



POTENTIAL CONTRIBUTION FOR LEED® CANADA FOR HOMES 2009 REQUIREMENTS

INNOVATION AND DESIGN PROCESS (ID)

CREDITS	DURABLE STRATEGIES	POTENTIAL POINTS	CREDIT RELE-	CONTRIBUTION AND COMPLIANCE* ENERMAX PANEL
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ID 3.1	Innovative or regional design	1-4 points	Direct
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Requirements

Prepare a written Innovative Design Request, to be submitted by the *LEED Canada for Homes* Provider to the CaGBC, explaining the merits of the proposed measure. This point should not be counted until *LEED Canada for Homes* has ruled on the request.

This credit rewards innovative or regional measures that are not addressed elsewhere in the Rating System. A project can also receive **1 LEED point** for exceeding the **performance requirements** of existing credits.

Exemplary performance requirement MR 2.2: Recycled content

Innovation and exemplary performance if the project reaches **30%** or more of recycled content.

Exemplary performance requirement MR 2.2: Regional materials

Innovation and exemplary performance if the project reaches **40%** or more of regional material.

Exemplary performance requirement MR 2.2: FSC Certified wood

Innovation and exemplary performance if **95%** or more of the project's total new wood is FSC Certified Wood.

COMMENTS

The **ENERMAX** panel from **BUILDING PRODUCTS OF CANADA CORP.** is class-leading and uniquely combines sound attenuation and thermal insulating properties. The reflective aluminum side improves the soundproofing efficiency of any wall or floor/ceiling assembly. The **ENERMAX** panel also increases the energy efficiency of the building in which it is installed. It is the perfect wall solution for a healthier, more comfortable and more peaceful indoor environment.

The **ENERMAX** panel absorbs sounds and thus improves the soundproofing efficiency. This product can therefore, according to the project's team and priorities, contribute to 1 LEED point for an innovative measure that promotes a high soundproofing efficiency.

Moreover, the **ENERMAX** panel contains a high pre-consumer and post-consumer recycled content as well as a high regional material percentage.

These characteristics may help achieve exemplary performances for the following credits:

MR 2.2: Recycled content

MR 2.2: Regional materials

MR 2.2: FSC Certified wood

ENERGY AND ATMOSPHERE (EA)

EA 1	Optimize Energy Performance	Up to 28 - 34 points Or up to 5 points Based on the selected options	Direct
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Requirements

Improve the overall energy performance of a home by meeting or exceeding the performance of **ERS (EnerGuide) 76** or **HERS 80**.

Prerequisites

1.1 Meet performance of ERS 76 or HERS 80 (0 points, required).

Credits

1.2 Exceptional Energy Performance in ERS (EnerGuide) (maximum 28 points). Exceed the performance of **ERS 76**. Use table 151 below relating the EnerGuide Rating System (**ERS**) index to the appropriate number of LEED points. This path can also pursue **EA 8** and **EA 9** and must meet the prerequisites and satisfy the conditions and must comply with the Credit **EA 8.1 Lighting** requirements.

OR

1.2 Exceptional Energy Performance in HERS (maximum 34 points). Exceed the performance of **HERS 80**. Use the table 15b below relating the **Home Energy Standards (HERS) Index** to the appropriate number of LEED points.

There are two possible conformity paths in the Energy and Atmosphere category. If a project is allocated points for Credit **EA 1.2 (SCE)**, Credits **EA 2 to 6, 7.3** and **10** must be skipped. If a project is allocated points for Credit **EA 1.2 (HERS)**, Credits **EA 2 to 6, 7.3** and **8 to 10** must be skipped.

COMMENTS

The **ENERMAX** panel is the result of laminating an aluminum membrane to a high-strength natural panel. This characteristic significantly improves the overall energy performance of walls. The **ENERMAX** panel thus contributes to Prerequisite and Credit **EA 1**.

The **ENERMAX** panel improves the energy efficiency of a building by adding a thermal resistance up to **R-4.3** (including the reflective coefficient and in conjunction with a 3/4 inch air space). Please refer to the applicable Building Code of your area (CCMC insulation 13494-R).

BUILDING PRODUCTS OF CANADA CORP. has all required documents regarding LEED® and can rapidly provide information for a specific project.



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EA 2

Insulation

2 points

Direct

COMMENTS

Requirements

Design and install insulation to minimize heat transfer and thermal bridging.

