

The following is a sample Turn Key Services assessment report. Recommendations included in this report are typical, but will vary based on your specific energy usage.

Items highlighted in **yellow** are contained in ASHRAE Level 1 assessment report, but are not included in a Walkthrough assessment report

CUSTOMER SUMMARY PAGE

ASHRAE Level 1 Assessment

Customer Name: Tom's Office Supply

Account #: 1234567

Service Address: 123 Main Street
Maplewood, MN 55109

Premise #: 123456789

Mailing Address: 456 1st Street
Saint Paul, MN 55101

Additional Service Address: N/A

Contact Person: John Johnson

Decision Maker: Tom Thompson

Phone: 651-555-5555

Phone: 651-555-5555

Xcel Energy Rep: Will Williams

Energy Auditor: Pete Peterson

Phone: 612-555-5555

Company: Franklin Energy Services

Email: will.williams@xcelenergy.com

Phone: 612-555-5555

Building Type: Office Building

Peak Demand: 106 kW

Electric Service: Xcel Energy

Gas Service: Xcel Energy

Customer Usage: <5 GWh

Type of Assessment: ASHRAE Level I

Date of Site Visit: January 1, 2013

Square Footage: 15,188

Qualifying Customer

Candidate for other study programs: Yes

If so, which ones: Recommissioning, Data Centers, Saver Switch, Turn Key Services

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DISCLAIMER OF WARRANTIES AND LIMITATION OF LIABILITY

The suggestions in this Energy Assessment (“Assessment”) are provided as a service to Xcel Energy customers and are based on a visual analysis of conditions observed at the time of the survey, information provided by the customer and from Xcel Energy, and costs based on the energy assessor’s experience on similar projects. The performance guidelines provided in the Assessment are for informational purposes only and are not to be construed as a design document. Xcel Energy will not benefit in any way from a customer’s decision to select a particular contractor or vendor to supply or install the products and measures suggested by the energy assessor.

Xcel Energy and the energy assessor do not guarantee that any specific level of energy or costs savings will result from implementing any energy conservation measures described in this Assessment. Xcel Energy and the energy assessor shall not, under any circumstances, be liable to the customer in the event that potential energy savings are not achieved.

Xcel Energy advises that customers check with their Xcel Energy Account Manager to determine the estimated value of their rebate (if any) and to verify that the equipment qualifies for Xcel Energy programs prior to implementation of any conservation measure. Some measures identified in this report may qualify for an Xcel Energy Custom Efficiency rebate. Custom Efficiency projects require pre-approval prior to purchase and installation. The customer is responsible for submitting project information to their Xcel Energy Account Manager to obtain pre-approval for Custom Efficiency projects and to determine the eligible custom rebate amount.

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Executive Summary



Tom's Office Supply requested that Xcel Energy perform an energy assessment to identify energy-related opportunities that show potential for improvement and investment options. This is the first step toward developing a long-term energy plan for 123 Main Street. Franklin Energy Services visited the customer's business site on January 1, 2013, and met with John Johnson. This energy assessment recommends strategic opportunities including those eligible for rate discounts, areas for energy-related process improvements in addition to key energy conservation opportunities.

Tom's Office Supply has already implemented a number of energy savings measures, such as:

- Replaced 32W T8 lamps with reduced wattage 25W T8 lamps
- Installed occupancy sensors in bathrooms
- The water heater operates at the appropriate temperature of 120°F

