

Innovation & Design Process

SS	WE	EA	MR	EQ	ID
Overview					

Sustainable design strategies and measures are constantly evolving and improving. New technologies are continually being introduced to the marketplace, and up-to-date scientific research influences building design strategies. The purpose of this LEED Canada category is to recognize projects with innovative building features and sustainable building knowledge.

Occasionally, a strategy results in building performance that greatly exceeds those required in an existing LEED Credit. Other strategies may not be addressed by any LEED Prerequisite or Credit, but warrant consideration for their sustainability merits. Finally, expertise in sustainable building is essential to the design and construction process. All of these issues are rewarded in this category.

Overview of LEED® Canada-NC v1.0 Credits:

ID Credit 1
Innovative Design

ID Credit 2
LEED Accredited
Professional

There are 5 points available in the Innovation & Design category

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Credit 1					

1-4 Points

Innovation in Design

Intent

To provide design teams and projects the opportunity to be awarded points for exceptional performance above the requirements set by the LEED Green Building Rating System and/or innovative performance in Green Building categories not specifically addressed by the LEED Green Building Rating System.

Requirements

- Credit 1.1 (1 point) Identify the intent of the proposed innovation Credit, the proposed requirement for compliance, the proposed submittals to demonstrate compliance, and the design approach (strategies) that might be used to meet the requirements.
- Credit 1.2 (1 point) Same as Credit 1.1
- Credit 1.3 (1 point) Same as Credit 1.1
- Credit 1.4 (1 point) Same as Credit 1.1

Submittals

- Provide the proposal(s) within the LEED Letter Template (including intent, requirement, submittals and possible strategies) and relevant evidence of performance achieved.

Summary of Referenced Standard

There is no standard referenced for this Credit.

Interpretation

- The intent of *Innovation in Design (ID) Credit 1* is to provide design teams and projects the opportunity to be awarded points for exemplary performance above the requirements set by the LEED Canada Green Building Rating System and/or *innovative* strategies in green building categories not specifically addressed by LEED.
- As a general rule of thumb, ID Credits for *exceptional* performance are awarded for doubling the Credit requirements and/or achieving the next incremental percentage threshold. For instance, an ID credit for exemplary performance in water use reduction (WEc3) would require a minimum of 40% savings (20%=WEc3.1; 30%=WEc3.2, etc.).

Educational Outreach Programs: To take advantage of the educational value of the green building features of a project and to earn a LEED point, any approach should be actively instructional. Two of the following three elements must be included in the educational program:

1. A comprehensive signage program built into the building's spaces to educate the occupants and visitors of the benefits of green buildings. This program may include windows to view energy-saving mechanical equipment or signs to call attention to water-conserving landscape features.
2. The development of a manual, guideline or case study to inform the design of other buildings based on the successes of this project. This manual will be made available to the CaGBC for sharing with other projects.
3. An educational outreach program or guided tour could be developed to focus on sustainable living, using the project as an example.

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1-4 Points

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Green Building Concerns

The LEED Canada-NC 1.0 Green Building Rating System was devised to address current sustainable issues involved in commercial building design. However, the building industry is constantly evolving and introducing new sustainable strategies and measures. It is important to stay abreast of current developments in sustainable building and incorporate those strategies and products that optimize built spaces. ID Credits are the vehicle by which LEED Canada-NC 1.0 recognizes and awards such accomplishments.

Additionally, innovation in design may be awarded if a project achieves exemplary performance under an existing LEED Canada Credit. Points for exemplary performance are available only for those Credits where the outcome provides substantial benefits.

Environmental Issues

With all sustainable design strategies and products, it is important to consider the related impacts to the environment and occupant well-being, and to assure that other building aspects are not adversely impacted.

Economic Issues

Innovative strategies and measures by definition have widely variable first costs and operating costs, depending on the degree of complexity, materials incorporated, and the novelty of the technology. Initial costs can range from free to prohibitively expensive. To understand the implications of design features, a life cycle analysis can be applied to determine if the strategy or product is cost-effective over the lifetime of the building.

