



ENERGY SAVINGS FOR BUSINESS

Investing to keep businesses competitive

An Overview of Refrigeration Measures

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



**ENERGY SAVINGS
FOR BUSINESS**

Investing to keep businesses competitive

**EMISSIONS
REDUCTION
ALBERTA**



Measure Categories

Compressed air

Solar PV

Lighting systems and controls

Motors and drives

Combined heat and power
(CHP)

Refrigeration

Geothermal

HVAC

Water Heating

Process Heating

Building Envelope
and Windows

COMING SOON

Food service



ENERGY SAVINGS
FOR BUSINESS

Investing to keep businesses competitive

EMISSIONS
REDUCTION
ALBERTA



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



Eligible Measures Types

Automatic Door Closer

Evaporator Fan Control

Strip Curtain

Anti-Sweat Heater Controls

Night Covers



**ENERGY SAVINGS
FOR BUSINESS**

Investing to keep businesses competitive

**EMISSIONS
REDUCTION
ALBERTA**



Automatic Door Closer

- Applicable for commercial heavy-duty insulated opaque walk-in cooler or freezer doors
- Hydraulic-type door closer presses the door against the seal and reduces the flow of warm air



SOURCE: Wikimedia



**ENERGY SAVINGS
FOR BUSINESS**

Investing to keep businesses competitive

**EMISSIONS
REDUCTION
ALBERTA**



Automatic Door Closer

Program Eligibility

- Must be for an existing walk-in cooler or freezer
- Door closer must be either hydraulic or spring-loaded

Application Requirements

- Must provide the specification sheets
- Must provide the doorway dimensions
- Must provide the volume of refrigerated space



Evaporator Fan Control

- Controller reduces air flow of evaporator fans when there is no refrigerant flow
- Running fans at lower speeds will achieve energy savings
- There is less waste heat within the system



Evaporator Fan Control

Program Eligibility

- Must be for an existing walk-in cooler or freezer
- Control must reduce fan speed and the air flow rate during the compressor's off-cycle

Application Requirements

- Must provide the specification sheets
- Must specify the areas served by the evaporators
- Must provide the age of the evaporators
- Must provide the HP of evaporator motors



Strip Curtain

- Strip curtains slow down heat transfer from warm and humid spaces into the walk-in units
- Act as a barrier between rooms
- Saves refrigeration compressor runtime



SOURCE: Unsplash



**ENERGY SAVINGS
FOR BUSINESS**

Investing to keep businesses competitive

**EMISSIONS
REDUCTION
ALBERTA**



Strip Curtain

Program Eligibility

- Must be for an existing walk-in cooler or freezer that does not have an existing barrier or has ineffective curtains

Application Requirements

- Must provide the specification sheets
- Must provide the doorway dimensions
- Must provide the volume of the refrigerated space
- Must provide the age of compressors



Anti-Sweat Heater (ASH) Controllers

- Prevents condensation on refrigerated display cases
- ASH controllers regulate the heaters according the surrounding conditions
- Uses just the right amount of electricity



SOURCE: Unsplash



**ENERGY SAVINGS
FOR BUSINESS**

Investing to keep businesses competitive

**EMISSIONS
REDUCTION
ALBERTA**



Anti-Sweat Heater (ASH) Controllers

Program Eligibility

- All display cases are eligible for this measure
- Must include humidity sensors for controls

Application Requirements

- Must provide the specification sheets
- Must provide the kW Rating for existing heaters
- Must specify the type of display case door
- Must provide the age of the cooler or freezer display case



Night Covers

- Fitted covers on open-type display cases
- Reduces the transfer of convective and conductive heat into a refrigerated space
- Saves electricity by reducing compressor runtime



Night Covers

Program Eligibility

- Eligible for existing open-type freezer or cooler display cases that currently do not use night covers
- Must be in use at least 25% per day

Application Requirements

- Must provide the specification sheet
- Must provide the age of refrigerated case
- Must provide the hours per day the case will be covered
- Must specify if it is a low temperature or high temperature case
- Must specify the case length (ft)
- Must specify if it is a horizontal or vertical case



Application: Refrigeration

STEP 1

Select the type of heating measure to be added to the application.

ADD MEASURE ✕

Measure Category
Refrigeration ▼

Measure Type
Evaporator Fan Control ▼

Measure
Select a Measure ▼
Evaporator Fan Control for Motors - coolers and freezers



Application: Refrigeration

STEP 2

Provide the required measure specific 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

Area Served by Evaporators (Square Feet)

Age of Evaporators (Years)

HP of Evaporator Motors

Per Unit Emissions Reduction

GET CALCULATED VALUES



**ENERGY SAVINGS
FOR BUSINESS**

Investing to keep businesses competitive

**EMISSIONS
REDUCTION
ALBERTA**



Application: Emissions and Costs

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
0.193
Total Emissions Reduction
Calculated value
Equipment & Material Costs ⓘ
Enter here
Labour Cost ⓘ
Enter here
Design Cost ⓘ
Enter here



Application: Calculated Incentives

STEP 4

Review the calculated values.

Maximum Eligible Measure Incentive is the calculated incentive cap relative to the total eligible project cost.

The screenshot displays a user interface for calculating incentives. It consists of three stacked input fields, each with a title and an information icon (i) to its right. The first field is titled 'Measure Incentive' and contains the text 'Calculated value'. The second field is titled 'Maximum Eligible Measure Incentive' and also contains 'Calculated value'. The third field is titled 'Total Eligible Measure Incentive' and contains 'Calculated value'. Below these three fields is a prominent green button with the text 'GET CALCULATED VALUES' in white capital letters.

Measure Incentive is the incentive based on the measures list.

The Total Eligible Measure Incentive is the lower of the two above values.



**ENERGY SAVINGS
FOR BUSINESS**

Investing to keep businesses competitive

**EMISSIONS
REDUCTION
ALBERTA**



Example of Incentive Consideration

A grocery store is looking to install Anti-Sweat Heater Controllers on their cooler and freezer display cases.

- Cost per door: \$375.00
- Labour per door: \$250.00

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



ENERGY SAVINGS
FOR BUSINESS

Investing to keep businesses competitive

EMISSIONS
REDUCTION
ALBERTA



Example of Incentive Consideration

Total Cost of ASH Controller (equipment + labour) = \$625.00

Potential Measure Incentive
= \$400/door

Maximum Eligible Measure Incentive
 $\$625.00 \times 50\%$
= \$312.50

Total Eligible Measure Incentive
= \$312.50



**ENERGY SAVINGS
FOR BUSINESS**

Investing to keep businesses competitive

**EMISSIONS
REDUCTION
ALBERTA**





ENERGY SAVINGS
FOR BUSINESS

Investing to keep businesses competitive

EMISSIONS
REDUCTION
ALBERTA



Support Team

Website: eralberta.ca/esb

Email: support@esbprogram.ca

Phone: 1-844-407-0025

By chat on the ERA website and program portal