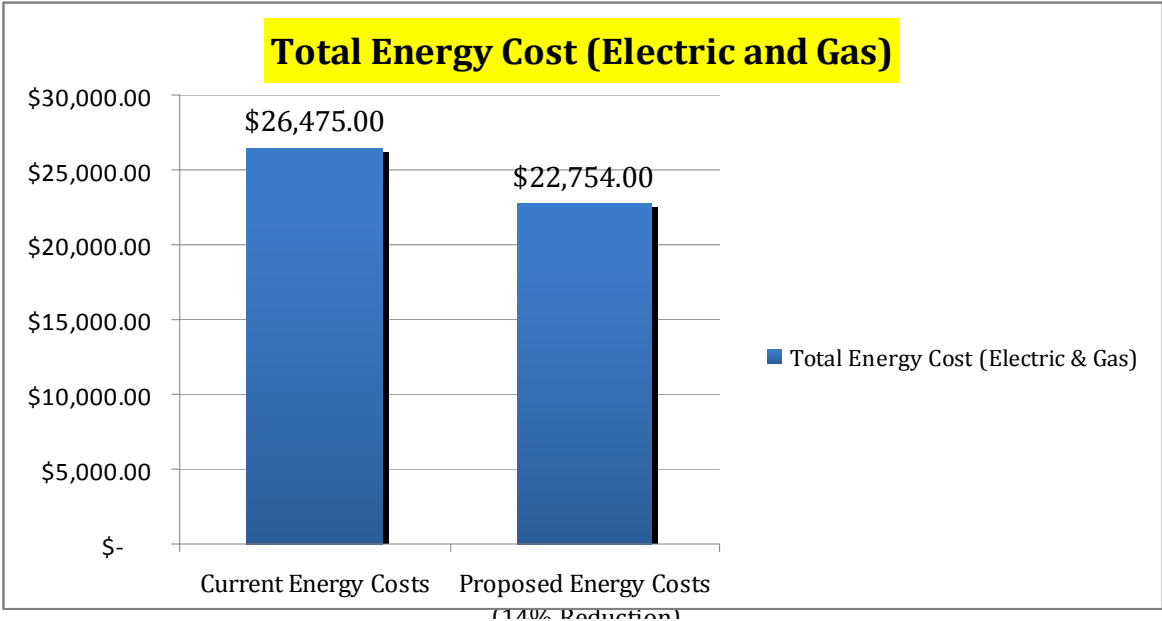
The following key energy savings opportunities are the measures you may want to consider first, based on the recent walk-through of your facility. Corresponding savings values can be found in the following *Energy Conservation Opportunities* table.

- Implementing discharge air temperature reset
- Reduce run-time of air handling units
- Implement power management on computers and monitors
- Installing vending machine occupancy controls
- Replace exterior HID lighting with equivalent LEDs

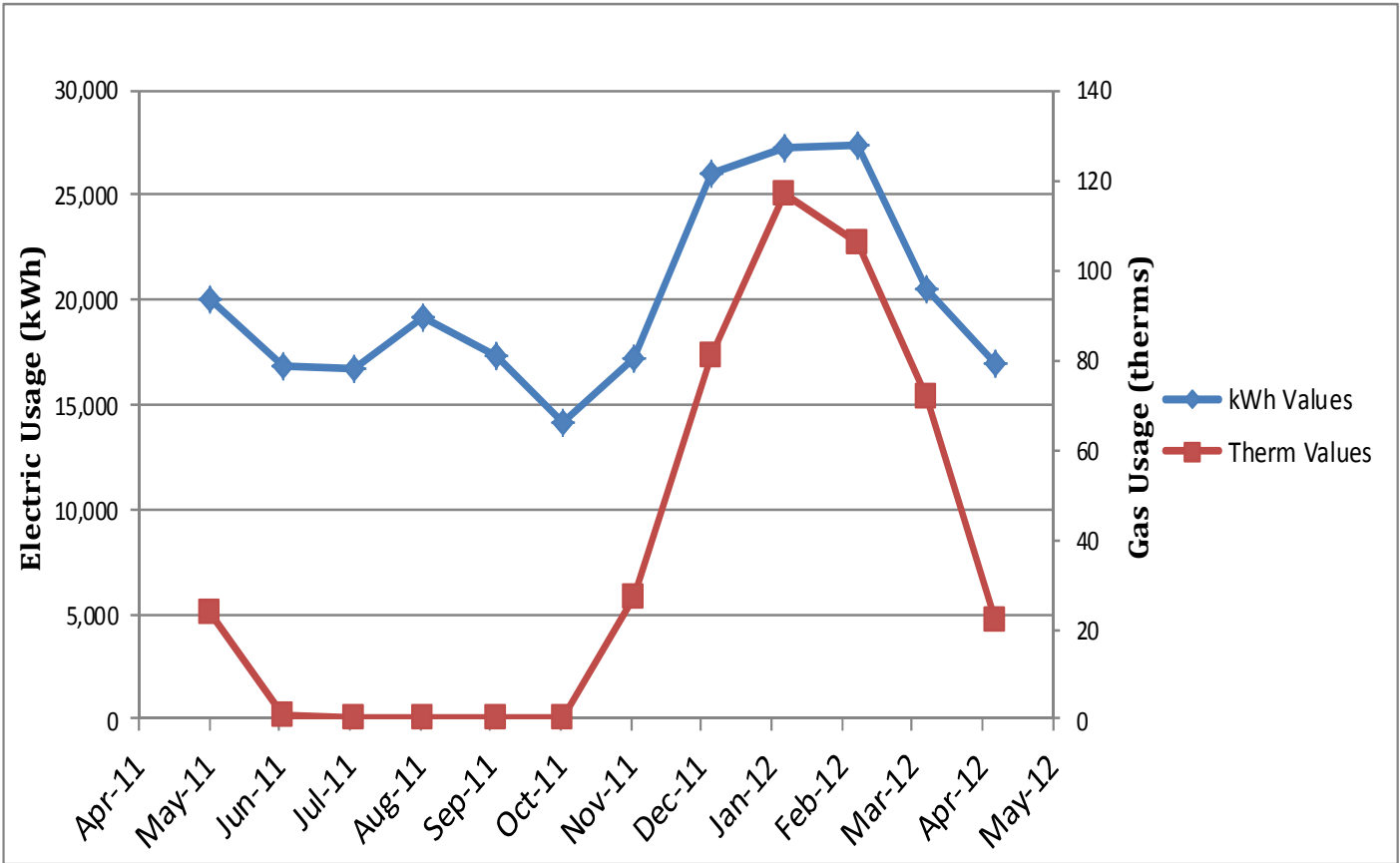
Key strategic opportunities include:

