



Bright Ideas!

LED LIGHTING FOR STRATAS

COMMON EXTERIOR FIXTURES

High Pressure Sodium

These lamps are often used for street lighting. The lamp works by creating an electric arc through vaporized sodium metal.

Metal-halide

A type of high-intensity discharge (HID) gas discharge lamp. Produces light by an electric arc through a gaseous mixture of vaporized mercury and metal halides.

LED

LED stands for Light Emitting Diode, a semiconductor device that converts electricity into light.

Commercial Exterior LED Fixtures are typically All-In-One.
No light bulbs to change.

CHOOSING LEDS



Consider:

- Purpose
- Height
- Lumens
- Colour
- Adjustability
- Footprint
- Sensors (PE)
- Samples

LEDS: PROS

- Energy savings
- Whiter light
- Less heat
- No mercury
- Instant-on
- Low or no maintenance
- Rebates available

LEDS: CONS

- More concentrated centre spot
- Sharper angle
- Possible complaints from residents or neighbours



HPS: softer
wider beam

LED: more concentrated
centre spot, "blinding"



The range of LED
products has

EXPANDED

CHECK AND COMPARE

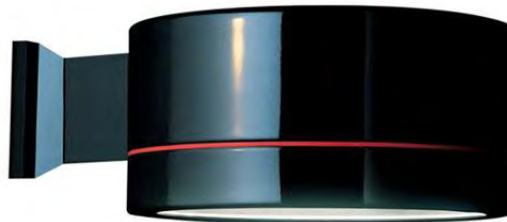
- Price
- Life (L70)
- Light Output Lumens
- Efficiency (Lumens per Watt)
- Colour temperature (Kelvin) (such as 4,000 K)
- Compatibility of Ballasts if applicable
- Instant-on / Dimmability
- Rebates available



More selection and styles of
Downlights / Security Lighting



More selection and styles of Interior and Exterior Sconces



Bulbs for Fully Enclosed Fixtures

12 watt LED replaces
75 watt incandescent



25,000 hr life LED.



Architectural Lighting



Solar LED Luminaires

No trenching, wiring, hydro bills or bulbs to change. Immune to power outages. 8-10 year battery life. Easy to change.



100,000 hr life. 8-12 feet high. Various factory set lighting profiles.

Vapourproof LED Fixtures

42watt LED fixture replaces 2 lamp T8



30-40% energy savings. 100,000 hr life.

Replacement Lamps

What's New?

HID to LED

The GE LED replacement for HID lamps is the key to improved energy usage and lamp life in industrial, warehouse, retail, commercial and outdoor applications.



2.5x longer life

The GE LED has a 50,000-hour rated life vs. HID (20,000 hours)



50%
less energy usage

with similar light output—
18,500 vs. 23,500 lumens

Why switch to LED Tubes?



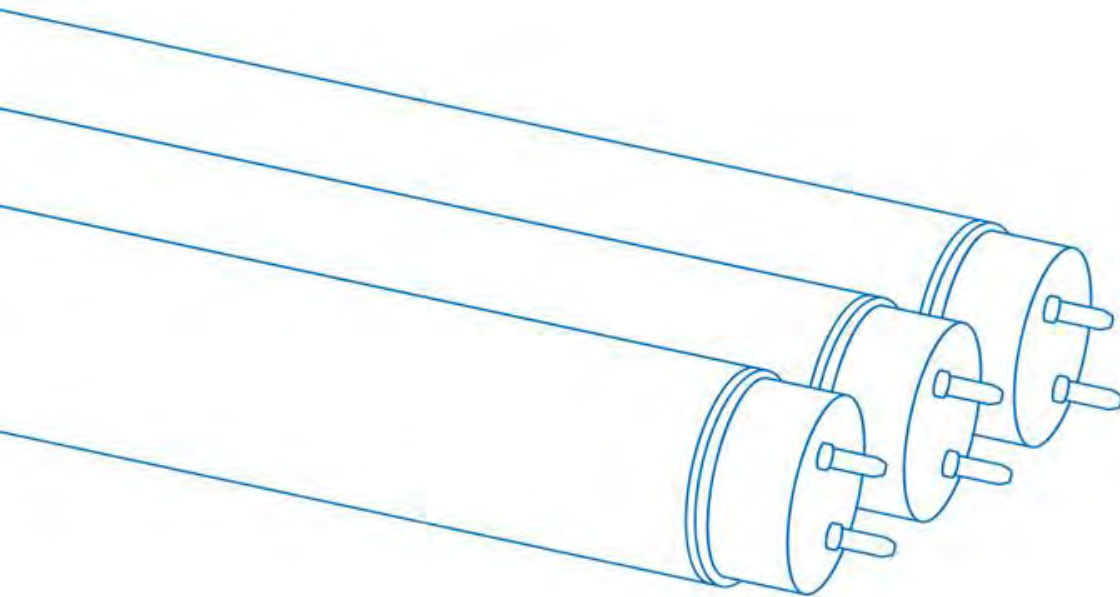
66% longer life
(50K vs. 30K hrs.)



