



for Gaz Métro Customers

PARTICIPANT'S GUIDE

FOR ENERGY EFFICIENT RENOVATIONS ON THE BUILDING ENVELOPE

Complete a guide for each social housing or social community building.



Foreword

This guide facilitates the preparation of a file so you can obtain financial assistance from the Energy Efficiency Fund (EEF) to carry out eco-energy work on your building's envelope (insulation of walls, roofs, window replacement, etc.).

EEF programs are only available to present and future customers of Gaz Métro, with the exceptions of tariff 4 and 5 customers. This guide is intended for owners of social housing and social community buildings who are planning eco-energy renovations to the envelope of their buildings.

The Energy Efficiency Fund (EEF) reserves the right to request additional information. Incomplete files cannot be processed. An EEF representative or an external auditor may perform an on-site visit to ensure that the work done complies with the program requirements. Upon accepting the financial aid under this program, you agree, if need be, to participate in an evaluation exercise. Also, with your consent, some projects, including photos and data, may be used to promote the EEF programs.

TO SUBMIT YOUR FILE

Energy Efficiency Fund - Gaz Métro

Non-Profit Organization Programs

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NOTE

The EEF reserves the right:

- To modify or cancel a program without prior notice;
- To interpret the terms and conditions of the program;
- To refuse any proposal that does not meet program criteria.

The customer:

- Acknowledges that any inaccurate declaration could result in the cancellation of the financial assistance. The EEF may then claim a reimbursement of the assistance paid;
- Agrees to be subject to a program evaluation exercise if the EEF or a third party mandated by the EEF so requests;
- Agrees that the EEF can visit the site in order to validate the implementation of the energy efficiency measures for which financial assistance has been paid;
- Agrees that the following information related to the project may be divulged: type of building and its description, reference consumption, eligible project costs, savings expected or achieved, and the amount of financial assistance granted.

Program description and objectives¹

The renovation program of the Energy Efficiency Fund is aimed at improving the thermal envelope of buildings in order to increase their energy efficiency.

The Energy Efficiency Fund (EEF) offers a financial assistance of **\$2 per cubic meter** of natural gas saved following renovation work done on the building envelope. The maximum assistance granted is \$100,000, up to a limit of 75 % of the cost of the project, considering all financial assistances received or allowed.

What measures are eligible?

- Replacement of windows and sliding glass doors;
- Reconditioning of windows and sliding glass doors;
- Insulation of the attic;
- Insulation of the walls;
- Insulation of basements;
- Complete caulking of the building.

You can also receive a financial assistance of **\$6 per cubic meter** of natural gas saved for the purchase and installation of solar air and/or water heating systems and **\$3.50 per cubic meter** of natural gas saved for the purchase and installation of drain water heat recovery units. Consult these programs for details.

Minimum requirements for the work

The work must **exceed** the standards of the [Model National Energy Code of Canada for Buildings](#) (PDF | 38 ko).

Who's eligible for this program?

Housing cooperatives, non profit housing cooperatives, and social community organizations servicing low income clients whose building is heated by natural gas.

Steps to follow:

You have up to **3 months** following the completion of the renovation work to make a request for financial assistance.

1. Register

Complete the Participant's Guide **before starting the renovation work** and submit a copy for each building to be renovated to the EEF.

2. Wait for confirmation

The EEF will confirm the financial assistance potentially available based on the cubic metres of natural gas to be saved.

3. Carry out the work

You must carry out the work in accordance with the information submitted to the EEF in the Participant's Guide.

4. Once the renovation work is completed, send us:

- Photos taken during and after the renovation work;
- A copy of the bills for the materials installed and labour.

¹ Program subject to change without prior notice.

2. REPLACEMENT OF WINDOWS AND SLIDING GLASS DOORS BY HIGH ENERGY EFFICIENCY WINDOWS AND SLIDING GLASS DOORS

In order to be able to determine the energy savings that can be achieved, you need to identify the specifications of your current windows and those you will be installing.