Prerequisites

2.1 Basic Insulation (0 points, required)

- Install insulation that meets or exceeds the **R-value** requirements listed in Chapter 6 of the **2004 International Energy Conservation Code** (Table 602.1) or the **local building codes**, whichever is the more stringent. Alternative wall and insulation systems, such as structural insulated panels (SIPs) and insulated concrete forms (ICFs), must demonstrate a comparable **R-value**, but thermal mass or infiltration effect cannot be included in the **R-value** calculation.
- Install insulation to meet the provincial or local standards. Installation must be verified by a **Green Rater** conducting a pre-drywall thermal bypass inspection.

2.2 Enhanced Insulation (2 points)

- Install insulation that exceeds the **R-value** requirements listed in Chapter 6 of the **2004 International Energy Conservation Code** (Table 602.1) or the **local building codes**, whichever is the more stringent by at least **20%**. Alternative wall and insulation systems, such as structural insulated panels (SIPs) and insulated concrete forms (ICFs), must demonstrate a comparable **R-value**, but thermal mass or infiltration effect cannot be included in the **R-value** calculation.
- Install insulation to meet grade 1 standards. Installation must be verified by a **Green Rater** conducting a pre-drywall thermal bypass inspection.

The **ENERMAX** panel is the result of laminating an aluminum membrane to a high-strength natural panel. This characteristic significantly improves the overall energy performance of walls. The **ENERMAX** panel thus contributes to Prerequisite and Credit **EA 2**.

The **ENERMAX** panel improves the energy efficiency of a building by adding a thermal resistance up to **R-4.3** (including the reflective coefficient and in conjunction with a 3/4 inch air space) to the interior of the exterior wall of the building (CCMC insulation 13494-R).

EA 3

Air Filtration

3 points

Direct

COMMENTS

Requirements

Minimize energy consumption caused by uncontrolled air leakage into and out of conditioned spaces.

Prerequisites

3.1 Reduce Envelope Leakage: Meet the air leakage requirements shown in table 17. The air leakage rate must be tested and verified by a **Green Rater**.

Credits

3.2 Greatly Reduced Envelope Leakage (2 points). Meet the air leakage requirements shown in table 17. The air leakage rate must be tested and verified by a **Green Rater**.

OR

3.3 Minimal Envelope Leakage (3 points). Meet the air leakage requirements shown in table 17. The air leakage rate must be tested and verified by a **Green Rater**.

The **ENERMAX** panel contributes to Credit **EA 3** because it substantially increases the air tightness of the building envelope. The **ENERMAX** panel's fully supported aluminum membrane is a Type 1 vapour barrier which ensures an air permeability lower than **0.02 L/s.m²**. This characteristic provides an increased performance to stop air and moisture migration in the wall cavity. The **ENERMAX** panel therefore decreases the air leakages and allows an increase in the energy efficiency of a building (CCMC air barrier 13356-R).

However, **BUILDING PRODUCTS OF CANADA CORP.** has no control over the on-site installation technique or on the products used to seal the openings.

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ENERGY AND ATMOSPHERE (EA)



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MR 2.1

Environmentally preferable products:
FSC-Certified Tropical Wood

(0) Required

Direct

COMMENTS

Requirements

Prerequisites

2.1: FSC-Certified Tropical Wood. Meet the following two requirements, as applicable:

A) Provide all wood-product suppliers with a notice (see figure 6, below) containing all the following elements:

- a statement that the builder's preference is to purchase products containing tropical wood only if it is FSC-Certified;
- a request for the country of manufacture of each products supplied; **and**
- a request for a list of FSC-Certified tropical wood products the vendor can supply.

B) If tropical wood is intentionally used (i.e., specified in purchasing documents), use only FSC-Certified tropical wood products. Reused or reclaimed materials are exempt.

The **ENERMAX** panel from **BUILDING PRODUCTS OF CANADA CORP.** can contribute to this Prerequisite since it does not contain tropical wood components.

BUILDING PRODUCTS OF CANADA CORP. can provide a compliance letter for this prerequisite in a certified project.

MR 2.2

Environmentally preferable products:
FSC-Certified wood

Does not contribute

Direct

COMMENTS

Requirements

Use building component materials that meet one or more of the criteria below:

Except as noted otherwise below, **90%** of the component, as defined in each category, must meet the specification shown.

Wood frame: 90% of wood used for the wall structure must be **FSC** certified.

