

Commercial Lighting Program

Illuminating Engineering Society



Presented by Toban Vexzon



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Outline

- Incentive changes
- Review the new Power Smart Lighting application (PSL)
- Review PSL appendices
- Upcoming



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Electrical permits

Electrical permit incentive

\$125 per eligible Power Smart* Commercial Lighting Program application.

- Electrical permits are required for:
 - Fixtures (including exit signs)
 - LED specialty lamps
- Why? Different technologies are not always compatible.
- Some unknown failures → socket? ballast type/manufacturer? fixture condition? lamps?
- Electrical Inspectors ensure lighting is installed according to codes and standards
- No electrical permit required for 120V medium base lamps (E26)



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Removed: LED specialty lamps for CFL

~~LED specialty lamps for CFL ballast^{4,5}~~

LED lamp power	Rated lamp hours	Incentive/lamp
Any	25,000-44,999	\$8
	≥ 45,000	\$15

- The online CLP Technical Specification Guide has standards to ensure safety and quality

5.8.3 Construction Specification

Measure applies to lamps with 4 pin G24q/GX24q base.

Lamps must have the hardware key feature implemented in the base of the lamp.

Lamps with 2 pin base working with magnetic ballast are not eligible.



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Revised: Pot light to LED fixtures

~~Pot lights with a screw-in socket
or CFL fixture to LED fixture~~

\$35/fixture



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CFL fixture (including CFL pot lights) to LED fixture

Existing fixture	Incentive/LED fixture
$\leq 60W$	\$10

- Over 60W is a custom calculation



Incandescent & halogen fixtures (including pot lights) to LED fixtures

Existing fixture	LED max. wattage	Incentive/LED fixture
$\leq 60\text{W}$	15	\$10
61-150W	30	\$35
151-300W	85	\$65
301-500W	200	\$90
501-999W	375	\$125
$\geq 1000\text{W}$	700	\$270

LED fixture upgrades from T8 fluorescents¹⁰

T8 lamp x feet	LED max. wattage	Incentive/ LED fixture
1 x 4	22	\$10
2 x 4	40	\$20
3 x 4	58	\$30
4 x 4	72	\$40
2 x 8 (non-HO)	75	\$35

- Increased → LED max. wattages to match the market
E.g. +2 +5 +8 +2
- Greater than LED max. wattage or 1-for-1 replacement,
incentive is custom and capped at prescriptive



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LED fixture upgrades from T12 fluorescents¹⁰

T12 lamp x feet	LED max. wattage	Incentive/ LED fixture
1 x 4	26	\$15
2 x 4	40	\$35
4 x 4	58	\$90
2 x 8 (non-HO)	75	\$60

- Increased → LED max. wattages to match the market
E.g. +1, +5, +8
- Greater than LED max. wattage or 1-for-1 replacement,
incentive is custom and capped at prescriptive



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Neon signage upgrades ending

- Incentive ends November 30, 2017
- Use appendix E – LED backlit signage
- Incentives for non-neon upgrades (such as T12HO) will continue



T12 → T8 fluorescent incentives ending

- Incentive ends November 30, 2017
- Why? T8 fluorescent is the base case technology
- T12 Upgrade options are:
 - 1) LED fixtures (prescriptive incentives)
 - 2) LED T8 linear lamps (prescriptive incentive on the lamps only)



Supplier Participation Agreement

- Required for all contractors/suppliers/retailers who want to participate in the CLP effective June 1, 2017
- Complete the fillable PDF online that asks for business name and contact information
- www.hydro.mb.ca/contractors/pdfs/supplier_participation_agreement.pdf
- Email a scanned copy (need a signature) to SupplierAgreements@hydro.mb.ca



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POWER SMART
FOR BUSINESS



Commercial Lighting Program

PROGRAM GUIDE



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Introduction

Manitoba Hydro's Commercial Lighting Program (CLP) is available to Manitoba Hydro's Electrical General Service Rate customers in the commercial, industrial, and agricultural sectors. The CLP offers financial incentives for installations of eligible energy efficient lighting systems.

If you have questions about the Commercial Lighting Program, contact your Manitoba Hydro account representative or the CLP directly:

Call 204-360-3676 (Winnipeg) or 1-888-624-9376
Email powersmartforbusiness@hydro.mb.ca or visit hydro.mb.ca/your_business/lighting.

Renovation projects

The CLP incentives apply to renovation projects.

New buildings & new additions to existing buildings: Interior lighting

The Power Smart New Buildings Program provides technical guidance and financial incentives for designing, constructing, and operating new, energy efficient buildings in Manitoba.

New commercial construction projects in Manitoba may be eligible for incentives and building designation through the Power Smart New Buildings Program. For more information, contact the New Buildings Program.

New buildings & new additions to existing buildings: Exterior lighting only

Your new building or addition may qualify for incentives for exterior lighting through the New Buildings Program or the Commercial Lighting Program.



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How to participate

All projects require review and written pre-approval by Manitoba Hydro prior to purchasing or installing new lighting or removing any existing lighting in order to be eligible for an incentive. Projects that begin before Manitoba Hydro's written pre-approval are not eligible for incentives.

1. Determine lighting requirements

Consult an electrical contractor, lighting designer, electrical code authority (such as an electrical inspector), or your Manitoba Hydro account representative for assistance.

2. Qualify

You must meet the customer eligibility criteria.

3. Contact Manitoba Hydro for a Lighting incentive application

Your Manitoba Hydro account representative will assist you in completing the application and answer any questions you have. Ensure you are using the most recent version of our program application form and incentive sheet.

4. Select eligible products

The lighting product(s) you plan to purchase must be eligible for an incentive. The lighting product is eligible if the product is on the CLP's Eligible Product List or if the product is on the DesignLights Consortium (DLC) Qualified Products List and meets the program technical specifications guide. If using products on the DLC complete and attach Appendix B to the application. If not, ask your lighting supplier to submit a Product Approval Request to get the product approved, or change to an approved product.

You must meet the Product eligibility criteria.

5. Complete application

Complete the lighting application that applies to your project.

- **Renovation:** A lighting project that upgrades an existing lighting system in a commercially billed facility. Excluding attics, boiler/electrical/mechanical rooms, crawl spaces, apartment suites, new buildings, new additions to an existing building, temporary lighting, and storage spaces.
- **New construction exterior lighting:** A lighting project that installs energy efficient lighting to the exterior or parking area of a new building, or in a new addition to an existing building, or where no previous lighting existed. To complete a new construction exterior lighting application, please refer to the instructions on page 8. Incentives for new building exterior lighting will be calculated by Manitoba Hydro based on the Manitoba Energy Code for Buildings (MECB).