BEFORE RENOVATIONS

Please check the boxes that correspond to your current windows.

→ **Type of window:**

- Operable
Fixed

→ **Type of pane:**

- Single
Double

→ **Type of glazing:**

- Single
Double
Triple

→ **Type of frame :**

- Aluminum
Aluminum with thermal barrier
Wood/Vinyl
Fibreglass

→ **Argon gas fill:**

- Yes
No

→ **Interstices:**

- None
6.4 mm (1/4 in.)
12.7 mm (1/2 in.)

→ **Low emissivity (low e):**

- Yes
No

AFTER RENOVATIONS

Please check the boxes that correspond to your new windows.

→ **Type of window:**

- Operable
Fixed

→ **Type of pane:**

- Single
Double

→ **Type of glazing:**

- Single
Double
Triple

→ **Type of frame :**

- Aluminum
Aluminum with thermal barrier
Wood/Vinyl
Fibreglass

→ **Argon gas fill:**

- Yes
No

→ **Interstices:**

- None
6.4 mm (1/4 in.)
12.7 mm (1/2 in.)

→ **Low emissivity (low e) :**

- Yes
No

→ **Indicate, in square metres (m²), the total surface area of the windows/sliding doors to be replaced. The windows and sliding doors need to be reported separately.**

Size of windows: _____ m²
Size of sliding glass doors: _____ m²

→ **In order to receive the financial assistance, before work begins, you must provide:**

- photos of the current windows and sliding glass doors to be replaced. Details of the windows must be easily visible on the photos.

- You can choose ENERGY STAR® qualified windows and sliding glass doors, which are 20% to 40% more efficient than conventional models.

- For optimal energy efficiency, **call on a professional** when installing windows and sliding glass doors. Poor installation may result in problems with air or water infiltration or faulty operation, even if the products purchased are energy efficient.

Don't forget:

- Complete and sign the Participant's Guide**
- Measure the size of the windows**
- Measure the size of the sliding glass doors**
- Take photos of the old windows**

3. RECONDITIONING OF WINDOWS AND SLIDING GLASS DOORS BY A SPECIALIZED COMPANY

Reconditioning windows is more economical than purchasing and installing new windows. It restores and, in some cases, even exceeds their original performance levels.

→ ***Please indicate in square metres (m²) the size of the windows and sliding glass doors to be reconditioned. The windows and sliding glass doors must be accounted for separately.***

Size of windows: _____ m²
 Size of sliding glass doors: _____ m²

→ ***In order to receive the financial assistance, you must provide, before work begins:***

- photos of the current windows and sliding glass doors to be reconditioned.
 Details of the windows must be easily visible on the photos.
- an estimate of the cost of the work and an evaluation of the potential energy savings done by a qualified company.

Don't forget:

- | | |
|--|--------------------------|
| Complete and sign the Participant's Guide | <input type="checkbox"/> |
| Measure the size of the windows | <input type="checkbox"/> |
| Measure the size of the sliding glass doors | <input type="checkbox"/> |
| Take photos of the old windows | <input type="checkbox"/> |
| Provide an estimate of the cost of the work | <input type="checkbox"/> |

4. INSULATION

4.1. Insulation of the roof

In order to be able to determine the energy savings that can be achieved, you need to identify the insulation specifications of your roof before and after the work.

BEFORE THE RENOVATIONS

→ **Type of roof on the building:**

- Wood-frame roof with attic space
- Wood-frame roof with parallel chord trusses
- Flat roof with concrete slab/steel bridging

Please indicate any other pertinent information about the type of roof: _____

→ **If you know the R value of your current roof, please indicate it:** _____

→ **Type of insulating**

- No insulation
- Cavity insulation (mineral wool/cellulose fibre)
- Insulating barrier (rigid insulation)

→ **Thickness of the insulation:**

- None
- 25.4 mm (1 in.)
- 38.1 mm (1.5 in.)
- 50.8 mm (2 in.)
- 101.6 mm (4 in.)
- 152.6 mm (6 in.)
- 203.2 mm (8 in.)
- 254.0 mm (10 in.)
- 304.8 mm (12 in.)
- 355.6 mm (14 in.)