- Xcel Energy's Data Center Study
- Xcel Energy's Recommissioning Study
- Xcel Energy's Saver Switch
- Xcel Energy's Turn Key Services

Additional opportunities to consider can be found later in the report.



Energy Usage Chart



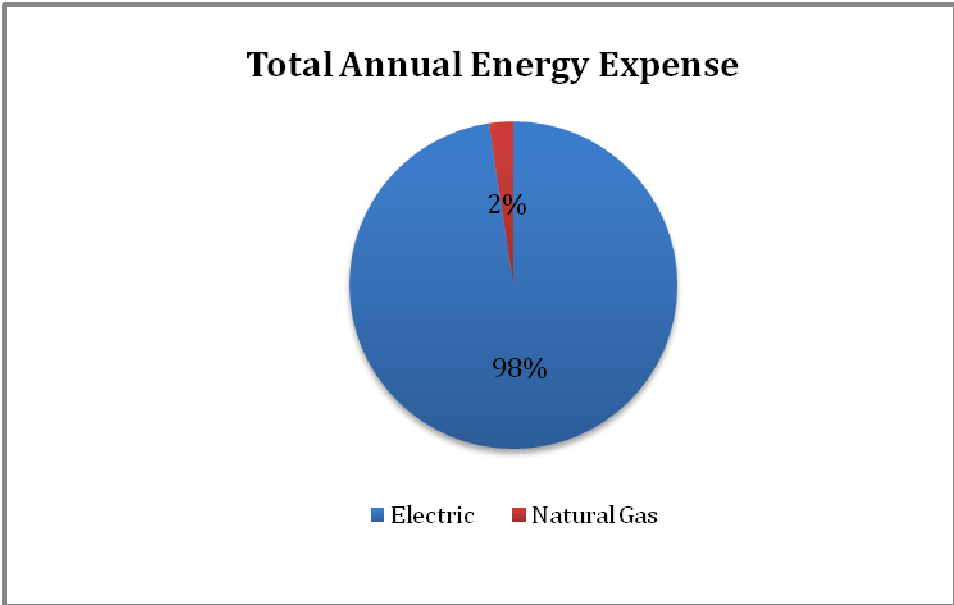
Building and Energy Profile

Building Profile

Type of Building:	Office Building	Year Built:	2005
Floor Area (s.f.):	15,188	Weekly Operating Hours:	42.5
Number of Workers:	25	Number of PCs:	32
Percent of Space Heated:	100%	Type of Heating:	Natural Gas - Forced Air with Electric Reheat
Percent of Space Cooled:	100%	Type of Cooling:	Electric - Forced Air