Your planned project must meet the project eligibility criteria and the installation requirements.

Ensure you provide all requested information on the application form, sign and date the application, and attach any relevant information and appendices.

Incomplete applications will be declined.

6. Submit application to Manitoba Hydro

This can be done by the customer or the contractor on the customer's behalf. It is the customer's responsibility to ensure that the lighting application is received by Manitoba Hydro. All applications for pre-approval must be submitted and received by Manitoba Hydro within 10 business days of the customer signing the application form. Please keep a copy of your lighting application form for your records. Application forms can be submitted to your Manitoba Hydro account representative or The Commercial Lighting Program. Your Manitoba Hydro account representative may conduct a pre-inspection or walk-through of the facility to verify the existing lighting.



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7. Make any necessary changes

Contact your Manitoba Hydro account representative to modify the original application. Manitoba Hydro must pre-approve any changes to the application before the existing lighting is removed for any changes to be eligible for incentives.

8. Project pre-approval

Manitoba Hydro issues written pre-approval to the customer for your lighting project. Do not start your project until written pre-approval has been received. If your project has not received written pre-approval within 14 business day of submitting your application to Manitoba Hydro, please contact us in writing at powersmartforbusiness@hydro.mb.ca to ensure your application has been received or at 204-360-3676.

9. Lighting purchase and installation

Purchase and install the new lighting within one year (12 months) of pre-approval by Manitoba Hydro.

10. Completion paperwork

After your new lighting is installed and operational, and within one year of pre-approval of your project, send your Manitoba Hydro account representative the following completion paperwork:

- Certificate of Inspection (within Winnipeg) or Certificate of Approval (outside Winnipeg)
- Filled-out, signed, and dated completion declaration & questionnaire.
Download *How to take part* at hydro.mb.ca/your_business/lighting/how_to_take_part.
- Itemized invoice(s) detailing:
 - date of purchase (must be after application written pre-approval date from Manitoba Hydro)
 - vendor's name, customer's name, and install address
 - manufacturer name and model number of each product (which must match the model number on the Eligible Product List or the Manitoba Hydro approved products on the DLC Qualified Products List)

- product description
- product quantities
- per unit product costs and total, separate from design, labour, and taxes
- labour (if applicable)

- All completion paperwork must be submitted to Manitoba Hydro within 10 business days of the customer signature.

Customers who don't submit completion paperwork, or who submit incomplete paperwork, will not be eligible for an incentive if written pre-approval was given more than a year ago. If we have questions at pre-approval, or close out during application period you must respond within 14 business days or the application will be canceled.

11. Post-inspection

Your Manitoba Hydro account representative will contact you and will conduct a post-inspection to confirm that all products were installed in accordance with the pre-approved application. The incentive is subject to change based on finalization of your application and all applicable paperwork.

12. Incentive processed

Once all completion paperwork is received by Manitoba Hydro the incentive will be adjusted based on invoicing, inspections, final products installed, product quantities, energy savings, and all applicable paperwork. Manitoba Hydro finalizes and processes your incentive. A cheque or a credit on your Manitoba Hydro bill is issued.



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T5 fluorescent lighting systems

T5 HO fixtures

Product	Incentive
1 x 4' T5 HO: new fixture	\$10/fixture
2 x 4' T5 HO: new fixture	\$20/fixture
3 x 4' T5 HO: new fixture	\$30/fixture
4 x 4' T5 HO: new fixture	\$50/fixture
5 x 4' T5 HO: new fixture	\$60/fixture
6 x 4' T5 HO: new fixture	\$70/fixture

46" T5 HO EE lamps

Product	Incentive
46" 44W T5 EE lamp	\$3/lamp
46" 47W T5 EE lamp	\$2/lamp
46" 49W T5 EE lamp	\$1/lamp

For T5 regular and other T5 HO lamp combinations, contact Manitoba Hydro.

Building where the renovation took place must have been in use/occupied for at least two years.

Final incentive amount may be reduced depending on existing lighting equipment, final product installed, product application, hours of use or energy savings from upgrade.

See the Commercial Lighting Program application form for a complete listing of terms and conditions.

PAYS (Pay-As-You-Save) financing may be available.

How to participate

- Manitoba Hydro must pre-approve your project **before** you purchase or install any lighting equipment. Incentives will not be issued if you have already started your project.
- New lighting must be installed and final paperwork received within one year of Manitoba Hydro's approval.

- ✓ **Determine lighting requirements.**
Consult an electrical contractor, or lighting designer, for assistance.
- ✓ **Ensure the lighting product you plan to install is on the CLP's Eligible Product List.**
If this product is not on the list, please contact your lighting agent before proceeding.
- ✓ **Contact Manitoba Hydro for a CLP application for your project.**
- ✓ **Submit the completed application to Manitoba Hydro for review.**
A Manitoba Hydro representative may conduct a pre-inspection/walk-through to view the existing lighting.
- ✓ **Manitoba Hydro issues pre-approval for your lighting application.**
- ✓ **Lighting can now be purchased and installed.**
Once lighting is operational send Manitoba Hydro:
 - **Certificate of Inspection** (within Winnipeg)
 - or **Certificate of Approval** (outside Winnipeg)
- Filled-in **Completion Declaration** (blank supplied by Manitoba Hydro)
- Filled-in **Completion Questionnaire** (blank supplied by Manitoba Hydro)
- **Itemized invoices** detailing:
 - date of purchase (must be after application written pre-approval date from Manitoba Hydro);
 - vendor's name, customer's name, and install address;
 - manufacturer name and model number of each product (which must match the model number on the Eligible Product List or on the DLC Qualified Product List);
 - product description;
 - product quantities;
 - per unit product costs and total, separate from design, labour, and taxes;
 - labour (if applicable).
- ✓ **Manitoba Hydro arranges a post-inspection.**
- ✓ **Manitoba Hydro finalizes and processes your incentive.**
Receive a cheque or a credit on your Manitoba Hydro bill after the post-inspection is complete and your application is approved.

For more information, contact your Manitoba Hydro Energy Services Advisor or:

204-360-3676 in Winnipeg or 1-888-624-9376
powersmartforbusiness@hydro.mb.ca
hydro.mb.ca/psfb

Power Smart for Business guidelines and incentive levels are subject to change without notice. February 2017.
Available in accessible formats upon request.