Community Issues

Community issues are those that affect others in close proximity to the project, as well as members of regional and world communities. Local actions can have dramatic effects on the world when considered in aggregate.

Design Approach

Strategies

There are two types of innovation strategies that qualify under this Credit:

1. *Exceeding existing LEED Canada-NC 1.0 Requirements.*

The first type includes those strategies that greatly exceed the requirements of existing LEED Credits. For instance, a project that incorporates energy or water efficiency measures that provide extraordinary savings and greatly exceed the requirements of their respective LEED Credits would be appropriate for this Credit.

2. *Innovation Strategies*

The second type of innovation strategies are those that are not addressed by any existing LEED Credits. Four independent sustainability measures may be applied to this Credit but they must have significant environmental and occupant benefits are applicable.

There are several key conditions associated with attaining an innovation Credit:

- Innovation is beyond what would be deemed as good design. Points for exemplary performance are available only for those Credits where the outcome provides outstanding, measurable benefits to the environment and/or building occupants.
- ID Credits are only awarded during the certification process. Although an innovation Credit can be submitted

through the Credit Interpretation Ruling (CIR) process, a CIRs ruling is provided only as a guidance of the likely outcome.

- Although any innovation in a particular strategy is to be commended, e.g., selecting PV systems with low embodied energy/kilowatt of onsite energy produced, ID Credits would typically only apply if they involve a significant portion of the project and thereby have greater demonstrated environmental benefit.
- Strategies that simply make common sense, e.g., lightning protection in military facilities enclosing explosives, are not typically eligible for ID Credits.
- Substantial efforts must be applied to ID Credits. Simple signage in a building, for example, would not be considered a significant educational effort by itself. Conversely, a visitor's centre and interactive display, coupled with a website and video would be an appropriate level of effort for earning an innovation Credit.
- No single strategy can achieve more than one point. For example, an innovation Credit has been awarded to a project for attaining a 45% reduction in water use (significantly in excess of the 30% reduction in WE c3.2). This does not imply that further improvements in water reductions will gain a proportionally greater number of points.
- Innovations can extend beyond building design to include education and operational practices, e.g., green housekeeping or purchasing of company fleet of alternatively fueled vehicles.

Required Documentation

ID Credits may be pursued by any LEED project, but the project team must sufficiently document the achievement using the LEED Credit equivalence process. This includes framing any proposed Innovation in Design CIRs and certification submissions as if they were a proposed new Credit, with sections for Intent, proposed Requirements for compliance, Submittals that demonstrate compliance (initial and audited submittals), and a summary of potential design approaches that may be used to meet the requirements. Proposed Requirements should define performance with substantial and measurable environmental benefits as compared to mainstream practice.

This format is particularly important if it is not obvious that you are proposing an innovation rather than a variation on standard practice. In general, reviewers look for significant and measurable environmental benefits from an innovation, backed up by data that support the significance of the measure.

- A separate set of submittals is required for each potential innovation credit. This must be in sufficient detail to assess its validity.
- The documentation should include:
 - A clear demonstration of the extent of the environmental benefits gained through the innovative strategy relative to typical practice, with supporting calculations.
 - Documentation submittals should be sufficient to unambiguously demonstrate the required performance.
 - A succinct narrative describing the features of the innovative approach.

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- A comparison of performance of the innovative approach versus an appropriate well-researched baseline representing typical mainstream practice.
- Where applicable, manufacturers' information on products and technologies.

Detailed life-cycle analysis and comparison to mainstream practice can be most helpful in demonstrating environmental performance over time.

The following submission example characterizes an Innovation in Design Credit for green housekeeping. It is framed as though it were a new proposed LEED Credit, which it may in future evolve into:

Intent:

Reduce exposure of building occupants and maintenance personnel to potentially hazardous chemical contaminants that adversely impact air quality, occupant well-being, and the environment.