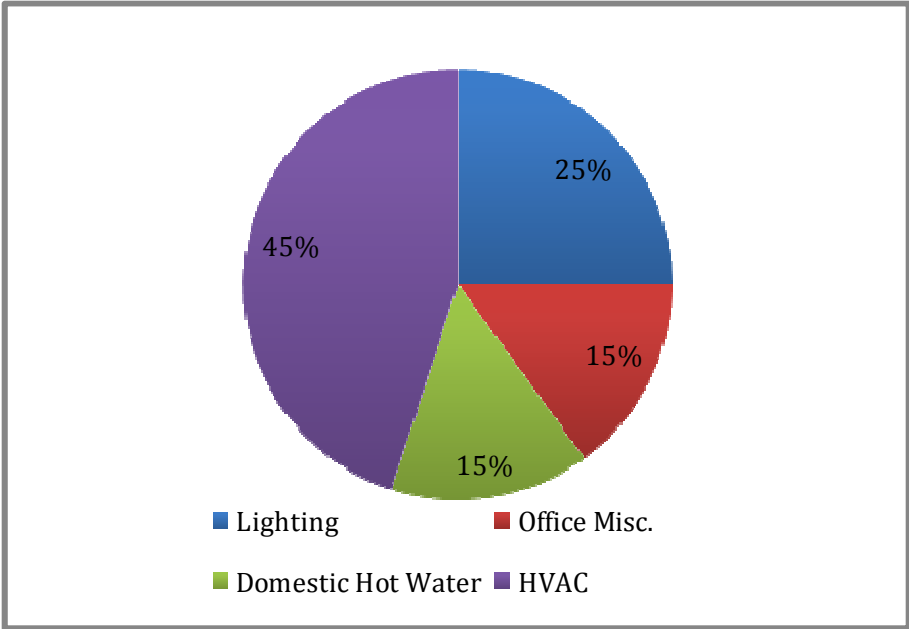
Energy Profile

The following chart identifies your electric and natural gas use.



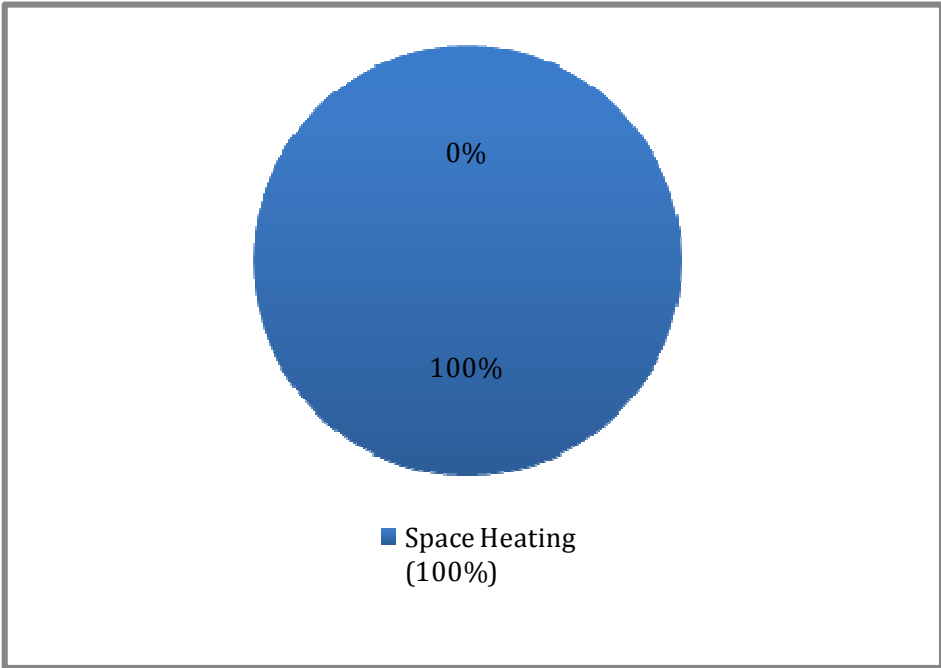
Energy End Use Profile

Electric



Electrical end use is based on average usage in similar facility type.

Natural Gas



Natural gas usage is based on break down of utility bill consumption.