- How to participate also on the incentives sheet



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Program guidelines and policies

Customer eligibility

To be eligible for a financial incentive, your company must:

- Be a Manitoba Hydro commercial customer billed at the Electrical General Service Rate;
- Use the lighting system in a commercial, not residential capacity;
- The building must be an existing building that has been continuously occupied and operated for a minimum of two consecutive years immediately prior to the application to this program. New Buildings and additions do not qualify with the exception of exterior lighting;
- Operate the lighting system for a minimum of 2,000 hours per year to be eligible for posted incentives. Lighting operation between 1,000 and 1,999 hours per year may qualify for prorated incentives;
- Own the lighting and be the end user of the lighting (i.e. not a lighting vendor, manufacturer, or installer);
- Keep the lighting installed, as specified on the application, for a minimum of three years after the date of the incentive payment.
- Lighting fixtures must be permanently affixed to the building. Temporary lighting does not qualify.
- All existing lighting must be removed and properly recycled.

Note: If your company has received financial assistance, either in whole or in part, for the lighting installation from any federal, provincial, or other Manitoba Hydro energy efficiency funding programs, it may not be eligible under

Project eligibility

1. Obtain written pre-approval from Manitoba Hydro prior to removing existing lighting and ordering, purchasing, or installing new lighting to be eligible for an incentive.
2. Only use products from Manitoba Hydro's Eligible Product List, or LED fixtures approved using Appendix B: DesignLights Consortium LED Fixture Verification, or those approved by Manitoba Hydro's lighting program engineer. All products must be new and not used.
3. Supply Manitoba Hydro with all the required and requested information, including completing appendices and attaching required documentation. Incomplete applications will not be pre-approved.
4. All incentives are limited to 100 per cent of the actual cost of the lighting equipment paid for by the recipient of the incentives, including taxes (excluding design, labour or other costs).

Lighting equipment means the lighting technology or device itself, such as the fixture, and does not extend to wiring, cables, or other materials related to or used to install the device.

The maximum eligible incentive is \$250,000 for all electrical measures included in your lighting project.

If an incentive is assigned by a customer to the vendor or installer of the lighting, the incentive is limited to the actual cost of the lighting equipment to the



5. Projects that are not eligible for renovation incentives include newly constructed buildings (interior or exterior); additions to existing buildings; lighting installed in a previously unlit area of an existing building; residentially billed spaces; projects with limited energy savings; projects with rented or temporary lighting; and other projects as determined by the program.
6. In retrofit situations where an appreciable portion of the existing lighting is inoperative, Manitoba Hydro reserves the right to limit lighting power density and incentives to the active portion only.
7. Manitoba Hydro calculates custom incentives using established program baseline technologies which may differ from a customer's existing system. In renovations where the customer is applying for a custom incentive. All incentives are capped at the lesser of energy savings, related prescriptive incentives, or material costs. For existing and proposed light levels, the mean lumens of a properly maintained system may be used to determine the appropriate light levels. For mean lumens of each technology, refer to the Lamp Ratings Tables in the Technical Specification Guide.

Light meter measurements of the existing installation will not be used since these levels are largely impacted by the age of the lamps, the regularity of fixture cleaning, etc., which may result in light meter readings that are much lower than that of a properly maintained system.

Customers will not receive incentives for demand

Product eligibility

1. All eligible products must meet the CLP's technical specifications in the current online CLP Technical Specification Guide here: hydro.mb.ca/your_business/lighting/pdf/technical_spec_guide.pdf

For LED fixtures a DLC listing may be acceptable. See the Appendix B form here: hydro.mb.ca/your_business/lighting/pdf/appendix_b_dlc_verification.pdf

2. Lighting must be new, owned by the customer (not rented, leased, etc.) approved by the Canadian Standards Association (CSA), or certified by an accredited independent organization, and must conform to CSA standards for the intended application.
3. It is the responsibility of the customer to ensure the lighting is in compliance with appropriate industry, legal, safety, and other standards, guidelines, or recommendations which apply to the lighting application and use. Consult an electrical contractor or lighting designer to determine application specific lighting requirements such as uniformity, colour temperature, light levels, and environmental aspects such as ingress protection (IP), corrosion, etc. The incentive may be revoked if any of the eligibility criteria has been violated.
4. Products intended for exterior application must be rated for satisfactory operation from -40°C to +40°C (-40°F to +104°F).
5. For eligible technologies and product types, view the

How to complete an application

PF2956(2)/1 Rev 17 02



Commercial Lighting Program Renovations Incentive Application

Application no.
PSL

Customer information

Business name ABC Commercial Company		Contact name Jane Smith	
Mailing address 123 Any Street	City/town AnyCity	Province MB	Postal code A1B 2C3
Phone no. (204) 555-1234	Fax no. (204) 555-1111	Email janesmith@mail.com	

Installer information

Company name DEF Electrical Company		Contact name Jack Gold	
Mailing address 456 Some Street	City/town AnyTown	Province MB	Postal code D4E 5F6
Phone no. (204) 999-5678	Fax no. (204) 999-9876	Email DEFelectric@mail.com	

Project site information

Building use description office and warehouse		GST registration no.	
Building address (if different from Customer mailing address)		City/town	Province Postal code
EXPECTED START 2017 08 01	EXPECTED COMPLETION 2017 11 30	Manitoba Hydro account no. 7654321 6123456	

Customer acknowledgment

(Read cover page of this Application before signing.)

I, the Customer, have read and understood the Agreement and the Program Eligibility Criteria printed on the cover page of this Application. I agree to the listed terms and conditions and warrant that I fully qualify and have complied with such terms and conditions.

☐ I am also applying for the Power Smart* for Business PAYS Financing Program.

☒ I understand this incentive amount is an ESTIMATE only and that this application must be PRE-APPROVED by MH BEFORE ordering/purchasing lighting or starting work on the project.

Signed by (Customer)	Jane Smith	3	yyyy mm dd 2017 07 01
Print name	Jane Smith		
Print title	President		

Personal information is being collected under the authority Program Activity and The Manitoba Hydro Act. The purpose is to provide incentives to commercial customers for upgrading their lighting and to acquire specific related information to calculate energy and demand savings resulting from the program. Other uses and disclosures may be to participating contractors, electronic system for program tracking, Public Utilities Board for statistical reporting, external auditors as part of a sample audit, government entities for reporting purposes and Manitoba Hydro officials on a "need to know" basis. The personal information is protected by the Protection of Privacy provisions of The Freedom of Information and Protection of Privacy Act. If you have any questions about the collection, contact Power Smart for Business at Manitoba Hydro, 360 Portage Ave., Winnipeg, MB R3C 0G8 or telephone 1-204-360-3676.

Cheque payment information (Read the back of this Application before signing.)

Payee name DEF Electrical Company		TOTAL INCENTIVE PAYABLE (subject to final inspection and submission of invoices)		\$ 40,474 68
Cheque mailing address 456 Some Street	City/town AnyTown	Province MB	Postal code D4E 5F6	

Voluntary assignment**

(Do not sign if the Incentive is to be paid to the Customer.)