→ **Please indicate in square metres (m²) or square feet (ft²) the total surface roof area to be insulated (clearly indicate the unit of measure used):** _____

→ **Please provide all other pertinent information or description of the condition of the roof before the renovations:** _____

AFTER THE RENOVATIONS

→ *Insulation products sold in Canada are rated R and RSI. Please indicate the rating of the material to be used in the renovation work: _____*

→ **Type of insulation**

- Cavity insulation (mineral wool/cellulose fibre)
- Insulation barrier (rigid insulation)

→ **Thickness of insulation:**

- None
- 25.4 mm (1 in.)
- 38.1 mm (1.5 in.)
- 50.8 mm (2 in.)
- 101.6 mm (4 in.)
- 152.6 mm (6 in.)
- 203.2 mm (8 in.)
- 254.0 mm (10 in.)
- 304.8 mm (12 in.)
- 355.6 mm (14 in.)

→ **To complete your file, you need to send us:**

→ photos of the roof before the work is done.

Don't forget:

- | | |
|---|--------------------------|
| Complete and sign the Participant's Guide | <input type="checkbox"/> |
| Measure the roof area to be insulated | <input type="checkbox"/> |
| Take photos of the roof before the work | <input type="checkbox"/> |

4.2. Insulation of above-ground walls

In order to be able to determine the energy savings that can be achieved, you need to specify the insulation specifications of your above-ground walls before and after the renovations.

BEFORE THE RENOVATIONS

→ After consulting the following list of wall insulation specifications, please indicate the one that corresponds to your current situation.¹

I. Metal trusses

- a. 92 mm (4 in.) @ 406 mm cc. (16 in.)
None
Mineral wool/cellulose fibre
- b. 92 mm (4 in.) @ 610 mm cc. (24 in.)
None
Mineral wool/cellulose fibre
- c. 152 mm (6 in.) @ 406 mm cc. (16 in.)
None
Mineral wool/cellulose fibre
- d. 152 mm (6 in.) @ 610 mm cc. (24 in.)
None
Mineral wool/cellulose fibre

II. Wood trusses

- a. 89 mm (4 in.) @ 406 mm cc. (16 in.)
None
Mineral wool/cellulose fibre
- b. 140 mm (6 in.) @ 406 mm cc. (16 in.)
None
Mineral wool/cellulose fibre
- c. 140 mm (6 in.) @ 610 mm cc. (24 in.)
None
Mineral wool/cellulose fibre

III. Masonry/concrete blocks, without trusses

IV. Masonry/concrete blocks with wood trusses

- a. 89 mm (4 in.) @ 406 mm cc. (16 in.)
None
Mineral wool/cellulose fibre
- b. 89 mm (6 in.) @ 610 mm cc. (24 in.)
None
Mineral wool/cellulose fibre

¹ Your choice must provide the appropriate data concerning the wall type, the depth of the posts (studs), interaxial (space between the posts, from center to center), as well as the type of insulation in the cavities.

- V. **Masonry/concrete blocks with metal trusses**
- a. 92 mm (4 in.) @ 406 mm cc. (16 in.)
 - b. 92 mm (6 in.) @ 610 mm cc. (24 in.)
- VI. **Sheet metal with Z struts**
- a. 89 mm (4 in.) @ 1830 mm cc. (72 in.)
 - b. 140 mm (6 in.) @ 1830 mm cc. (72 in.)