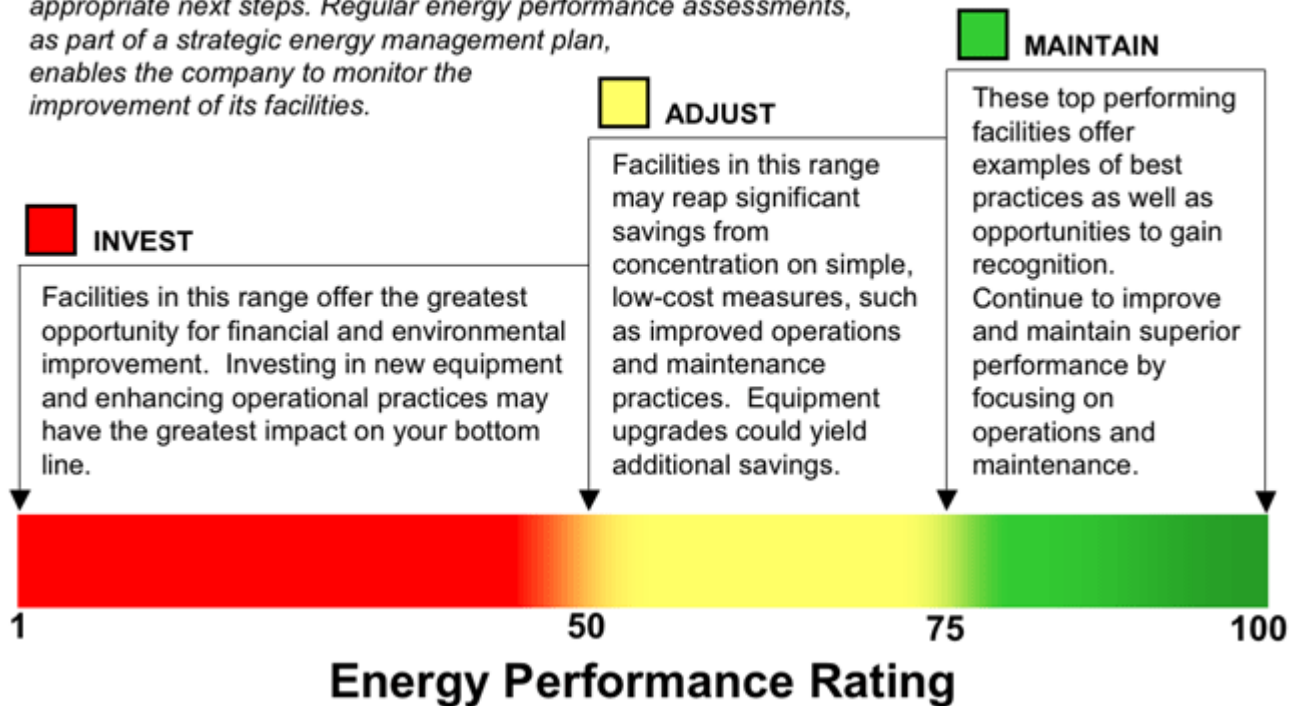
Energy Star Benchmarking Results

Full Energy Star Report is attached

Facility Performance Set Baseline Periods Set Energy Performance Target					
Select View: Create View Edit View					
12 Months Ending	Current Rating (1-100)	Current Site Energy Intensity (kBtu/Sq. Ft.)	Current Source Energy Intensity (kBtu/Sq. Ft.)	Change from Baseline: Energy Use Intensity (kBtu/Sq. Ft.)	Change from Baseline: Adjusted Energy Use Intensity (kBtu/Sq. Ft.)
March 2012	45	57.0	183.6	0.0	0.0

Determining a Course of Action

Establish an energy performance baseline for all facilities in the company's portfolio, then set performance goals and create an action plan. The guide below can help determine the appropriate next steps. Regular energy performance assessments, as part of a strategic energy management plan, enables the company to monitor the improvement of its facilities.



Energy Conservation Opportunities

Please refer to the Conservation Opportunity Analysis section following this table for a detailed description.

Energy Conservation Opportunity		Estimated Demand Savings (kW/yr)	Estimated Energy Savings (kWh/yr)	Estimated Thermal Savings (Therm/yr)	Estimated Annual Cost Savings (\$)	Estimated Capital Cost (\$) ¹	Estimated Incremental Cost (\$)	Simple Payback (Years) ²	Estimated Xcel Energy Incentives (\$) ^{3,4}
Payback less than 2 years (low/no cost opportunities)									
1	Implement power management on computers and monitors	--	2348	--	\$134	--	--	Immediate	--
2	Reduce run-time of air handling units (AHU)	--	1,970	24	\$307	--	--	Immediate	--
3	Implementing discharge air temperature reset	2.40	38,684	-2000	\$2,246	\$1000	--	0.4	--
4	Install high-pressure, low-volume faucet aerators	0.10	1,026	--	\$111	\$60	--	0.5	--
5	Install occupancy control in low-traffic areas	--	4,534	--	\$258	\$650	--	1.8	\$195 (\$15-25 for wall- and \$30-40 for ceiling-mounted sensors.)
6	Install vending machine occupancy controls	--	1,575	--	\$90	\$180	--	2.0	--
Payback 2 – 10+ years (capital cost opportunities)									
7	Replace exterior HID lighting with equivalent LEDs	--	10,089	--	\$575	\$3,600	--	4.6	\$950 (\$75 per wallpack and custom incentives totaling up to \$125 for pole light and spot light retrofits)

¹Estimated capital costs are based on historical project averages. *Capital Cost* is defined as the total equipment cost for the project. *Incremental Cost* refers to the additional cost associated with the increased capital cost for replacing standard equipment with higher efficiency equipment.