I, the Customer, do hereby irrevocably direct and authorize Manitoba Hydro to pay the Incentive to the vendor or Installer named in the box titled "CHEQUE PAYMENT INFORMATION".

Signed by (Customer)	Jane Smith	6	yyyy mm dd 2017 07 01
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** Note: Manitoba Hydro reserves the right to apply the Incentive first to any outstanding account balances or loans of the Customer and to pay the balance, if any, to the vendor or Installer to whom the Customer has assigned the Incentive.

MANITOBA HYDRO USE ONLY

Pre-inspection (RR)	Receipt (MP)	Disbursements	Due date
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Commercial Lighting Program
Summary of Lighting IncentivesApplication no.
PSL**8**

Instructions: Complete this page last.

1. LED fixtures & retrofit kits

1. \$ 11,390.00

2. LED lamps

2. \$ 2,050.00

3. T8 fluorescent lighting systems

3. \$ 110.00

4. T5 fluorescent lighting systems

4. \$ 350.00

5. T8 & T5 energy efficient lamps

5. \$ 66.00

6. Custom option

6. \$

7. Lighting system controls and occupancy sensors *(attach Appendix D)*

7. \$

8. LED backlit signage *(attach Appendix E)*

8. \$

9. Electrical permit incentive

9. \$ 125.00

TOTAL INCENTIVE PAYABLE
(carry this total to front of Application) ▶

\$ 14,091.00

9



1. LED Fixtures & Retrofit Kits

Instructions: Use this page for fixtures with prescriptive incentives. Refer to incentive sheet for incentive amounts.

Proposed system must list location number from Existing system table. System incentive is equal to the number of fixtures multiplied by incentive per proposed fixture.

If the same product is being installed in different locations, specify annual hours of operation for each location.

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Reasons for change
Illumination: ☐ more ☒ same ☐ less ☒ Need for white light ☒ Reduce maintenance ☒ Reduce lighting bill ☐ Building renovation ☐ Improve aesthetics

EXISTING SYSTEM									
Location no.	Location	Usage	Fixture/lamp type	Lamp input power (W)	Lamps/fixture	Fixture input power (W)	No. of fixtures	Annual hours of operation	
1.	Building Exterior - Entrance	<input type="checkbox"/> Indoor <input checked="" type="checkbox"/> Outdoor	Metal Halide	400 W	1	400 W	2	5840 h	
2.	Building Exterior - Walls	<input type="checkbox"/> Indoor <input checked="" type="checkbox"/> Outdoor	HPS	250 W	1	300 W	16	5840 h	
3.	Main Warehouse	<input checked="" type="checkbox"/> Indoor <input type="checkbox"/> Outdoor	T12/4 foot	34 W	4	148 W	87	4380 h	
4.		<input type="checkbox"/> Indoor <input type="checkbox"/> Outdoor		W		W		h	
5.		<input type="checkbox"/> Indoor <input type="checkbox"/> Outdoor		W		W		h	
6.		<input type="checkbox"/> Indoor <input type="checkbox"/> Outdoor		W		W		h	
7.		<input type="checkbox"/> Indoor <input type="checkbox"/> Outdoor		W		W		h	
8.		<input type="checkbox"/> Indoor <input type="checkbox"/> Outdoor		W		W		h	

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PROPOSED SYSTEM												
Location no. ¹	Manufacturer	Model no.	Approval		Fixture type	Fixture input power (W)	Fixture initial Lumens (L)	Material cost (\$)	No. of fixtures	Incentive/proposed fixture	System Incentive (\$)	Annual hours of operation
			EPL	DLC								
1	AAA Light	LED-38-44	✓		Flood light	85 W	9000 L	\$ 425	2	x \$ 270	\$ 540	5840 h
2	BBB Light	LEDR-Z-B		✓	wall pack	75 W	6000 L	\$ 375	16	x \$ 200	\$ 3,200	5840 h
3	CCC Light	MCF3842	✓		highbay	47 W	4700 L	\$ 175	25	x \$ 90	\$ 2,250	4380 h
3	CCC Light	FLED-66-99	✓		highbay	55 W	5500 L	\$ 200	60	x \$ 90	\$ 5,400	4380 h
						W	L	\$		x \$	\$	h
						W	L	\$		x \$	\$	h
						W	L	\$		x \$	\$	h
						W	L	\$		x \$	\$	h

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15

¹ List location number from Existing System table above.

TOTAL INCENTIVE ► 1. \$ 11,390

NEW

2. LED Lamps including line voltage, specialty, and low voltage

Instructions: Use this page for LED lamps with prescriptive incentives. Refer to incentive sheet for incentive amounts.

Proposed system must list location number from Existing system table.

If the same product is being installed in different locations, specify annual hours of operation for each location.

EXISTING SYSTEM						
Location no.	Location description	Usage	Lamp type (INC, HAL, CFL, T8, MH, HPS)	Watts	Quantity	Annual hours of operation
1.	hallways	<input checked="" type="checkbox"/> Indoor <input type="checkbox"/> Outdoor	Halogen	60 W	27	5840 h
2.	stairwells - north side	<input checked="" type="checkbox"/> Indoor <input type="checkbox"/> Outdoor	Halogen	75 W	42	8760 h
3.	stairwells - south side	<input checked="" type="checkbox"/> Indoor <input type="checkbox"/> Outdoor	Incandescent	100 W	20	8760 h
4.	back room - warehouse	<input checked="" type="checkbox"/> Indoor <input type="checkbox"/> Outdoor	T8 fluorescent	32 W	24	4380 h
5.	lobby	<input checked="" type="checkbox"/> Indoor <input type="checkbox"/> Outdoor	Metal halide	400 W	5	8760 h
6.		<input type="checkbox"/> Indoor <input type="checkbox"/> Outdoor		W		h
7.		<input type="checkbox"/> Indoor <input type="checkbox"/> Outdoor		W		h
8.		<input type="checkbox"/> Indoor <input type="checkbox"/> Outdoor		W		h
9.		<input type="checkbox"/> Indoor <input type="checkbox"/> Outdoor		W		h
10.		<input type="checkbox"/> Indoor <input type="checkbox"/> Outdoor		W		h
11.		<input type="checkbox"/> Indoor <input type="checkbox"/> Outdoor		W		h
12.		<input type="checkbox"/> Indoor <input type="checkbox"/> Outdoor		W		h
13.		<input type="checkbox"/> Indoor <input type="checkbox"/> Outdoor		W		h

PROPOSED SYSTEM											
Lamps								Incentive			Annual hours of operation
Location no.¹	Manufacturer	Model no.	EPL approved		Watts	Rated lamp hours	Quantity	Incentive/lamp	Total		
			Yes	No							
1	DDD Light	SV1-42-LX1	✓		10 W	25,000	27	x\$ 8	-\$ 216	5840	
2	EEE Light	D3-21-ST	✓		16 W	25,000	42	x\$ 14	-\$ 588	8760	
3	EEE Light	D3-21-ST	✓		16 W	25,000	20	x\$ 14	-\$ 280	8760	
4	FFF Light	RFG-112-T8-5K	✓		18 W	50,000	18	x\$ 9	-\$ 162	4380	
4	FFF Light	RFM-184-T8-3K	✓		12 W	50,000	6	x\$ 9	-\$ 54	4380	
5	GGG Light	M3-R4-31	✓		146 W	50,000	5	x\$ 150	-\$ 750	8760	
		20		21	W			x\$	-\$		
					W			x\$	-\$		
					W			x\$	-\$		
					W			x\$	-\$		
					W			x\$	-\$		
					W			x\$	-\$		
					W			x\$	-\$		

¹ List location number from Existing System table above.

