Offices 2,816 hrs/yr	7:00 AM to 5:00 PM	7:00 AM to 5:00 PM	7:00 AM to 5:00 PM	7:00 AM to 5:00 PM	7:00 AM to 5:00 PM	8:00 AM to 12:00 PM	
C: Shop 2,607 hrs/yr	7:00 AM to 5:00 PM	7:00 AM to 5:00 PM	7:00 AM to 5:00 PM	7:00 AM to 5:00 PM	7:00 AM to 5:00 PM		
D: Rental Warehouse 626 hrs/yr	8:00 AM to 10:00 AM	8:00 AM to 10:00 AM	8:00 AM to 10:00 AM	8:00 AM to 10:00 AM	8:00 AM to 10:00 AM	8:00 AM to 10:00 AM	

One-Stop Efficiency Shop Customer Participation Agreement

Option for Customer Self-Install

I, the undersigned, agree that to the best of my knowledge the lighting schedule below accurately describes how the lights are operated at the facility listed in this document. I understand that the energy or cost savings reflected in this analysis are estimates, and that Center for Energy and Environment (CEE) and Xcel Energy do not guarantee that a specific level of energy or cost savings will result from the implementation of energy conservation measures or the use of products funded under this program. I also give CEE permission to submit, on my behalf, all Xcel Energy rebate and financing forms required for the One-Stop Efficiency Shop program.

I understand that all electrical code violations that are found during the lighting system inspection or during installation must be brought up to code at the customer's expense. Costs for correcting code violations are NOT included in the installation costs quoted in this document.

Note: Participants that elect to install the new lighting systems themselves must also agree to and sign the terms and conditions in the attached 'Supplemental Rules for Self-Install Option'.

Select One

Financed

Cash

Signature Joe Brown Date _____
Customer Cost: \$6,031.83 (Including special orders)

Lighting Schedules

Your lighting savings are based on the following average hours of operation							
Lighting Schedule Name	Mon	Tues	Wed	Thur	Fri	Sat	Sun
A: Exits 8,760 hrs/yr	12:00 AM to 12:00 AM	12:00 AM to 12:00 AM	12:00 AM to 12:00 AM	12:00 AM to 12:00 AM	12:00 AM to 12:00 AM	12:00 AM to 12:00 AM	12:00 AM to 12:00 AM
B: Offices 2,816 hrs/yr	7:00 AM to 5:00 PM	7:00 AM to 5:00 PM	7:00 AM to 5:00 PM	7:00 AM to 5:00 PM	7:00 AM to 5:00 PM	8:00 AM to 12:00 PM	
C: Shop 2,607 hrs/yr	7:00 AM to 5:00 PM	7:00 AM to 5:00 PM	7:00 AM to 5:00 PM	7:00 AM to 5:00 PM	7:00 AM to 5:00 PM		
D: Rental Warehouse 626 hrs/yr	8:00 AM to 10:00 AM	8:00 AM to 10:00 AM	8:00 AM to 10:00 AM	8:00 AM to 10:00 AM	8:00 AM to 10:00 AM	8:00 AM to 10:00 AM	

Option for Customer Self-Install

Supplemental Rules for Self-Install Option

You have elected to install the new lights yourself. The One-Stop Program allows that option if you meet all of the the following requirements:

- A) The exact equipment specified for the lighting retrofits outlined in your signed and dated Lighting System Analysis report must be installed at your facility. If the initial fixture counts were inaccurate please call (612) 335-3487 so our records can be modified.
- B) The fluorescent lamps and associated ballasts that are replaced by new lighting systems must be recycled or disposed of according to law by a certified recycling company. You must submit a recycling manifest for these fixtures. If the initial fixture counts are modified additional lamps or ballasts must also be recycled.
- C) You understand that it is your responsibility to comply with any existing state and/or municipal codes and requirements governing lighting retrofits in commercial buildings.
- D) A detailed invoice must be submitted to CEE for processing. The invoice from your lighting supplier must include a detailed list of the equipment installed including quantities and a description including manufacturer. An invoice and manifest from the recycling company must also be attached.

The job must be completed within 5 weeks of the signature date unless an extension request is submitted to CEE. If you have any questions about these rules please call 612-335-3487. If you agree to abide by these rules please sign and date the statement below and submit with your Participation Agreement.

Signature

Date

(Read before signing)