²Simple Payback includes incentive unless estimated value is not given.

³Items marked with an asterisk are custom efficiency projects and may require pre-approval to qualify for an Xcel Energy rebate. Please check with your Xcel Energy representative before purchasing/implementing measure.

⁴Xcel Energy rebates typically cannot exceed 60% of the project cost (including equipment and labor).

Conservation Opportunity Analysis

Opportunity 1: Implement power management on computer monitors

During the audit, many computers and monitors were left in full power mode, though the stations were left unattended. Windows has built in software to put computers into low power mode after a period of inactivity. A computer and monitor combination uses about 80 watts of power. A best practice is to have computers go into standby after 15 minutes of inactivity, and to hibernate after 30 minutes. In standby and hibernation modes, computers go into a low state of energy mode, and upon a simple mouse click quickly resume to the desktop. Enabling and implementing standby and hibernation modes and turning off monitors when not used could save up to \$250 per year. For more information on how to implement hibernation mode:

<http://www.pcmag.com/article2/0,2817,2554,00.asp>

Opportunity 2: Reduce run-time of air handling units

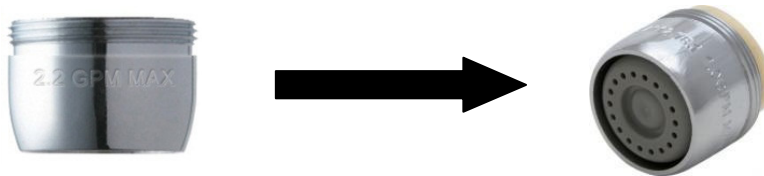
The three roof-top units are starting between two and three hours before the space is occupied. Modern HVAC equipment is capable of getting space to the desired condition within one hour, so starting air-handling units earlier than that simply wastes energy. Estimated savings were calculated by reducing the run-time for all air-handling units to start only one-hour prior to the occupied time.

Opportunity 3: Implementing discharge air temperature reset

Discharge air temperature reset refers to RTU 3 and its relation to VAV boxes. Currently, the RTU's discharge air temperature is set too low, so conditioning each zone relies extensively on the electric reheats. By implementing discharge air temperature reset, the VAV's would work with the building automation system and rooftop unit to fluctuate the discharge air temperature, reducing conditioning at the zone. This system would require that additional control points be added to monitor and control the rooftop to fluctuate this temperature. The building automation software must then be programmed to not use electric reheats during pre-conditioning or during unoccupied times which causes significant wasted energy. Be aware that while you will notice significant electricity savings, therm usage will increase after implementing this measure. Don't let that be the hesitation, as it is much more energy efficient and cost effective to have the heat and conditioned air produced at the rooftop whenever possible.

Opportunity 4: Install high-pressure, low-volume faucet aerators

The installation of high-pressure, low-volume aerators will reduce water, sewer, and electricity usage. Most faucet aerators use 2.2 gallons of water per minute. If each sink runs for 5 minutes per day during the work week, over 3,200 gallons of water are used per sink per year. By installing high-pressure low-volume aerators you induce airflow into the mixture, reducing the amount of water used, but without any loss in pressure or cleansing power. By installing (6) 1.5 gallon per minute aerators in lieu of (6) 2.2 gallon per minute aerators, about 4,000 gallons of water and sewer will be saved annually, as well as 1026 kWh which is used to heat the water.



Opportunity 5: Install occupancy sensors in low-traffic areas

You may want to install occupancy sensors to automatically turn lights off in areas such as restrooms, storage rooms, hallways or other rooms where lights could get left on. Occupancy sensors simply limit the amount of time the lights in each room are left on while unoccupied. Sensors can be purchased fairly inexpensively, for roughly \$20-\$125 each depending on type and style. The savings for installing these sensors varies greatly depending on the quantity of fixtures controlled as well as the amount of human traffic through the room. The typical payback for a break room and restroom installation is under two years. Xcel Energy offers rebates of \$15-25 and \$30-40 per wall- and ceiling-mounted occupancy sensors, respectively, depending on the amount of wattage controlled. Estimated savings were calculated by installing (9) occupancy sensors throughout the building.

