



# ENERGY SAVINGS FOR BUSINESS

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## An Overview of Lighting Systems and Controls

# Housekeeping

- Microphones are muted
- If you called in, select “telephone” and enter audio PIN
- Type questions into the “Questions” section of the control panel
  - We will try to answer as many questions as possible
- If you have technical difficulty during the webinar, it is being recorded and will be posted on our website



# Agenda

- Program Overview
- Measure Categories
- Lighting Systems
  - Technology Overview
  - Specific Rules
  - Application Form
- Lighting Controls
  - Technology Overview
  - Specific Rules
  - Application Form
- Q&A Period



# Presenters



**Portia Baladad**

Moderator

ESB Marketing Manager  
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**Luca Jungen**

Presenter

Program Manager  
(ERA)



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Presenter

ESB Support Manager,  
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**Sooria Narsiah**

Presenter

ESB Lead Technical Support  
(Enerva & Summerhill Team)



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# About ERA

## MANDATE

Reduce GHG emissions and grow Alberta's economy by accelerating the development and adoption of innovative technology solutions.

## VISION

Alberta has competitive industries that deliver sustainable environmental outcomes, attract investment, and are building a diversified, lower carbon economy.

## STRATEGIC PRIORITIES



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# Measure Categories

Compressed air

Solar PV

Lighting systems and controls

Motors and drives

Combined heat and power  
(CHP)

Refrigeration

Geothermal

COMING SOON

Water  
heating

HVAC

Process  
heating

Food  
service

Building envelope  
and windows



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# Important Note: Pre-Project Application Submissions

- If a pre-project application is submitted, but is not approved, it does not hold a place in the line for the incentive reservation
- The incentive is only reserved after the pre-project application is approved
- It is important to submit good-quality applications with complete documentation or the review cannot occur comprehensively; this delays the review and approval process



# Lighting System Measures

- Troffer LED Lighting Fixtures
- Downlighting/Integral LED Lighting Fixtures
- Exterior LED Lighting Fixtures Accent or Tracking LED Lighting Fixtures
- Linear LED Lighting Fixtures
- Bay LED Lighting Fixtures

*\*Retrofit Kits for these measures are eligible.*



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# Lighting System Measures

- LED Exit Signs
- Refrigerated Case LED Lighting Fixtures

*Retrofit kits for these measures are not eligible.*



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# Lighting System Eligibility

- Projects must be carried out on existing buildings — new construction is not eligible
- Specification sheets are required
- Incentives are capped at 25% of project costs
- The Minimum project incentive is \$1,000
- ENERGY STAR or DLC certifications are required for specific lighting systems



# ENERGY STAR or DLC Certifications

The Eligible Measures List will indicate which technologies will require certifications.

ENERGY STAR	DLC
Accent/Track LED Lighting Fixtures	Linear LED Fixtures
Downlight/Integral LED Lighting Fixtures	Troffer LED Fixtures
	Bay LED Fixtures
	Exterior LED Fixtures
	Refrigerated Case LED Fixtures



# Lighting System Application

## STEP 1

Select the measure type and measure.

ADD MEASURE



Measure Category

Lighting



Measure Type

Bay LED Fixture



Measure

Bay fixture and retrofit kit - LED - <10,000 lume...



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# Lighting System Application

## STEP 2

Provide the required information.

### MEASURE SPECIFIC INFORMATION

Quantity

Enter here

Specification Sheet



Select from computer (or) Drag and Drop documents to upload. Acceptable file types: .JPEG, .PNG, .PDF, .Docx, .xlsx

Building Type Installed

Type here

Lighting Technology Wattage Being Replaced

Type here

Lighting Technology Being Replaced - Bay Fixture

Select from list

Estimated Annual Hours of Operation

Enter here

DLC ID

Type here

DLC Category

Type here

Lumen Output

Enter here



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# Lighting System Application

## STEP 3

The emissions reduction estimates are automatically calculated. Review all costs to ensure they have been accurately recorded. They will be compared to the cost quote(s) uploaded in the application. The incentive is capped to 25% of the total cost.

**NOTE:** Installation costs should be included in the labour costs. All other costs should be included in the design costs.

Per Unit Emissions Reduction

2.641085082

Total Emissions Reduction

Calculated Value

Equipment & Material Costs ⓘ

Enter here

Labour Cost ⓘ

Enter here

Design Cost ⓘ

Enter here

Total Cost

Calculated value



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# Lighting System Application

## STEP 4

Review the calculated values.

**The Measure Incentive** is the incentive based on the measures list. The **Maximum Eligible Measure Incentive** is the calculated incentive cap relative to the total eligible project cost. The **Total Eligible Measure Incentive** is the lower of the two above values.

Incentive Per Unit

\$30.00

Measure Incentive

Calculated value

Maximum Eligible Measure Incentive

Calculated value

Total Eligible Measure Incentive ⓘ

Calculated value



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# Lighting Controls Measures

- Daylight Controls
- Occupancy Controls
- Exterior Lighting Bi-Level Control





# Lighting Controls Eligibility

- Projects must be carried out on existing buildings — new construction is not eligible
- Specification sheets are required
- Automatic off-feature is not eligible
- Specific controls have “wattage controlled” requirements (Please see Eligible Measures List for details)
- Incentives are capped at 50% of project costs



# Lighting Controls Application

## STEP 1

Select the measure type and measure.

ADD MEASURE



Measure Category

Lighting Controls



Measure Type

Daylight Controls



Measure

Fixture Mounted Dual Occupancy and Daylight ..



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# Lighting Controls Application

## STEP 2

Provide the required information.

### MEASURE SPECIFIC INFORMATION

Quantity

Specification Sheet



Select from computer (or) Drag and Drop documents to upload. Acceptable file types: .JPEG, .PNG, .PDF, .Docx, .xlsx

Building Type Installed

Type here

Estimated Annual Hours of Operation 

Is a Control being Replaced?