TOTAL INCENTIVE ▶ 2. \$ 2,050

3. T8 fluorescent lighting systems

	EXISTING SYSTEM				
	Location	Lamps/fixture	Type	Watts/fixture (including lamps)	Fixture quantity
4 FOOT T12 SYSTEM	Lunch room	2	2 x 4 T12 Fluorescent	74 W	4
		4		148 W	
				W	
8 FOOT T12 SYSTEM	Warehouse	2	Slimline	135 W	7
		2	H0	205 W	
				W	
HID TYPE			Probe Start MH	W	
			Pulse Start MH	W	
				W	
INCANDESCENT or other, specify:				W	
				W	

PROPOSED T8 FIXTURES									
Manufacturer	Model no.	Lamps		Fixture		Incentive		Annual hours of operation	
		No./fixture	Length	Fixture quantity	Category ¹ (P or S)	Incentive/fixture	Total		
HHH Light	T8F-PRL-2	2	4 ft.	4	P	x \$ 5	-\$ 20	2800 h	
III Light	T8F-PM3-5	2	8 ft.	7	P	x \$ 5	-\$ 35	4380 h	
			ft.			x \$	-\$	h	
			ft.			x \$	-\$	h	
T8 FIXTURE TOTAL ▶ A						\$	55		

¹ Category: Premium (P) or Standard (S).

PROPOSED T8 BALLASTS										
Manufacturer	Model no.	Category ² (P or S)	Voltage	Input power	Lamps		Fixture		Incentive	
					No./fixture	Length	Ballasts/fixture	Fixture quantity	Incentive/fixture	Total
HHH Light	T8B-120-MZ	P	120V	60 W	2	4 ft.	1	4	x \$ 5	-\$ 20
III Light	T8B-120-D9	P	120V	120 W	2	8 ft.	2	7	x \$ 5	-\$ 35
			V	W		ft.			x \$	-\$
			V	W		ft.			x \$	-\$
T8 BALLAST TOTAL ▶ B						\$	55			

² Category: Premium (P) or Standard (S).

A	T8 FIXTURE TOTAL	B	T8 BALLAST TOTAL
\$	55	+	\$ 55

TOTAL INCENTIVE ▶ 3.

\$ 110

26

4. T5 fluorescent lighting systems

EXISTING SYSTEM					
Location	Lamps/fixture	Type	Watts/fixture (including lamps)	Fixture quantity	
4 FOOT T12 SYSTEM	2		74 W		
	4		148 W		
			W		
8 FOOT T12 SYSTEM	2	Slimline	135 W		
	2	H0	205 W		
			W		
HID TYPE	Warehouse	Probe Start MH	470 W	5	
	27	Pulse Start MH	W		
			W		
INCANDESCENT or other, specify:			W		
			W		

PROPOSED T5 SYSTEM											
Ballasts					Lamps		Fixture		Incentive		Annual hours of operation
Manufacturer	Model no.	Category ² (LH or SH)	Voltage	Input power	No./ fixture	Length	Ballasts/ fixture	Fixture quantity	Incentive /fixture	Total	
JLL Light	T5FL-LH-28	LH	120 V	360 W	6	4 ft.	2	5	x \$ 70	- \$ 350	4380
28			V	W		ft.			x \$	- \$	
			V	W		ft.			x \$	- \$	
			V	W		ft.			x \$	- \$	
			V	W		ft.			x \$	- \$	

² Category: Low Harmonics (LH) or Standard Harmonics (SH).

TOTAL INCENTIVE ► 4. \$ 350

29

5. T8 & T5 energy efficient lamps

PROPOSED SYSTEM									
Location	Existing lamp wattage	Lamps				Incentive		Annual hours of operation	
		T8 or T5	Manufacturer	Model no.	Input power	Quantity	Incentive/lamp		
Back assembly	32 W	T8	LLL Light	T8EEL-R-25	25 W	12	x \$1.50	- \$ 18	4380 h
Front assembly	54 W	T5	MMM Light	T5EEL-K-44	44 W	16	x \$3	- \$ 48	4380 h
30	W	31	32		W		x \$	- \$	h
	W				W		x \$	- \$	h
	W				W		x \$	- \$	h
	W				W		x \$	- \$	h

TOTAL INCENTIVE ► 5. \$ 66

33





Instructions: Complete this form to describe your existing and proposed lighting system where no prescriptive incentives exist. If additional space is required, make copies of this page and attach the completed pages to the application. If the project has any type of lighting controls, complete Appendix D: Lighting Control Systems and Occupancy Sensors. If the project has LED backlit signage complete Appendix E: LED Backlit Signage.

This option may also be used for **innovative equipment and designs** where no prescriptive incentives exist. Customized proposals submitted by qualified lighting designers that can demonstrate demand reductions will be evaluated upon request.

Required information:

- Copy of the price quote detailing material costs for each proposed lighting product.
- Existing System and Proposed System information **must** be filled out in the tables below.