Opportunity 6: Install vending machine occupancy controls

Vending machines typically operate 24 hours a day, seven days a week. There are a number of products available that turn off the vending machine using an occupancy sensor. When no one is near the machine for a preset amount of time, the unit turns off. When someone walks by, the unit turns on. These devices are set up to make sure that the machine maintains beverages at a low temperature by cycling the compressor on an as needed basis. Estimated energy savings for this measure are based on installing controls on (1) soda vending machine in the break room. More information on these controls, please visit the following website:

http://www.usatech.com/energy_management/energy_vm.php

Opportunity 7: Replace exterior HID lighting with equivalent LEDs

Equivalent light output LED models have become a viable alternative for exterior lighting. Compared to HID fixtures; LEDs require about 1/4th the power, last up to 5 times longer, and maintain lighting levels over the life of the fixture. Upgrading HID fixtures to LED fixtures requires purchasing an entirely new fixture. Estimated energy savings are based on replacing (11) 100W MH wallpacks with (11) 20W LED wallpacks, (2) 100 MH spot lights with (2) 18W LED spotlights, and (2) 250W high pressure sodium pole fixtures with (2) 52W LED pole fixtures. Xcel Energy offers a \$75 rebate for every HID wallpack upgraded to an LED wallpack and a custom incentive of up to \$125 may be offered for the replacement of HID pole lights and spot lights with equivalent wattage LEDs.

Strategic Opportunity Analysis

Xcel Energy's Turn Key Services

You have successfully completed the assessment portion of Xcel Energy's Turn Key Services. Now is the time to take action and capture the energy savings potential detailed in this report. The Turn Key Services program is a project management offering designed to remove hurdles and assist in implementation of energy efficiency improvements that result in sustainable energy conservation. Pete Peterson of Franklin Energy will assist in coordinating and obtaining Xcel Energy project approval, aligning and educating installation vendors, and maximizing incentives. For any project completed within one year, Turn Key Services offers a 30% bonus incentive not to exceed 75% of total project cost. For more information, please contact Peter Peterson at 612-555-5555.

Xcel Energy's Recommissioning Study and Efficiency Controls

Over time, facilities lose efficiency as sensors, controls, and equipment begin to fail or when building use changes from how it was originally commissioned. Recommissioning helps you find and solve mechanical system problems that make your facility expensive to operate. The audit indicated that the Building Automation System (BAS) is not communicating properly with the three rooftop units, zones, and control system. The communication between the rooftops, the zones, and building automation system needs to be recalibrated and upgraded with additional controls to avoid recent problems like extensive reheating, long periods of pre-conditioning, and ensuring that ventilation matches the zone's needs. Tom's Office Supply could benefit from a recommissioning study targeting the HVAC system and its connection with the (BAS).

Xcel Energy's recommissioning program can be helpful to: optimize HVAC equipment operations, fine-tune time-of-day schedules, improve indoor air quality, suggest new and advanced equipment control strategies, and reduce equipment wear and tear. To assist in the cost of a recommissioning study, Xcel Energy can fund up to 75% of the study, not to exceed \$25,000. Recommissioning studies typically result in savings of 5 to 20 percent of total building energy costs. Custom incentives may be provided for implementing recommended measures from the recommissioning study. Please speak with your Xcel Energy representative for more details on this opportunity.

Xcel Energy's Saver's Switch program

Saver's Switch is a pager-activated device that Xcel Energy installs on or near your outside air conditioning units that helps reduce electric loads when price or demand for electricity peak. Single or dual-stage ground or rooftop units are eligible (certain restrictions apply). Peak control customers are not eligible.

During periods of peak demand for electricity, typically hot summer afternoons, a signal is sent to the Saver's Switch to cycle your air conditioner(s) off and on for 15- to 20-minute intervals. The air conditioner will continue to cool the building during the cycle. There are usually 10-12 days a summer when the switch is activated.

Enrollment in Xcel Energy's Saver Switch program makes one eligible for a monthly credit of \$5 per enrolled ton on their Xcel Energy bill. Please speak to your Xcel Energy account representative to determine eligibility.

Xcel Energy's Data Center Efficiency

The data center located in the Tom's Office Supply is conditioned by a small split system that cools the area around the server racks. The system is rather inefficient in its means of exhausting the heat produced by the server racks. A redesign of the airflow in the room to properly ventilate the server equipment will reduce the cooling load, extend equipment life, and will stop triggering the BAS warning about high temperature. Please speak to your Xcel Energy account representative for how to enroll in this program.

For More Information

In addition to the energy conservation measures, we recommend in this energy assessment, Xcel Energy offers cash rebates and a variety of payment and billing programs to better manage your cash flow. Please see www.xcelenergy.com/rebates or call 1-800-481-4700 for details.

