

LED Lighting Rebates

Drew Martig

Morris – Energy Management Rep

LIGHTING REBATES—TERMS & CONDITIONS

Retrofit & new construction

- Highly encourage Design Lights Consortium/Energy Star product.
- Residential qualify for hard-wired retrofits only. No screw-in bulb rebates.
- Screw-in bulbs purchased through residential lighting program retailers at marked down prices do not qualify for rebates.
- Sports lighting does not qualify.
 - Essentially no coincidental demand savings
 - Very low operating hours, low kWh savings
- Otter Tail accepts no responsibility for light output.
- Any disposal costs are responsibility of the customer.
- Minimum rebate is \$20.00. Maximum is 75% of the total cost of the project

SOUTH DAKOTA NEW CONSTRUCTION LIGHTING REBATES

New construction high-efficiency lighting

LED technology	Wattage	Rebate per fixture or lamp
Indoor LED fixture	<30	\$10.00
	30 to 49	\$15.00
	50 to 79	\$25.00
	80 to 99	\$30.00
	>99	\$50.00
Outdoor LED fixture	<30	\$5.00
	30 to 49	\$7.50
	50 to 79	\$10.00
	80 to 99	\$15.00
	>99	\$20.00



Screw-in indoor LED	<10	\$1.00
	10 to 24	\$2.25
	25 to 49	\$5.00
	50 to 75	\$10.00
Screw-in outdoor LED	<10	\$1.75
	10 to 24	\$1.00
	25 to 49	\$2.50
	50 to 75	\$4.00
Occupancy/daylight sensing controls		\$100/connected kW

SOUTH DAKOTA LIGHTING RETROFIT REBATES

Replacement lighting

Existing	Replaced with	Rebate per watt saved
Low-efficiency incandescent	Screw-in LED indoor (with and without removal prevention devices)	10¢
	Screw-in LED outdoor (with and without removal prevention devices)	5¢
	Hard-wired LED indoor	25¢
	Hard-wired LED outdoor	15¢
Low-efficiency fluorescent	Hard-wired LED	25¢
Standard T8 fluorescent lamps	LED lamp-only retrofit	15¢
Mercury-vapor lamps	Hard-wired LED indoor	25¢
	Hard-wired LED outdoor	15¢
	Screw-in LED indoor	10¢
	Screw-in LED outdoor	5¢
Standard HID	Hard-wired LED indoor	25¢
	Hard-wired LED outdoor	15¢
	Screw-in LED indoor	10¢
	Screw-in LED outdoor	5¢
Exit lighting fixtures	High-efficiency exit lighting (based on maximum demand reduction of 20 watts/fixture)	25¢
Occupancy/daylight sensing controls		\$100/connected kW



MINNESOTA NEW CONSTRUCTION LIGHTING REBATES

New construction high-efficiency lighting

LED technology	Wattage	Rebate per fixture or lamp
Indoor LED fixture	<30	\$15.00
	30 to 49	\$25.00
	50 to 79	\$35.00
	80 to 99	\$50.00
	>99	\$75.00
Outdoor LED fixture	<30	\$10.00
	30 to 49	\$15.00
	50 to 79	\$20.00
	80 to 99	\$25.00
	>99	\$30.00



Screw-in indoor LED*	<10	\$1.25
	10 to 24	\$3.50
	25 to 49	\$8.00
	50 to 75	\$13.50
Screw-in outdoor LED*	<10	\$1.00
	10 to 24	\$1.50
	25 to 49	\$3.50
	50 to 75	\$6.00
Occupancy/daylight sensing controls		\$200/connected kW
Luminaire level lighting controls		\$200/connected kW

* Screw-in bulb rebates are available for commercial customers only.

MINNESOTA LIGHTING RETROFIT REBATES

Replacement lighting

Existing	Replaced with	Rebate per watt saved
Low-efficiency incandescent	Screw-in LED indoor (with and without removal prevention devices)	20¢
	Screw-in LED outdoor (with and without removal prevention devices)	10¢
	Hard-wired LED indoor	60¢
	Hard-wired LED outdoor	40¢
Low-efficiency fluorescent	Hard-wired LED	60¢
Standard T8 fluorescent lamps	LED lamp-only retrofit	40¢
Mercury-vapor lamps	Hard-wired LED indoor	60¢
	Hard-wired LED outdoor	40¢
	Screw-in LED indoor	40¢
	Screw-in LED outdoor	20¢
Standard HID	Hard-wired LED indoor	60¢
	Hard-wired LED outdoor	40¢
	Screw-in LED indoor	40¢
	Screw-in LED outdoor	20¢
Exit lighting fixtures	High-efficiency exit lighting (based on maximum demand reduction of 20 watts/fixture)	60¢
Occupancy/daylight sensing controls		\$200/connected kW
Luminaire level lighting controls		\$200/connected kW



EXAMPLE LIGHTING RETROFIT REBATE - MN

- Example: Community Building with (36), 4 lamp F32T8 Fluorescent 2'x4' Troffers.
- We will propose to use existing fixtures, with 14-watt LEDs and bypass the ballasts.
- 32 watts existing
- 14 watts installed
- 18 watts saved
- 18 watts saved
- X \$0.60 per watt saved
- = \$10.80 per lamp
- X 144 lamps
- = \$1,555.20 total rebate!