BUILDING PRODUCTS OF CANADA CORP. is **FSC** Mix Credit certified. Certificate code **BNQ-COC-604001**, **FSC-C113184**. Therefore, all of the **BUILDING PRODUCTS OF CANADA CORP.**'s products are made out of **100%** controlled wood.

FSC certified **ENERMAX** panels can be provided upon special request and availability. This product may thus contribute to this Credit since it is made of **51.7%** wood components.

The percentages are calculated according Credit **MR 2.2** and exclude the post-consumer recycled content.

*All data relating to components with certified wood have been validated by a third party - **Vertima inc.***

MR 2.2

Environmentally preferable products: Recycled content

0.5 point by component

Direct

COMMENTS

Requirements

Environmentally preferable products 0.5 point each, maximum 8 points).

Use building component materials that meet one or more of the criteria below. Except as noted in Table 24, a material must make up **90%** of the component, by weight or volume. A single component that meets each criterion (i.e., environmentally preferable, low emissions, and local sourcing) can earn points for each.

Roof, floor and walls—Insulation: must have **20%** or more recycled content (0.5 point by components).

The **ENERMAX** panel can contribute to this credit since it contains **49.8% pre-consumer** recycled content and **36.3% post-consumer** recycled content.

Percentages of recycled content are calculated based on the total weight of the entire system and **exclude** the percentage of recycled content from internal waste of **BUILDING PRODUCTS OF CANADA CORP.** production as requested by **LEED®**.

*All data relating to components with recycled content were identified and validated by a third party - **Vertima Inc.***

BUILDING PRODUCTS OF CANADA CORP. has all required documents regarding **LEED®** and can rapidly provide information for a specific project.

MATERIALS AND RESOURCES (MR)



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MR 2.2

Environmentally preferable products: Local production

0.5 point by component

Direct

COMMENTS

Requirements

Environmentally Preferable Products (0.5 point each, maximum of 8 points)

Use building materials that meet one or more of the criteria below. Except as noted in table 24, a material must make up **90%** of the component by weight or volume. A single component that meets each criterion (i.e., environmentally preferable, low emissions, and local sourcing) can earn points for each.

Local production

Use products that were extracted, processed, and manufactured within **800 km** (500 miles) of home if moved by truck or within **2,400 km** (1,500 miles) if moved by rail.

Except as noted otherwise below, **90%** of the component, as defined in each category, must meet the specification shown.

The **ENERMAX** panel can contribute to this Credit since **86.1%** of the components used in its manufacturing are extracted, collected, treated and recovered within **800 km** or **2,400 km** (depending on the transportation mean used) of the final production site.

The percentage calculation was performed by considering the requirements of Credit **MR 2.2** and the maximum distance radius (which depends on the means of transportation used).

The **ENERMAX** panel is made in **Pont-Rouge, QC, CAN** (G3H 1S2).

The origin of the main components and the mean of transportation used must be validated for every project.

All data relating to regional materials have been validated by a third party - Vertima Inc.

MR 2.2

Environmentally preferable products: Low emissions

0.5 point by component

Direct

COMMENTS

Requirements

Environmentally Preferable Products (0.5 point each, maximum of 8 points)

Use building materials that meet one or more of the criteria below. Except as noted in Table 24, a material must make up **90%** of the component by weight or volume. A single component that meets each criterion (i.e., environmentally preferable, low emissions, and local sourcing) can earn points for each.

Low emissions : Comply with California «Practice for Testing of VOCs from Building Materials Using Small Chambers» (www.dhs.ca.gov/ehlb/IAQ/VOCS/Practice.htm).

The **ENERMAX** panel can contribute to this Credit since the components used in its manufacturing by **BUILDING PRODUCTS OF CANADA CORP.** comply with the low emissions requirements.

The **ENERMAX** panel contains no volatile organic compound (VOC) and no added urea formaldehyde.

All data relating to emissions have been validated by a third party - Vertima inc.



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POINTS

TOTAL

UP TO 15.5 POINTS &
UP TO 44.5 POINTS (BASED
ON THE SELECTED OPTIONS)

The ENERMAX board can contribute up to a total
of 15.5 points (prescriptive path) & 44.5 points (non-
prescriptive path) for a LEED® Canada for Homes Project

** It is important to consider that the total amount of possible points reflects the number of achievable points in each credit categories. The product by itself cannot achieve this score, as defined above, but is considered as a beneficial element in order to achieve LEED® credits.*