Uses 43% less energy
(18W and 2200 lumens
vs LFL 32W and 2725 lumens)



Better quality of light
(Instant-On)



GE's Integrated LED Tube (UL Type A)

Easy Plug & Play Performance

Uses existing ballast

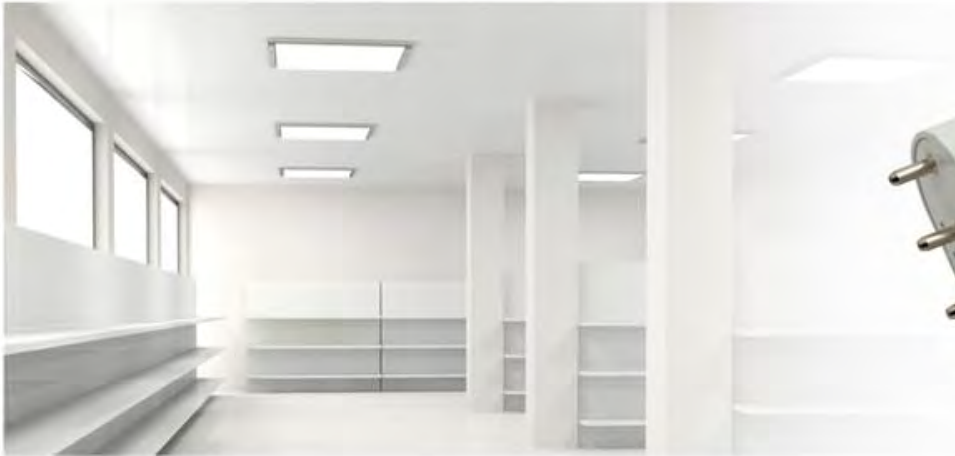
Quickest installation

Lowest installation cost

System compatibility
depends on LFL ballast

LED High Lumen BiAx Plug-In

17watt LEDs replace 25watt Fluorescents

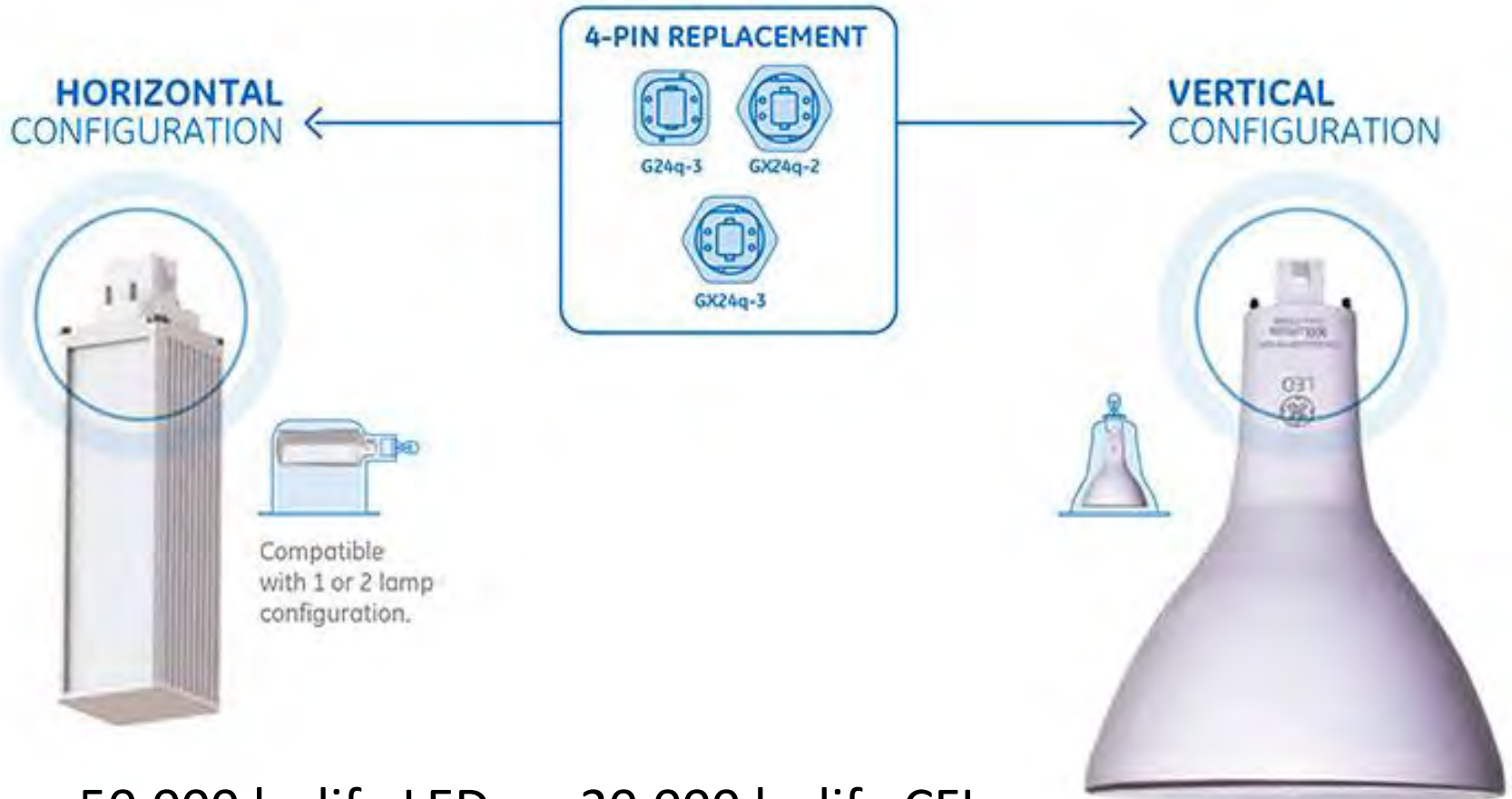


50,000 hr life LED vs. 20,000 hr life CFL

Colours 3000, 3500, 4000, 5000 Kelvin

Plug-In Replacement Lamps

12 watt LEDs replace 26 watt CFLs



50,000 hr life LED vs. 20,000 hr life CFL

MR16 and GU10 LEDs

3.5-7 watt LEDs replace 35-50 watt Halogens