MN LIGHTING REBATE ESTIMATE

<i>Otter Tail Power Company</i>		ESTIMATED: Lighting Retrofit Energy Savings												
<i>Energy Management Representative</i>														
Prepared By: Drew Martig		2/1/2024		Customer & Location: Community Building										
								Energy Rate (\$ per kWh)		\$ 0.110				
Existing System								Proposed System						
Area / Location	Existing Fixture	Fixture count	Watts/Fixture	Hours Per Year	Total kW Demand	Total Annual kWh	Annual Energy Cost	Proposed System	Fixture count	Watts/Fixture	Hours Per Year	Total kW Demand	Total Annual kWh	Annual Energy Cost
Office	Fluorescent	144	32.00	2,080	4.608	9,585	\$1,054	LED hard-wired (interior)	144	14.00	2,080	2.016	4,193	\$461
Estimated Annual Cost of Electricity (Existing System)							\$1,054	Estimated Annual Cost of Electricity (Proposed System)						\$461
Electric Energy Use kWh (Existing System)							9,585	Electric Energy Use kWh (Proposed System)						4,193
Electric Demand kW (Existing System)							4.6	Electric Demand kW (Proposed System)						2.0

MN SIMPLE PAYBACK EXAMPLE

Potential Estimated Energy Savings Per Year	\$593.05
Simple Payback in Years (based on energy savings only)	4.81
Total Estimated Project Cost	\$2,850.00
Rebate Estimate	\$ 1,555.20
Final Estimated Project Cost	\$1,294.80
Final Payback in Years (based on energy savings only)	2.18

Annual Electric Energy Use Reduction kWh	5,391
Electric Demand kW Reduction	2.6
Cost of Waiting Per Month	\$49
<i>The cost of waiting doesn't include maintenance of existing fixtures for lamp & ballast replacements</i>	

EXAMPLE LIGHTING RETROFIT REBATE - SD

- Example: Community Building with (36), 4 lamp F32T8 Fluorescent 2'x4' Troffers.
- We will propose to use existing fixtures, with 14-watt LEDs and bypass the ballasts.
- 32 watts existing
- 14 watts installed
- 18 watts saved
- 18 watts saved
- X \$0.25 per watt saved
- = \$ 4.50 per lamp
- X 144 lamps
- = \$ 648.00 total rebate!

SD LIGHTING REBATE ESTIMATE

<i>Otter Tail Power Company</i>		ESTIMATED: Lighting Retrofit Energy Savings													
Prepared By: Drew Martig 2/12/2024				Customer & Location: COMMUNITY BUILDING											
										Energy Rate (\$ per kWh)		\$ 0.105			
Existing System								Proposed System							
Area / Location	Existing Fixture	Fixture count	Watts/Fixture	Hours Per Year	Total kW Demand	Total Annual kWh	Annual Energy Cost	Proposed System	Fixture count	Watts/Fixture	Hours Per Year	Total kW Demand	Total Annual kWh	Annual Energy Cost	
Fluorescent	32.00	144	32.00	4,439	4.608	20,455	\$2,148	LED hard-wired (indoor)	144	14.00	4,439	2.016	8,949	\$940	
Estimated Annual Cost of Electricity (Existing System)							\$2,148	Estimated Annual Cost of Electricity (Proposed System)							\$940
Electric Energy Use kWh (Existing System)							20,455	Electric Energy Use kWh (Proposed System)							8,949
Electric Demand kW (Existing System)							4.6	Electric Demand kW (Proposed System)							2.0

SD SIMPLE PAYBACK EXAMPLE

Potential Estimated Energy Savings Per Year	\$1,208.12
Simple Payback in Years (based on energy savings only)	2.36
Total Estimated Project Cost	\$2,850.00
Rebate Estimate	\$ 648.00
Final Estimated Project Cost	\$2,202.00
Final Payback in Years (based on energy savings only)	1.82

Annual Electric Energy Use Reduction kWh	11,506
Electric Demand kW Reduction	2.6
Cost of Waiting Per Month	\$101
<i>The cost of waiting doesn't include maintenance of existing fixtures for lamp & ballast replacements</i>	

THANK YOU!