Yes

No



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# Lighting Controls Application

## STEP 3

The emissions reduction estimates are automatically calculated. Review all costs to ensure they have been accurately recorded. They will be compared to the cost quote(s) uploaded in the application. The incentive is capped to 50% of the total cost.

**NOTE:** Installation costs should be included in the labour costs. All other costs should be included in the design costs.

Per Unit Emissions Reduction

0.730214916

Total Emissions Reduction

Calculated value

Equipment & Material Costs ⓘ

Enter here

Labour Cost ⓘ

Enter here

Design Cost ⓘ

Enter here

Total Cost

Calculated value



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# Lighting Controls Application

## STEP 4

Review the calculated values.

**The Measure Incentive** is the incentive based on the measures list. The **Maximum Eligible Measure Incentive** is the calculated incentive cap relative to the total eligible project cost. The **Total Eligible Measure Incentive** is the lower of the two above values.

Incentive Per Unit

\$25.00

Measure Incentive ⓘ

Calculated value

Maximum Eligible Measure Incentive ⓘ

Calculated value

Total Eligible Measure Incentive ⓘ

Calculated value



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# Example of Project Cost Allocation

An office building is carrying out a lighting retrofit. As part of the retrofit, the project will install:

- Troffer fixtures for the main floors
  - 2x2 between 2,000 and 3,500 Lumens
- Bay fixtures for the lobby
  - between 10,000 and 14,999 Lumens
- Exit signs for the stairwells

Per Unit Emissions Reduction

2.641085082

Total Emissions Reduction

Calculated Value

Equipment & Material Costs ⓘ

Enter here

Labour Cost ⓘ

Enter here

Design Cost ⓘ

Enter here

Total Cost

Calculated value



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# Example of Project Cost Allocation

The project has the following costs:

- Equipment Cost for Troffer Fixtures - \$25,000 for 250 fixtures
  - Potential incentive:  $250 \times \$20/\text{fixture} = \$5,000$
- Equipment Cost for Bay Fixtures - \$11,000 for 60 fixtures
  - Measure incentive:  $60 \times \$50/\text{fixture} = \$3,000$
  - Maximum Eligible Measure Incentive:  $\$11,000 \times .25 = \$2,750$
- Equipment Cost for Exit Signs - \$3,000 for 30 exit signs
  - Potential incentive of \$360 ( $\$12/\text{fixture}$  as per Eligible Measures List)
- Labour Cost - \$12,000
- Design Costs - \$3,000



# Example of Project Cost Allocation

The Labour and Design Costs must be split between the three measures using an estimated allocation. In this example, the labour and design costs are split into thirds.

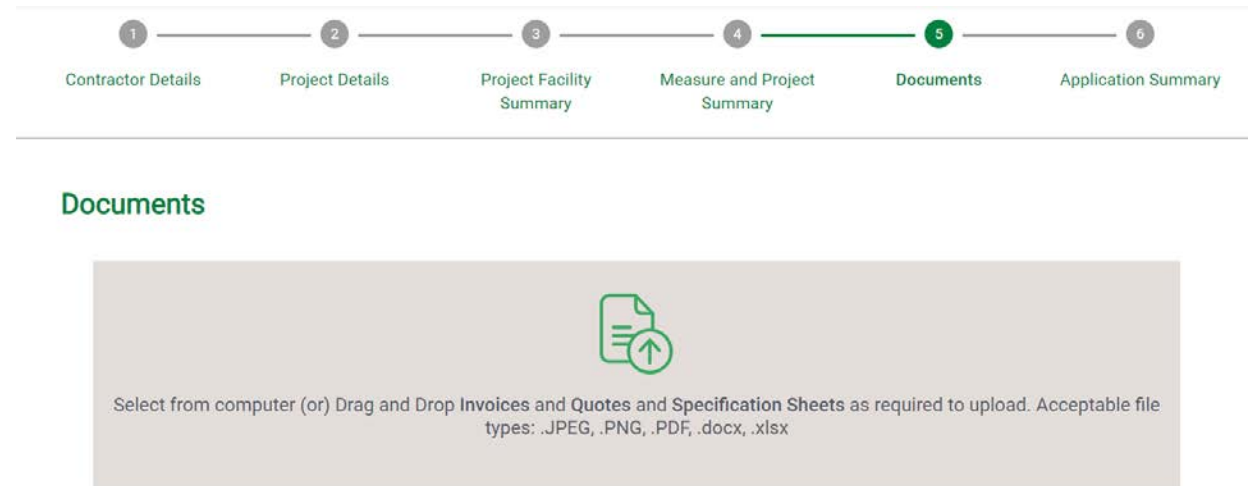
	Troffer	Bay	Exit Signs
Equipment & Material Costs	\$25,000	\$11,000	\$3,000
Labour Cost	\$4,000 (1/3)	\$4,000 (1/3)	\$4,000 (1/3)
Design Cost	\$1,000 (1/3)	\$1,000 (1/3)	\$1,000 (1/3)
Total Measure Cost	\$30,000	\$16,000	\$8,000
Eligible Measure Incentive	\$5,000	\$3,000	\$360
Incentive Cost Cap of 25%	\$7,500	\$4,000	\$2,000





# Adding Cost Estimates to Your Application

If allocating project costs between measures, please provide a document with the allocation descriptions in step 5 of the Pre-Project Application.





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# Support Team

Website: [eralberta.ca/esb](http://eralberta.ca/esb)

Email: [support@esbprogram.ca](mailto:support@esbprogram.ca)

Phone: 1-844-407-0025

By chat on the ERA website and program portal

**Thank you. See you next time.**



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