Spotlights / Downlights / Directional Lamps

LED replaces Halogens



LED Refit Solution for Recessed Downlights

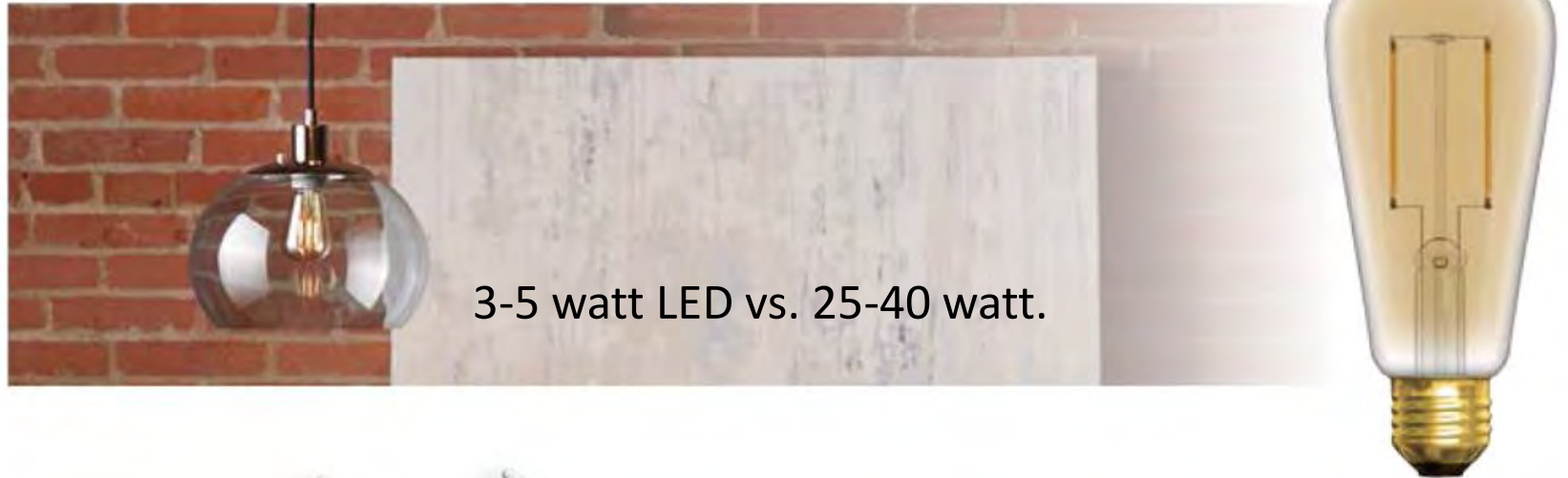
Screws into existing fixture. No wiring or tools.



10-13 watt LED vs. 65-90 watt incandescent. 50,000 hr vs. 2,000 hr life.

Decorative / Vintage and Chandeliers

Dimmable LED bulbs replace Incandescent



3.5-7 watt LED vs. 25-60 watt. 15,000 hr life LED vs. 1,000 hr life incandescent.

THINKING GREEN

“It is essential that we re-examine ethically what we have inherited, what we are responsible for, and what we will pass on to coming generations.

We have the capacity, and the responsibility. We must act before it is too late.”

