



Your Energy Assessment Report

Community-Based Small Business Program

Lori Johnson, City of Carlos Fire Department
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Account No. 1005106

Prepared By:
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Overview

This report is designed to help you achieve energy savings by implementing energy-efficient upgrades to your facility. Investing in your business through energy improvements can help you reduce your operating costs and improve your bottom line.



To assist in your energy-saving journey, the attached assessment report includes:

- Recommendations on opportunities to save energy.
 - A summary of estimated energy and cost savings.
 - Estimated incentives available from Otter Tail Power Company
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If the proposed recommendations are fully implemented they may result in:

Energy Incentives	Approximate Customer Investment	Approx 5 Year Energy Savings
\$732	\$2,890	\$5,858

We appreciate your participation in the Otter Tail Power Small Business Program.

If you have questions, please feel free to contact me at 507-273-3217 or bwimmer@franklinenergy.com.

Sincerely,

Brian Wimmer
Franklin Energy
Otter Tail Power Community-Based Small Business Program

Your System Analysis

The visual below summarizes our assessment of the general condition of each energy-using system in your building at the time of our visit. Please consult a professional contractor where action is needed.

Property/Business Name	City of Carlos Fire Department	Business Type	Transportation and Warehousing
System	Description	System Status	
1 Heating	Analysis includes a visual inspection of heating system(s) used to heat the facility.	Excellent	
2 Domestic Hot Water	Analysis includes a visual inspection of water heating equipment used in the facility.	Excellent	
3 Lighting	Analysis includes a visual inspection of the lighting equipment observed indoors and out.	*Action Needed	
4 Refrigeration	Analysis includes a visual inspection of the refrigeration equipment used in the facility.	*Action Needed	

*Efficiency improvements recommended.

Recommendations

The following is a list of customized energy-saving opportunities we identified for your property with corresponding incentives from Otter Tail Power Company. All figures are estimates based on typical annual usage and costs, as well as our observations of end use equipment in your facility at the time of our assessment. These estimates are intended to help you prioritize which projects to pursue first. The next step is to get bids from local contractors, where applicable. We recommend getting multiple bids for those opportunities that require greater upfront investment.

Replace 100W HID wall pack with LED	Est. annual savings	\$38.11
The exterior security lighting is done with wall pack HID lamps and magnetic ballasts. Installing a new LED fixture will reduce energy consumption 60% -70% while providing similar light levels for security. Some wall pack LED light fixtures, known as full-cutoff, shine the light down to increase the light levels where it is needed versus flooding the area (and potentially bothering your neighbors). LEDs also have a longer life which saves on bulb replacement maintenance costs.	Est. Total Cost	\$130
	Estimated Payback	2.5 years
	Est. Rebate	\$34.80
	Quantity	1
Replace 150W incandescent bulbs with LED	Est. annual savings	\$60.84
Incandescent lights are the least efficient lighting source with most of their energy given off as heat rather than light. LED lights consume 90% less energy to produce the same amount of light. Since LED lamps give off less heat, they can also reduce cooling costs. LEDs also last much longer before needing replacement.	Est. Total Cost	\$20
	Estimated Payback	0.08 year
	Est. Rebate	\$15.00
	Quantity	2
Replace 8' 59W T8 lamps with two (2) 4' Type B TLEDs	Est. annual savings	\$246.50
This method of converting your fluorescent fixture to LED requires an electrician to remove or bypass the ballast for the new LED lamps to work. Benefits of Type B LED T8 lamps include greater efficiency than plug-and-play lamps and avoided future ballast maintenance. This is the preferred method of retrofit if you have old or incompatible ballasts that are frequently requiring replacement. Once this retrofit is performed, fluorescent T8 lamps will no longer work inside the fixtures.	Est. Total Cost	\$2,040
	Estimated Payback	5.7 years
	Est. Rebate	\$632.40
	Quantity	34

Recommendations - continued

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Recycle Old Refrigerator	Est. annual savings	\$91.50
Refrigerators consume a great deal of energy, especially older models. Consider having units that are not used very much recycled to remove this power sink from the grid and your electric bill. Your utility offers a rebate to have working units picked up by a third party organization and recycled.	Est. Total Cost	\$0
	Estimated Payback	0.5 year
	Est. Rebate	\$50.00
	Quantity	1
Replace Top-Bottom Refrigerator with ENERGY STAR Unit	Est. annual savings	\$734.61
There is an old refrigerator in your facility that consumes a large amount of electricity. Units that are avocado green, gold or brown in color are particularly bad and should be replaced. Sub-metering to measure use can help determine existing use and potential savings with an upgraded model.	Est. Total Cost	\$700
	Estimated Payback	1 year
	Est. Rebate	\$0.00
	Quantity	1

Free Upgrades Received Today

The following products were installed and/or provided free of charge on behalf of Otter Tail Power Company to help you start saving immediately. The annual savings figures are estimates based on typical usage patterns, baseline equipment and electric rates.

Install Value	Qty.	Item	Annual Savings*
\$9.00	6	Domestic Hot Water Pipe Insulation (feet)	\$30.12

Annual Electric Savings:
301 kWh (kilowatt hours)

Total Estimated
Annual Energy
Savings:

\$30

* Savings based on typical usage

Comments



Incandescent Flood Bulbs

Replace with LED bulbs.

Next Steps

You have taken the first step towards greater energy efficiency in your business. Now make the opportunities described in this report a reality by following the graphic below.



3

Develop your projects.

When ready, contact your energy professional for additional advice and help developing and reviewing proposals.

2

See what measures fit your budget.

Use this report to set target dates for items from your investment opportunities.

1

Review your opportunities.

Follow up with your energy professional with any questions you may have.