35

Reasons for change
Illumination: ☒ more ☐ same ☐ less
☐ Need for white light ☐ Reduce maintenance ☐ Reduce lighting bill ☒ Building renovation ☒ Improve aesthetics

36

Description of proposed lighting system

EXISTING SYSTEM									
Location no.	Location	Usage	Fixture/lamp type	Lamp input power (W)	Lamps/fixture	Fixture input power (W)	No. of fixtures	Annual hours of operation	
1.	Office	<input checked="" type="checkbox"/> Indoor <input type="checkbox"/> Outdoor	T12/4 ft.	34 W	4	148 W	82	5840 h	
2.	Private office	<input checked="" type="checkbox"/> Indoor <input type="checkbox"/> Outdoor	T8/2 ft.	17 W	2	33 W	9	5840 h	
3.		<input type="checkbox"/> Indoor <input type="checkbox"/> Outdoor		W		W		h	
4.		<input type="checkbox"/> Indoor <input type="checkbox"/> Outdoor		W		W		h	
5.		<input type="checkbox"/> Indoor <input type="checkbox"/> Outdoor		W		W		h	
6.		<input type="checkbox"/> Indoor <input type="checkbox"/> Outdoor		W		W		h	

PROPOSED SYSTEM										
Location no. ¹	Manufacturer	Model no.	Approval		Fixture/lamp type	Fixture input power (W)	Fixture initial Lumens (L)	No. of fixtures	Material cost (\$)	Annual hours of operation
			EPL	DLC						
1	NNN Light	LED6-RS-22	✓		LED troffer	43 W	4400 L	97	\$ 12,610	5840 h
1	SSS Light	LED8-5K-120-ST	✓		LED troffer	22 W	1900 L	6	\$ 300	2080 h
2	OOO Light	LEDMR-FG-4G	✓		LED specialty	11 W	1000 L	9	\$ 288	5840 h
	39		40			W	L		\$	h
						W	L		\$	h
						W	L		\$	h

¹ List location number from Existing System table above.

TOTAL MATERIAL COST ► \$ 13,198

Manitoba Hydro use only: TOTAL INCENTIVE ► 6. \$


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How to complete application appendices

Complete and attach Appendix A if you are installing lighting in an agricultural environment.

Download
appendices
from CLP
website

192962 Rev 15 05



COMMERCIAL LIGHTING PROGRAM
AGRICULTURAL LIGHTING VERIFICATION – APPENDIX A

1

Application no.
PSL 123456

INSTRUCTIONS: All Applicants must verify each lighting system element with the supplier or installer. Your application may be rejected if the elements on your checklist below are not verified.
Complete this form and attach it to your Commercial Lighting Program (CLP) Application. CLP will determine if the lighting technology is suitable for any incentives. For further assistance, contact your local Energy Services Advisor or Power Smart Sales Representative or call 1-204-360-3676 or 1-888-624-9376 (1-888-MBHYDRO).

NEW LIGHTING SYSTEM INFORMATION (Selection awareness information)
To encourage proper product selection, please consider the following:

2

- ☒ Temperature (check ambient temperature versus lighting ambient temperature rating)
- ☒ Ingress protection (check suitability for wet, damp, pressure washing, dust, explosion-proof applications etc.)
- ☒ Corrosion resistance (solids, chemicals, ammonia, etc.)
- ☒ Compatibility with building controls (dimming, frequency of switching, etc.)
- ☒ Lamp rating for the fixture (open/enclosed)
- ☒ Warranty coverage for intended use

CUSTOMER STATEMENT
I, the Customer, declare that the information above has been verified with the supplier, distributor, or manufacturer, and that the lighting technology being purchased is suitable for the environment in which it is being installed.
I understand and acknowledge that this Verification will form part of my Application.

Signed by (Customer)
Jane Smith

yyyy mm dd
2017 10 31

3

PHOTOCOPY AND RETAIN ONE COPY FOR YOUR RECORDS.

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1. Write the Power Smart Lighting application number.
2. Check these boxes after ensuring the lighting product(s) you are installing are suitable for the environment and usage.
3. The customer (not the supplier or contractor) must sign and date this.



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Instructions: Complete this form when applying for a Commercial Lighting Program (CLP) incentive, and the LED fixture listed below is **not** on the CLP Eligible Product List (EPL) **and** is approved by the DesignLights Consortium (DLC).

The Customer must complete, sign, and attach this form to the CLP Application. The CLP will determine if the LED fixture is suitable for any incentives. For further assistance, contact your local Energy Services Advisor or Power Smart Sales Representative, or call 1-204-360-3676 or 1-888-624-9376.

Lighting system information

LED fixtures only. **Does not include retrofit kits.**

2

Fixture manufacturer PPP Light	Fixture model MK-ULED-5000
Fixture manufacturer	Fixture model
Fixture manufacturer	Fixture model

Note: LED fixtures approved by this method will **not** be included on the Eligible Product List (EPL). To get a product on the EPL, a Product Approval Request must be submitted and approved.

Required documents

3

- Attach a copy of the LED fixture's active DLC listing. Ensure the expanded view of Rated Data and Test Data tabs (if available) is visible.
- Attach a specification sheet. Outdoor use LED fixtures must meet -40°C temperature requirements.

Customer statement

I, the Customer, declare that the information above has been verified with the supplier, distributor, or manufacturer, and that the LED fixture being purchased is suitable for the environment in which it is being installed.

I understand and acknowledge that this Verification will form part of my Application.

Signed by (Customer) Jane Smith	yyyy mm dd 2017 10 31
------------------------------------	--------------------------

4

PHOTOCOPY AND RETAIN ONE COPY FOR YOUR RECORDS.

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1. Write the Power Smart Lighting application number.
2. Ensure the LED fixture manufacturer and model number written here match with the DLC and your paid invoice.
3. Both of these documents must be attached.
4. The customer (not the supplier or contractor) must sign and date this.

Note: Manitoba Hydro will review the product to determine if it is eligible for incentives based on whether the product meets our program technical specifications.

Instructions: Complete this form when you apply for a Power Smart* Commercial Lighting Program (CLP) incentive for hotel and motel individual suites. Information on common area and hallway lighting can be provided on the respective CLP application page. Complete this form and attach it to your CLP application. CLP will determine if the lighting technology is suitable for any incentives. For further assistance, contact your local Energy Services Advisor or Power Smart Sales Representative or call 1-204-360-3676 or 1-888-624-9376.

Hotel information

No. of rooms	248	Winter occupancy rate	60 %	Summer occupancy rate	85 %
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Lighting system information

LED lamps

EXISTING SYSTEM					
Location (washroom, table lamp, entrance)	Lamp type (INC, HAL, CFL)	System 1		System 2	
		Watts	Quantity	Watts	Quantity
entrance	incandescent	60 W	248	W	
table lamp	incandescent	60 W	248	W	
main room wall sconce	halogen	75 W	248	W	
		W		W	

PROPOSED SYSTEM								
Night light quantity	Location	Lamps					Incentive	
		Manufacturer	Model no.	Watts	Rated lamp hours	Quantity	Incentive**/lamp	Total
	entrance	RRR Light	PS28	10 W	25,000	248	x \$ 4	-\$ 992
	table lamp	RRR Light	PS28	10 W	25,000	248	x \$ 4	-\$ 992
	main room wall sconce	TTT Light	MK4572	16 W	25,000	248	x \$ 7	-\$ 1,732
				W			x \$	-\$
TOTAL MEASURE INCENTIVE ▶								\$ 3,702

LED fixtures**

Design information	EXISTING SYSTEM		PROPOSED SYSTEM	
	System 1	System 2	System 1	System 2
Lamp type and wattage (INC, MV, MH, HPS, etc.)	CFL 26W			
Fixture type, manufacturer and model no.	CFL		LED, WWA Light R2156	
Fixture location in room	Washroom		Washroom	
No. of fixtures	248		248	
Watts per fixture including ballast	52 W	W	30W	W
Estimated cost of proposed system	N/A	N/A	\$50	
Total kilowatt lighting load (MH USE ONLY)	kW	kW	kW	kW

** Incentive amounts can be found on the Hotel & Motel Individual Suite Lighting Incentives sheet.

All custom options must be approved by Manitoba Hydro's Lighting Engineer before installation begins. Incentive amount will be available once pre-approval is received.