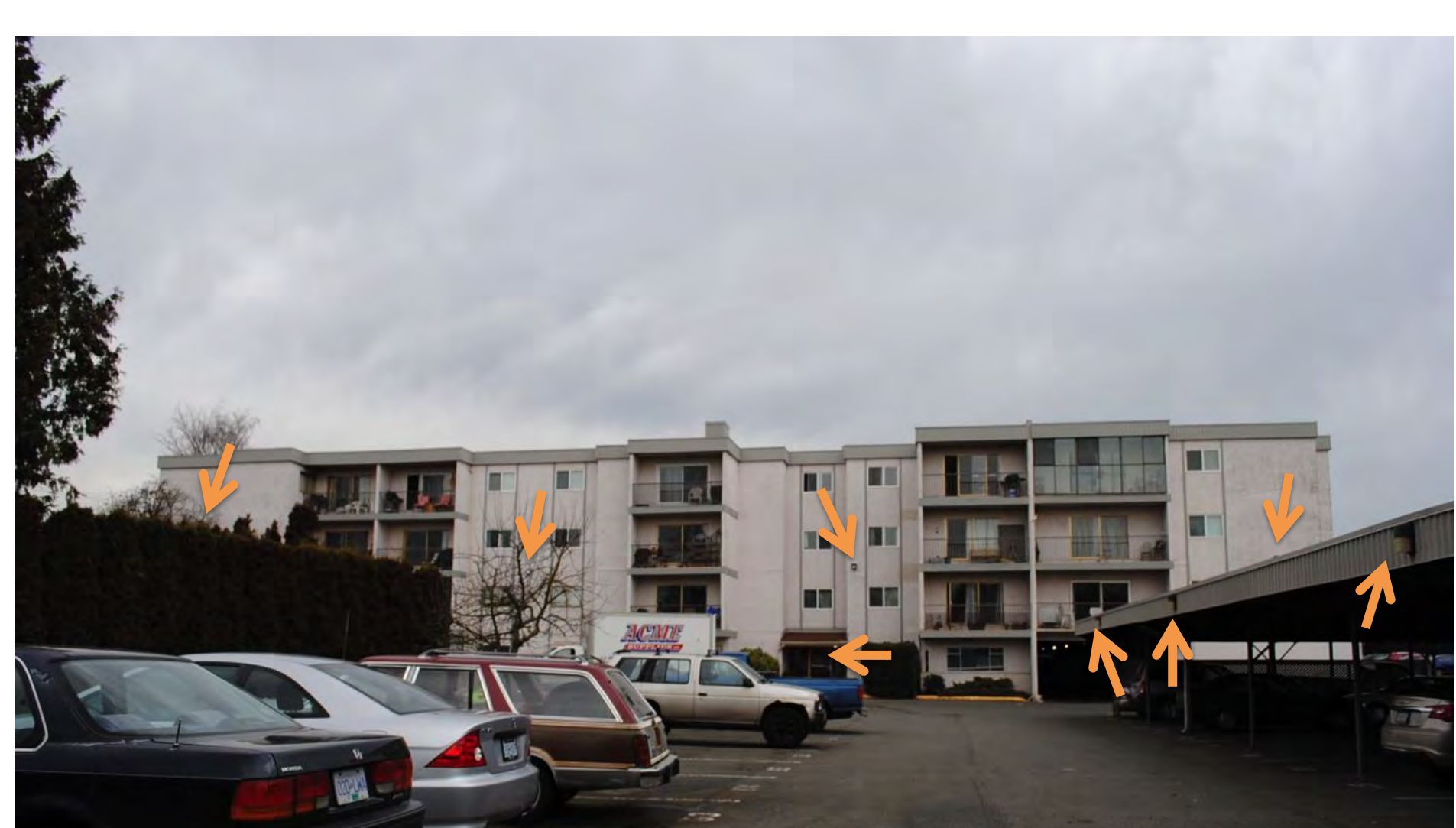
- The Dalai Lama

VIS1052 CASE STUDY



- 94 Units
- Built 1974
- Original lights

EXTERIOR LIGHTING PROJECT



What fixtures did we choose?

6 High Pressure Sodium Luminaires



- Each fixture uses 75 watts
- Bulb life 24K hours (5 yrs)
- Maintenance costs (over 20 yrs)
bulbs + ballast + labour = \$268 each

6 LED Luminaires



- Each fixture uses 19 watts
- Life 100K hours (20 yrs)
- Fixture cost \$197
- No bulbs/maintenance costs

15 High Pressure Sodium



- A = 75 watts
- B = 160 watts
- Bulb life 24K hours (5 yrs)
- Maintenance costs (over 20 yrs)
bulbs + ballast + labour = \$268 each

15 LED Floods



- Each fixture uses 19 watts
- Life 100K hours (20 yrs)
- Fixture cost \$269
- No bulbs/maintenance costs

5 “Coach Lights” with CFL Bulb



- Each fixture uses 13-23 watt bulb
- Bulb life 10K hours (2.1 yrs)
- Maintenance costs (over 20 yrs)
bulbs + labour = \$57 each

5 LED Flush Mounts



- Each fixture uses 16.5 watts
- Life 50K hours (10 yrs)
- Fixture cost \$196
- No bulbs/maintenance costs

Energy Savings

1974 Fixtures	Watts (bulb + ballasts)	2015 LEDs	Watts	Savings
8 HPS Flood Lights	160 watts	8 LED Flood Lights	19 watts	
7 HPS Wall Luminaires	75 watts	7 LED Flood Lights	19 watts	
Carport: 6 HPS Wall Luminaires	75 watts	6 LED Wall Luminaires	19 watts	
5 Coach Lights	23 watts	5 LED Flush Mounts	16.5 watts	
watts/1000 = kWh	2.37 kW		0.484 kW	79.6%
Consumption per Year	11,246 kWh		2,297 kWh	8,949 kWh
Hydro Cost per Year	\$1,462		\$293	\$1,169