*BillWise from Xcel Energy*SM programs include payment options like:

- Auto Pay – a simple and convenient way to have monthly energy payment automatically withdrawn from a bank account on the day it is due.
- EFT (Electronic Funds Transfer) – allows simplification of the bill paying process and improving cash management by directly transferring money from your account to Xcel Energy.
- Pay By Phone – allows quick and secure transfer of energy payment from a bank account directly to Xcel Energy, right over the phone, at no cost.
- Credit/Debit Cards Payments – allows payment of energy bill online or by phone using a credit or debit card for a small fee.

The Billing options include – EDI (Electronic Data Interchange) which allows receipt of your energy bill electronically the day after the billing cycle is complete. More information on all these programs can be obtained by discussing eligibility requirements with your Xcel Energy representative. You also can call the Business Solution Center at 1-800-481-4700 or visit us at xcelenergy.com for more information about qualifying for cash rebates, discount rates or billing/payment options.

Glossary

Actual Demand: The highest average 15 minutes of demand over a billing period.

Billed Demand: The actual demand plus the adjusted demand for power factor correction.

BTU (British thermal unit): A unit of energy required to raise the temperature of 1 lb water by 1°F. Additionally, 1 cubic foot of natural gas contains 1000 BTU.

Capital Cost: The total equipment cost for the project.

CCF: 100 cubic feet of natural gas. For the purposes of measuring energy use, a therm and a CCF of natural gas are equivalent. Additionally, 1 CCF contains 100,000 BTU.

Dekatherm: A dekatherm (10 therms) is a unit of energy equivalent to 1,000,000 BTU.

Incremental Cost: Refers to the additional cost associated with the increased capital cost for replacing standard equipment with higher efficiency equipment.

Load Factor: A measure of facility operating efficiency. Load Factor is the ratio of average load in kilowatt supplied during a designated period to the peak load occurring that period.

$$\text{Load Factor} = \frac{\text{KWh supplied in a period}}{\text{Peak kW in a period (x) hours in a period}}$$

Annual Electric Consumption

Previous 12 months (definition of terms can be found in the glossary)

May 2011 to April 2012

Month	Billing Period (Days)	Actual Demand (kW)	Billed Demand (kW)	Total Energy (kWh)	Total Cost (\$)	Cost/kWh (\$)	Power Factor
May-11	31	87	87	20,000	\$ 2,108.19	\$ 0.11	0.997
Jun-11	32	77	77	16,800	\$ 1,967.43	\$ 0.12	0.986
Jul-11	30	82	82	16,720	\$ 2,138.54	\$ 0.13	0.977
Aug-11	29	80	80	19,120	\$ 2,258.08	\$ 0.12	0.973
Sep-11	32	74	74	17,280	\$ 2,092.28	\$ 0.12	0.980
Oct-11	28	63	63	14,160	\$ 1,589.77	\$ 0.11	0.989
Nov-11	30	83	83	17,200	\$ 1,748.38	\$ 0.10	0.996
Dec-11	33	98	98	26,080	\$ 2,473.51	\$ 0.09	0.999
Jan-12	32	106	106	27,280	\$ 2,768.04	\$ 0.10	0.999
Feb-12	31	106	106	27,360	\$ 2,703.11	\$ 0.10	0.999
Mar-12	29	97	97	20,560	\$ 2,200.70	\$ 0.11	0.998
Apr-12	30	79	79	16,960	\$ 1,793.55	\$ 0.11	0.996
Total	367			239,520	\$ 25,841.58		
Avg.	0.00			0	0		

Annual Natural Gas Consumption

Previous 12 months (definition of terms can be found in the glossary)

May 2011 to April 2012

Month	Billing Period (Days)	Total Energy (therms)	Total Cost (\$)	Cost/Therm (\$)	Degree Days (DD)	Therm/DD
May-11	30	24	\$ 41.91	\$ 1.75	423	0.06
Jun-11	32	1	\$ 27.39	\$ 27.39	54	0.02
Jul-11	30	0	\$ 26.72		6	0.00
Aug-11	28	0	\$ 26.72		0	
Sep-11	30	0	\$ 26.72		38	0.00
Oct-11	31	0	\$ 26.72		162	0.00
Nov-11	29	27	\$ 45.33	\$ 1.68	536	0.05
Dec-11	31	81	\$ 86.06	\$ 1.06	1039	0.08
Jan-12	34	117	\$ 110.44	\$ 0.94	1253	0.09
Feb-12	29	106	\$ 100.11	\$ 0.94	1204	0.09
Mar-12	31	72	\$ 75.94	\$ 1.05	834	0.09
Apr-12	30	22	\$ 39.36	\$ 1.79	370	0.06
Total	365	450	\$ 633.42			
Avg.	0.00	0	\$ -			