Customer statement

I, the Customer, declare that the above information is true and understand and acknowledge that this Verification will form part of my Application.

Signed by (Customer) Jane Smith 5 yyyy mm dd 2017 10 31

PHOTOCOPY AND RETAIN ONE COPY FOR YOUR RECORDS.

1. Write the Power Smart Lighting application number.
2. Ensure location of proposed system matches with the existing system above.

3. The measure incentive is carried forward to the summary of measure incentive page in the #6. Custom option box.
4. This incentive will be calculated by Manitoba Hydro.
5. The customer (not the supplier or contractor) must sign this.

Instructions: Complete this form when you apply for a Power Smart® Commercial Lighting Program (CLP) incentive for any type of lighting control system or occupancy sensor. Indicate page number(s) on all copies.

Attach required documentation:

- ☒ Technical specifications of proposed system, including a product specification sheet.
☒ Estimated material cost for the new system (system hardware only).

Attach completed form and all documentation to your CLP application. The CLP will determine if the lighting technology is suitable for any incentives and advise you in writing if your project has been pre-approved and work can begin. For further assistance, contact your local Energy Services Advisor or Power Smart Sales Representative or call 1-204-360-3676 or 1-888-624-9376.

Page 1 of 1
PHOTOCOPY AND RETAIN ONE COPY FOR YOUR RECORDS.

NEW

Dimming control system information

Description of proposed lighting system *Dimming system with programmable controller. Dimming schedule indicated below.*

Do you turn off your lights after business hours? Yes ☒ No ☐

Location	Manufacturer	Model no.	Fixture power	No. of fixtures	Total power	Power level	Annual hours of lighting operation	Material cost
Main floor – left wing	VVV Dimming System	LOW6400	50 W	10	500 W 3	100%	1000 h	\$ 1,000
						50%	2000 h	
						10%	1000 h	
						%	h	
						%	h	
TOTAL ►								\$ 1,000

Occupancy sensors and switching control system information

Description of proposed lighting system *fixture mounted sensors on office fixtures – see attached Excel sheet listing fixture wattages*

Do you turn off your lights after business hours? Yes ☒ No ☐

Location	Manufacturer	Model no.	No. of sensors	Sensor type ¹	Total system power	Annual hours of lighting operation (before)	For controls only Annual hours (after)	Material cost
office	XXX sensor	9009XL	60	1	10,842 W	4380 h	2890 h	\$ 2,040
					4 W	5 h	6 h	\$
					W	h	h	\$
					W	h	h	\$
TOTAL								\$ 2,040

¹ Type 1 – wall switch replacement and fixture-mount sensors. Type 2 – all other sensors.

MANITOBA HYDRO USE ONLY	No. of sensors	x Incentive amount \$	= Total Incentive \$	7	Dimming control system total incentive = \$
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Sensors and switching total incentive = \$

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- Write the Power Smart Lighting application number.
- Check boxes once required documents are attached.
- Total Power = Fixture power x No. of fixtures.
- Total system power = No. of sensors x sensor wattage controlled.
- Current annual hours of lighting operation.
- Expected annual hours of lighting operation with new control system.
- Manitoba Hydro will calculate the incentive.

Instructions: Complete this form when you apply for a Power Smart* Commercial Lighting Program (CLP) incentive for upgrading to LED backlit signage.

Attach the technical specifications of the Proposed System, including the LEDs and the driver.

Attach a sign drawing that also includes:

- the dimensions;
- whether the sign is single-sided or double-sided;
- the location where the LEDs are to be installed inside the sign.

Attach the completed form and all documentation to your CLP application and submit to Manitoba Hydro for pre-approval.

The CLP will determine if the lighting technology is suitable for any incentives and advise you once your project has been pre-approved. Once pre-approved you can order, purchase, and install your lighting. For further assistance, contact your local Energy Services Advisor or Power Smart Sales Representative or call 204-360-3676 or 1-888-624-9376.

NEW

EXISTING SYSTEM: T12 HO, T8 HO, or OTHER (excluding neon)			
Location	Lighting technology	No. of lamps	Lamp type and length
Exterior signage	T12 HO	120	F72 (6')

EXISTING SYSTEM: NEON (Incentive ends March 31, 2018)									
Location	Neon			Transformer rating				Total power	Length
	Colour	Diameter of tube	Current	Voltage	Current	Power	No.		
		mm	mA	V	A	W		W	ft.
		mm	mA	V	A	W		W	ft.
		mm	mA	V	A	W		W	ft.

PROPOSED SYSTEM							
LED					Total Input power	Incentive total	Annual hours of operation
Colour	Manufacturer	Model no.	Length	Watts/foot			
white	QQQ Light	MLF-LED-S2-R	720 ft.	2 W	1440 W	\$ 2	8736 h
			ft.	W	W = \$		h
			ft.	W	W = \$		h
			ft.	W	W = \$		h

TOTAL INCENTIVE ►

\$

FOR MANITOBA HYDRO USE ONLY				
30 mA	W/foot	No. feet	Total W	Total kW
Neon base case	4.78	x	=	/ 1,000 =
LED	1.32	x	=	/ 1,000 =
Savings	3.46			
60 mA	W/foot	No. feet	Total W	Total kW
Neon base case	9.62	x	=	/ 1,000 =
LED	1.32	x	=	/ 1,000 =

1. Write the Power Smart Lighting application number.
2. Manitoba Hydro will calculate the incentive.

DEF Electrical Company
456 Some Street
AnyTown, MB D4E 5F6
Phone: 204-999-5678
Email: DEFelectric@mail.com