Project Cost

Item	Cost
26 Fixtures	\$6,201.51
Labour & Materials	\$1,677.45
Photo Control installation	\$339.00
Electrical Permit	\$239.00
Less BC Hydro Rebate	-\$800.68
Total	\$7,656.28

Return on Investment

Energy Savings per Year	\$1,169.
Maintenance Savings per Year (\$35,913/20 yrs)	\$296.
Total Savings per Year	\$1,465.
Project Cost	\$7,656.
Return on Investment (ROI)	5.2 Years

ASSUMPTIONS

Hydro

- Lights aver 13 hrs/day
- 365 days = 4,745 hrs/yr
- Hydro cost \$0.13/kWh

NOTE: Soon parts for High Pressure Sodium Fixtures will no longer be available.

Maintenance

- HPS bulbs \$22 each
- \$10 labour to change
- Ballast replaced once
- Ballast \$70 each
- Min 1 hour labour \$70

Getting Started

GETTING YOUR STRATA PROJECT STARTED

[www.bchydro.com/
powersmart/busine
ss/programs/expres
s.html](http://www.bchydro.com/powersmart/business/programs/express.html)

- 1.
- 2.
- 3.



Home > Energy Savings > Business > Programs & Incentives > Business Energy-Saving Incentives

Energy-Saving Incentives For Businesses



Helping businesses save money and energy

Get help to reduce your operating costs through the implementation of energy efficiency projects. Whether you run a small or a large business, we have incentives that can help cover a portion of the cost of simple one-to-one retrofits.

Already familiar with our incentives for businesses? [See the latest program updates.](#)

Available incentives

Incentives are available for a [variety of technologies](#) [PDF, 196 KB].

Get help from industry experts

Already have an energy efficiency project in mind? Members of our Alliance of Energy Professionals can help you get started. The Alliance is an independent network of registered contractors and distributors that can help provide you with solutions and implement your project. They are trained to help you with energy-saving projects from start to finish so that your experience is seamless.

For a list of Alliance members that can help with your project, request a referral.

[Request a referral](#)

Program resources

- [Confirm your eligibility by using the business program eligibility tool](#)
- [Read through the FAQ before you get started](#) [PDF, 104 KB]
- [Refer to e.Catalog to see the eligible technologies and products](#)

PROGRAMS & INCENTIVES

Leaders in energy management

Business energy-saving incentives

Commercial energy management assessment

Energy performance contracts

Continuous optimization

Energy studies & audits

Industrial project incentives

Strategic energy management

New plant design

Build energy efficient homes

Commercial new construction

Customer build program

Sustainable communities program

Business energy saving incentives login

- [Login](#)
- [Register](#)

See also

Business Program Eligibility Tool

Welcome to the Power Smart business program eligibility tool. To find out which programs you are eligible to participate in, please enter your 11-digit business account number.

Account Number

[Next](#)

Your account number is located in the top right corner of your BC Hydro bill. For assistance, please contact the BC Hydro Business Help Desk at 604 522 4713 (Lower Mainland) and 1 866 522 4713 (elsewhere in B.C.).

COMMERCIAL

[Business Program Eligibility Tool](#)

[Power Smart Partner Program](#)

[Energy Manager Online](#)

[Workplace Conservation Awareness](#)

[Energy Management Assessment](#)

[Energy Performance Contracts](#)

[Continuous Optimization](#)

[Success Stories](#)

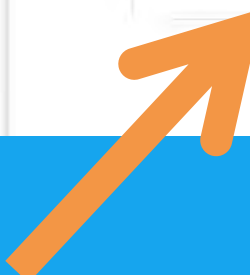
Hours of Operation

Monday to Friday,
8:00 a.m. - 4:30 p.m., PST

Phone In Lower Mainland
604 522 4713

Other areas, call toll free
1 866 522 4713

Email:
incentives@bchydro.com



Enter your strata's BC Hydro account number to verify eligibility.