→ *If you know the R value of your above-ground walls before the renovation work please indicate it: _____*

→ *Please indicate the type and thickness of the insulating shield of your outside wall, if applicable, before the work:*

None

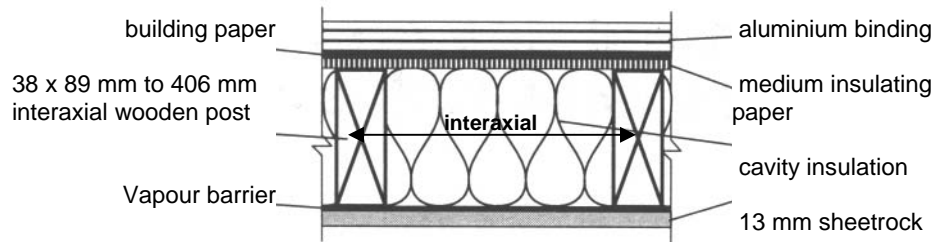
Rigid insulation

- a. 25.4 mm (1 in.)
- b. 38.1 mm (1.5 in.)
- c. 50.8 mm (2 in.)

Spray-applied insulation

- a. 25.4 mm (1 in.)
- b. 38.1 mm (1.5 in.)
- c. 50.8 mm (2 in.)

Example of woodwork wall construction



Source: Model National Energy Code of Canada for Buildings, 1997
Canadian Commission on Building and Fire Codes

→ *Please indicate in square metres (m²) or square feet (ft²) the total surface wall area to be insulated, excluding doors and windows.
(Clearly indicate the unit of measure used): _____*

→ *If the inside and outside areas are different, please provide details: _____*

AFTER THE RENOVATIONS

→ After consulting the following list of wall insulation specifications, please indicate the one that corresponds to your situation after the renovation work.

I. Metal Trusses

- | | | | |
|----|--------------------------------------|--|--------------------------|
| a. | 92 mm (4 in.) @ 406 mm cc. (16 in.) | | |
| | None | | <input type="checkbox"/> |
| | Mineral wool/cellulose fibre | | <input type="checkbox"/> |
| b. | 92 mm (4 in.) @ 610 mm cc. (24 in.) | | |
| | None | | <input type="checkbox"/> |
| | Mineral wool/cellulose fibre | | <input type="checkbox"/> |
| c. | 152 mm (6 in.) @ 406 mm cc. (16 in.) | | |
| | None | | <input type="checkbox"/> |
| | Mineral wool/cellulose fibre | | <input type="checkbox"/> |
| d. | 152 mm (6 in.) @ 610 mm cc. (24 in.) | | |
| | None | | <input type="checkbox"/> |
| | Mineral wool/cellulose fibre | | <input type="checkbox"/> |

II. Wood Trusses

- | | | | |
|----|--------------------------------------|--|--------------------------|
| a. | 89 mm (4 in.) @ 406 mm cc. (16 in.) | | |
| | None | | <input type="checkbox"/> |
| | Mineral wool/cellulose fibre | | <input type="checkbox"/> |
| b. | 140 mm (6 in.) @ 406 mm cc. (16 in.) | | |
| | None | | <input type="checkbox"/> |
| | Mineral wool/cellulose fibre | | <input type="checkbox"/> |
| c. | 140 mm (6 in.) @ 610 mm cc. (24 in.) | | |
| | None | | <input type="checkbox"/> |
| | Mineral wool/cellulose fibre | | <input type="checkbox"/> |

III. Masonry/concrete blocks without trusses

IV. Masonry/concrete blocks with wood trusses

- | | | | |
|----|-------------------------------------|--|--------------------------|
| a. | 89 mm (4 in.) @ 406 mm cc. (16 in.) | | |
| | None | | <input type="checkbox"/> |
| | Mineral wool/cellulose fibre | | <input type="checkbox"/> |
| b. | 89 mm (6 in.) @ 610 mm cc. (24 in.) | | |
| | None | | <input type="checkbox"/> |
| | Mineral wool/cellulose fibre | | <input type="checkbox"/> |

V. Masonry/concrete blocks with metal trusses

- | | | | |
|----|-------------------------------------|--|--------------------------|
| a. | 92 mm (4 in.) @ 406 mm cc. (16 in.) | | |
| b. | 92 mm (6 in.) @ 610 mm cc. (24 in.) | | <input type="checkbox"/> |