Invoice Example



1

Date	Invoice #
11/20/2017	12345

Invoice To
ABC Commercial Company 123 Any Street AnyCity, MB A1B 2C3

Ship To
ABC Commercial Company 123 Any Street AnyCity, MB A1B 2C3

P.O. No.	Terms	Rep	Ship Via	Order Date	Project
123				11/20/2017	PSL#123456

Item #	Product Description	Quantity	Unit Price	U/M	Ext. Price
1	85 Watt LED fixture Manufacturer: AAA Light Model #: LED-85W-44-5KIR7-R7-PC4U	2	425.00	ea	850.00
2	75 Watt LED wallpack Manufacturer: BBB Light Model #: LEDR-75W-Z-B4-TY-RT8-R5	16	375.00	ea	6000.00
3	10 Watt LED lamp Manufacturer: DDD Light Model #: SV10W-42-LX1-4K-R5-BV-W	27	8.00	ea	216.00
4	Labour	1	3000.00		3000.00
5	Electrical Permit	1	150.00		150.00
			Subtotal \$10,216.00 GST \$510.80 PST \$817.28 Total \$11,544.08 Payments/Credits 11,544.08 Balance owing \$0.00		

1. Date of purchase (must be after application written pre-approval date from MH).
2. Vendor's name, customer's name and install address.
3. Manufacturer name and model number of each product (which must match the model number on the Eligible Product List or on the DLC Qualified Product List).
4. Product description.
5. Product quantities.
6. Per unit product costs and total separate from design, labour and taxes.

PAID
12/02/17

 **Manitoba
Hydro**
POWER SMART.

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Appointment of representative form

PF2960



COMMERCIAL LIGHTING PROGRAM APPOINTMENT OF REPRESENTATIVE

IMPORTANT NOTICE: To participate in the Program, you do not need to appoint anyone to be your Representative (including your Contractor).

1. ABC Commercial Company full legal name of customer company
(the "Customer") hereby authorizes and appoints Jack Gold from DEF Electrical Company full legal name of representative (the "Representative") 456 Some Street, Anytown, MB D4E 5F6 full address of Representative as the Customer's representative to act on its behalf in connection with the completion and submission of the:
a) Application for the Program and materials relating to demonstration of eligibility, but the Customer is still responsible for signing the Application; and
b) Certificate of Inspection (within Winnipeg) or Certificate of Approval (outside Winnipeg); Completion Declaration and Completion Questionnaire for the Program; and materials relating to demonstration of satisfactory completion of measure(s) and work including itemized invoicing detailing product costs (separate from design, labour, and taxes), product model details, date of purchase, and vendor's name requested for issuance of Program incentive.

NOTE: If the Customer does not want the Representative to act on its behalf for both Part (a) and Part (b) above, do not complete this APPOINTMENT OF REPRESENTATIVE.

2. The Customer hereby acknowledges and confirms that the Customer has reviewed all of the foregoing Program forms (including all terms and conditions, and Program requirements) and the Customer understands and accepts the full legal and practical effects and risks of the present appointment and of having the Representative to act on its behalf.
NOTE: For instance, the Representative may decide at its discretion that the retrofit measures have been complete to the Customer's satisfaction, regardless of whether the Customer is actually satisfied or not.
3. Notwithstanding anything to the contrary, the Customer hereby authorizes Manitoba Hydro and its officers, directors, employees, contractors, agents, and Program partners, to release to the Representative any information about the Customer (whether information provided to Manitoba Hydro or already in Manitoba Hydro's possession or control) that Manitoba Hydro may deem necessary relating to the Customer's application to or participation in the Program, or the assessment or issuance of any Program incentive.
4. The Customer understands and agrees that: (a) its appointment of the Representative does not relieve any of the Customer's obligations as the applicant and participant under the Program, including, without limitation, the Customer's obligation to comply with all requirements of Manitoba Hydro at all times; and (b) any and all decisions, actions, and inactions, of the Representative will be deemed conclusively to be those of the Customer, and the Customer is and will be fully responsible for the decisions, actions, and inactions, of the Representative in all respects in connection with the Program at all times.
5. The Customer shall, and shall also cause the Representative to, defend, indemnify, and save harmless, Manitoba Hydro and its officers, directors, employees, contractors, agents, Program partners, successors, assigns, from and against any and all manners of action, causes of action, losses, costs, damages, expenses, suits, claims, liabilities, debts, and demands which any of the foregoing persons or entities may suffer or be put to, or which may be brought or made against any of the foregoing persons or entities, arising out of any action or inaction of the Customer and/or the Representative, or any of their respective directors, officers, employees, affiliates, contractors, subcontractors (through every tier), representatives, or agents, or any breach of any Program requirement, or the negligence or misconduct of the Customer and/or the Representative or their respective directors, officers, employees, affiliates, contractors, subcontractors (through every tier), representatives, or agents.
6. This appointment shall remain in force until the time when: (i) the Representative completes to Hydro's satisfaction the appointed acts selected by the Customer pursuant to Section 1 above; or (ii) when Manitoba Hydro provides written acknowledgement to the Customer confirming Manitoba Hydro's receipt and acceptance of written notice from the Customer requesting revocation of the Customer's appointment of the Representative hereunder; whichever is earlier.
7. This Appointment shall be binding on and inure to the benefit of the Customer's successors, heirs, executors, administrators, and representatives.

IN WITNESS WHEREOF the Customer hereto has executed this Appointment as at the date below to ratify and confirm the powers of the Representative by virtue of this appointment.

Customer company name <u>ABC Commercial Company</u>	Application no. PSL <u>123456</u>
---	--------------------------------------

Jane Smith
Per: _____
Signature of Authorized Signing Officer
Jane Smith
Name
President
Position
July 1, 2017
Date

Per: _____
Signature of Authorized Signing Officer
Name
Position
Date



System wattage tables updated



Information on: T12, T8, T5, CFL, INC, HAL, MH, HPS, MV

System wattage tables

Nominal wattages for T12 fluorescent lighting systems

Lamp length Units	Number of lamps	Fixture power (W)	Rated life ² (hrs)	Initial lumens (lm)	Mean lumens (lm)	Mean efficacy (lm/W)	Lamp loss depreciation
2-foot systems (20W)	1	26	9,000	875	790	30	0.903
	2	54		1,750	1,580	29	
	3	N/A		N/A	N/A	N/A	
	4	108 ¹		3,500	3,160	29	
3-foot systems (25W)	1	37	18,000	1,650	1,350	36	0.818
	2	61		3,300	2,700	44	
	3	N/A		N/A	N/A	N/A	
	4	122 ¹		6,600	5,400	44	
4-foot systems (34W)	1	41	20,000	2,180	1,810	44	0.830
	2	74		4,360	3,620	49	
	3	115		6,540	5,430	47	



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Upcoming

- CLP presentations in May → Wpg, Steinbach, Brandon



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Questions & Contact



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Nancy Stroich

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