The e.Catalog lists thousands of conversions that are eligible for rebates.

www.bchydro.com/ecatalog/

Contact a commercial lighting supplier for assistance.



e.Catalog

e.Catalog is the sole source of eligible configurations and products for the business energy saving incentive program. Over 10,000 energy-efficient products from over 250 brands in one place, helping your business save time and money. You can also download the eligible configurations list.

BUSINESS ENERGY SAVING INCENTIVES

e.Catalog

- Advanced Search
- Eligible Products
- Product Updates

Business Energy Saving Incentives

The business energy saving incentive program provides B.C.'s commercial businesses with financial incentives that can cover up to 75% of the cost of your energy-efficiency project. [Learn more.](#)

Search

Keyword Search

Manufacturer:

Search [Advanced Search](#)





Incentives Available

361 incentives found, Items per page 10

< 1 2 3 4 5 ... 38 37 >

Replace Existing Technology	With Energy Efficient Technology	PDF	CSV
All Product Categories	All Product Categories		View
10-100 HP HVAC Fan	➔ Add variable frequency drive	All makes and models are eligible	
10-100 HP HVAC Pump	➔ Add variable frequency drive	All makes and models are eligible	
100 W High Pressure Sodium	➔ 4' 54W T5HO, 1 lamp (overlit)	View Eligible Products	PDF CSV
100 W High Pressure Sodium	➔ Induction luminaire or retrofit kit <= 80W	View Eligible Products	PDF CSV

HOUSEHOLD LIGHTBULBS

		☀ DIMMER ————— BRIGHTER ☀			
LUMENS		450	800	1100	1600
LEAST EFFICIENT ↓ ↑ MOST EFFICIENT	Standard Incandescents 	40W	60W	75W	100W
	New Halogen Incandescents  Save up to 28%*	29W	43W	53W	72W
	CFLs  Save up to 75%*	9W	14W	19W	23W
	LEDs  Save up to 77%*	8W	13W	17W	N/A

LED light bulbs use about 75% less energy than standard incandescent bulbs.

Learn more about **HOUSEHOLD LIGHTBULBS** here:

www.energystar.gov/products/lighting_fans



The simple choice for energy efficiency.

ENERGY EFFICIENT
products

ENERGY SAVINGS
at home

ENERGY EFFICIENT
new homes

ENERGY STRATEGIES FOR
buildings & plants

Home » Certified Products » Lighting

Certified Products

Your source for energy efficient product information

All Certified Products

Appliances

Lighting

Office Equipment

Electronics

Product Specifications Search

Lighting & Fans



Lighting products that have earned the ENERGY STAR deliver exceptional features, while using less energy. Saving energy helps you save money on utility bills and protect the environment by reducing greenhouse gas emissions in the fight against climate change.

LIGHTING RESOURCES



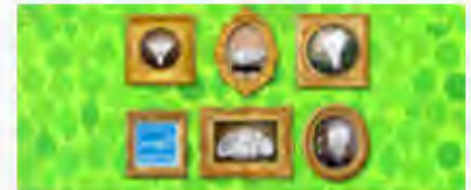
Buyer's Guide (PDF)

Useful info and facts to help you make the right lighting choices for your renovation needs.



Illuminated Podcast

Can't keep track of all the new energy-efficient lighting options out there? Check out ENERGY STAR's Illuminated podcast.



GALLERY OF BRIGHT BULBS

Watch the Gallery of Dim Bulbs videos and see why ENERGY STAR is the "Bright" choice.

[Guide to Dimmable LED Lighting \(PDF\)](#)

[Learn About LED Bulbs](#)

[Learn About CFL Bulbs](#)

[Light Bulb Savings Calculator \(EXCEL\)](#)

[Interactive Choose a Light Guide](#) [EXIT →](#)

[FAQs about Lighting](#)

Use the **Energy Star Light Bulb Savings Calculator** to calculate savings for Household bulbs



www.visoa.bc.ca

Thank you to Commercial Lighting
for research and assistance. (250) 385-8816 comlight.com