VI. Sheet metal with Z strut

- | | | | |
|----|---------------------------------------|--|--------------------------|
| a. | 89 mm (4 in.) @ 1830 mm cc. (72 in.) | | |
| b. | 140 mm (6 in.) @ 1830 mm cc. (72 in.) | | <input type="checkbox"/> |

→ **Insulation products sold in Canada are rated R and RSI. Please indicate the rating of the material to be used in the renovation work: _____**

→ **Please indicate the type and thickness, if applicable, of the barrier insulating your exterior wall after the work:**

None

Rigid insulation

a. 25.4 mm (1 in.)

b. 38.1 mm (1.5 in.)

c. 50.8 mm (2 in.)

Spray-applied insulation

a. 25.4 mm (1 in.)

b. 38.1 mm (1.5 in.)

c. 50.8 mm (2 in.)

→ **Please provide any other pertinent information about, or description of the condition of the walls before the work: _____**

→ **To complete your file you need to send us:**

→ photos of your above-grade walls before the insulation work.

Don't forget:

Complete and sign the Participant's Guide

Measure the wall area to be insulated (exclude doors and windows)

Take photos of the above-ground walls before the work

4.3. Insulation of underground walls

In order to be able to determine the energy savings that can be achieved, you need to specify the insulation specifications of your underground walls before and after the renovation work.

BEFORE THE RENOVATIONS

→ After consulting the following list of wall insulation specifications, please indicate the one that corresponds to your current situation.²

- I. Concrete without trusses
- II. Concrete blocks with wood trusses
- a. 89 mm (4 in.) @ 406 mm cc. (16 in.)
- None
- Mineral wool/cellulose fibre
- b. 89 mm (6 in.) @ 610 mm cc. (24 in.)
- None
- Mineral wool/cellulose fibre
- III. Blocks with steel trusses
- a. 92 mm (4 in.) @ 406 mm cc. (16 in.)
- None
- Mineral wool/cellulose fibre
- b. 92 mm (6 in.) @ 610 mm cc. (24 in.)
- None
- Mineral wool/cellulose fibre

→ If you know the R value of your underground walls before the renovation work please indicate it: _____

→ Please indicate the type and thickness, if applicable, of the barrier insulating your exterior wall before the work:

- I. None
- II. Rigid insulation
- a. 25.4 mm (1 in.)
- b. 38.1 mm (1.5 in.)
- c. 50.8 mm (2 in.)
- III. Spray-applied insulation
- a. 25.4 mm (1 in.)
- b. 38.1 mm (1.5 in.)
- c. 50.8 mm (2 in.)

² Your choice must provide the appropriate data as to wall type, depth of the posts (studs), interaxial (space between the posts, center to center), as well as the type of insulation in the cavities.

→ Please indicate in square metres (m^2) or square feet (ft^2) the total surface wall area to be insulated, excluding doors and windows.
(Clearly indicate the unit of measure used): _____

If the inside and outside areas are different, please provide details: _____

AFTER THE RENOVATIONS

→ After consulting the following list of wall insulation specifications, please indicate the one that corresponds to your situation after the renovation work.

- I. Concrete, without trusses
- II. Concrete blocks with wood trusses
- a. 89 mm (4 in.) @ 406 mm cc. (16 in.)
None
Mineral wool/cellulose fibre
- b. 89 mm (6 in.) @ 610 mm cc. (24 in.)
None
Mineral wool/cellulose fibre
- III. Blocks with steel trusses
- a. 92 mm (4 in.) @ 406 mm cc. (16 in.)
None
Mineral wool/cellulose fibre
- b. 92 mm (6 in.) @ 610 mm cc. (24 in.)
None
Mineral wool/cellulose fibre

→ Insulation products sold in Canada have an R and RSI rating. Please indicate the rating of the material to be used in the renovation work: _____

→ Please indicate the type and thickness, if applicable, of the barrier insulating your exterior wall after the work:

- I. None
- II. Rigid insulation
- a. 25.4 mm (1 in.)
b. 38.1 mm (1.5 in.)
c. 50.8 mm (2 in.)
- III. Spray-applied insulation
- a. 25.4 mm (1 in.)
b. 38.1 mm (1.5 in.)
c. 50.8 mm (2 in.)

→ Please provide any other pertinent information about or description of the condition of the underground walls before the work: _____

→ To complete your file, you need to send us:

→ photos of your underground walls before the insulation work.

Don't forget:

Complete and sign the Participant's Guide

Measure the wall area to be insulated (exclude doors and windows)

Take photos of the walls before the work

APPENDIX

Insulation effectiveness

R-values and their metric equivalent, RSI-values, are used to rate the effectiveness of insulating materials. The higher the R-value or RSI-value the more resistance the material has to the movement of heat. Insulation products sold in Canada are labelled with R and RSI ratings. Provincial building codes specify minimum R or RSI values for new construction, with different values for different applications. It is important to know what your local building code requires when planning a construction project.

Proper installation of insulation plays a large role in its effectiveness. Compressing the insulation, leaving air spaces around it or allowing air movement in the insulation all reduce the actual R-value of the insulation.

Insulation material	R/in. (RSI/m)	Appearance	Advantages-Disadvantages
Batt type			
Fibreglass	3.0-3.7(21-26)	All batts come in plastic wrapped bales. The products are like fibrous blankets, about 1.2 m (48 in.) long and wide enough to fit snugly between wall studs.	Readily available.
Mineral wool	2.8-3.7 (19-26)	Same as fibreglass.	Somewhat better fire resistance and soundproofing qualities than fibreglass.
Cotton	3.0-3.7(21-26)		Not readily available.
Loose fill (All loose fill typically requires a professional installer.)			
Fibreglass	3.0-3.7(21-26)	A very light fibrous fill, usually pink or yellow.	Can be affected by air movement in attics.
Mineral fibre	2.8-3.7(19-26)	A very light fibrous fill, usually brown.	
Cellulose fibre	3.0-3.7(21-26)	Fine particles usually grey in colour, more dense than glass or mineral fibre.	Provides more resistance to air movement than other loose fill insulations. Can have settlement problems if not installed properly.

Board stock			
Type I and II (expanded) polystyrene or EPS	3.6-4.4(25-31)	White board of small (about 8 mm—0.3 in. - diameter) foam beads pressed together.	Typically no HCFCs used in production. Must be covered.
Type III and IV (extruded) polystyrene or XPS	5.0 (35)	Commonly blue or pink homogeneous foam board.	Works well in wet conditions, can act as a vapour retarder. HCFC (an ozone depleter and greenhouse gas) usually used in production. Must be covered.
Rigid fibreglass	4.2-4.5(29-31)	A dense mat of fibres, typically less rigid than the polystyrene.	Drains water away. Sometimes hard to find.
Rigid mineral fibre	4.2-4.5(29-31)	See rigid fibreglass above.	Drains water away.
Polyisocyanurate	5.6-7.7(39-53)	Foil-faced rigid foam.	HCFC usually used in production.
Spray applied			
All spray-applied insulations fill cavities very well. They must be applied by specialized contractor.			
Wet spray cellulose	3.0-3.7(21-26)	Fine particles held in place by a binder.	
Polyisocyanurate	3.6(25)	A soft, spray foam that expands into the cavity.	Can act as the air barrier. Must be covered.
Polyurethane	5.8-6.8(40-47)	A foam that expands into the cavity and sets up fairly rigid.	Can act as the air barrier and vapour retarder HFC used in production must be covered.

Note: All values are approximate and for general comparison only. Some insulation may cause irritation or pose a danger during installation. Read the manufacturers' recommendations and instructions on insulation packaging for information on proper respiratory, eye and skin protection.

*Excerpt from the [Canada Mortgage and Housing Corporation Web site](#).