Requirements for Commercial Buildings:

To receive an innovation point, the project team will need to demonstrate that a comprehensive green cleaning/housekeeping program is in place with clear performance goals, including:

1. A statement of purpose describing what the policy is trying to achieve from a health and environmental standpoint, focusing on cleaning chemicals and custodial training at a minimum.
2. A contractual or procedural requirement for operations staff to comply with the guidelines, including a written program for training and implementation.
3. A clear set of acceptable performance level standards by which to measure progress or achievement, such as

Green Seal standard GS-37 (see www.greenseal.org) or California Code of Regulations, Title 17 Section 94509, VOC standards for cleaning products (go to www.calregs.com, click on "California Code of Regulations" and perform a keyword search for "94509").

4. Documentation of the program's housekeeping policies and environmental cleaning solution specifications, including a list of approved and prohibited chemicals and practices. Demonstrate that the products used in the project are non-hazardous, have a low environmental impact, and meet the criteria set forth in #3 above. Concentrated cleaning products should be utilized when available.

Requirements for Residential Buildings:

- For cleaning and maintenance of common areas, a building owner/manager must comply with the requirements stated above. Additional steps are required to influence housekeeping protocols within residences.
- Select six major cleaning needs and identify products (compliant with #3, above) that will be supplied to meet these needs. Note that one cleaner may address several cleaning functions. Examples of cleaning needs include, but are not limited to: counter, sink, tub/shower, tile, limescale remover, toilet, hard flooring, laundry detergent, laundry bleach and windows.
- Provide an estimated 6 month supply of these products to residents, as well as information on how to easily purchase refills and/or replacements. Educate the residents on the green cleaning concepts and products via discussion and written materials upon

move-in and periodically thereafter.

- Additionally, if the building contains retail tenants, actively educate them on the cleaning products, standards and protocols that are being used in the common areas. Submit a narrative and highlighted supportive documents (e.g., relevant to policy, O&M, communications, products and contracts) as part of the LEED certification submittal.

Potential Strategies:

Refer to “Cleaning for Health” by Inform, Inc. (<http://www.informinc.org/cleanforhealth.php>)

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SS	WE	EA	MR	EQ	ID
Credit 2					

1 Point

LEED® Accredited Professional

Intent

To support and encourage the design integration required by a LEED Green Building project and to streamline the application and certification process.

Requirements

At least one principal participant of the project team that has successfully completed the LEED Accredited Professional exam.

Submittals

- Provide the LEED Letter Template stating the LEED Accredited Professional's name, title, company and contact information. Include a copy of this person's LEED Accredited Professional Certificate.

Summary of Referenced Standard

There is no standard referenced for this Credit.

Interpretation

- The intent is to have a LEED Accredited Professional to shepherd the design process, and maintain focus on environmental and health goals throughout design and construction. Because LEED is more successfully accomplished the earlier it is started in the design process, it is best to have a LEED Accredited Professional on the team as early as possible. That said, the point can be achieved by having the profession accredited prior to application for certification.
- At least one principal participant of the project team must successfully complete Accredited Professional exam for Credit achievement.
- Only 1 point is attainable regardless of how many LEED Accredited Professionals are on the team.

Green Building Concerns

LEED Accredited Professionals have the expertise required to design a building to LEED standards and to coordinate the documentation process that is necessary for LEED certification. The Accredited Professional understands the importance of integrated design and the need to consider interactions between the Prerequisites and Credits and their respective criteria. Architects, engineers, consultants, owners, and others who have a strong interest in sustainable building design are all appropriate candidates for accreditation. The Accredited Professional should be the champion for the project's LEED application and this person should be an integral member of the project design team.

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Credit 2					

Design Approach

Strategies

To become a LEED Accredited Professional, the LEED Accreditation Exam must be successfully passed. To prepare for the exam, it is helpful to attend a LEED Workshop offered by, or authorized by, the CaGBC. Workshops include details on Prerequisites and Credits, calculation and documentation examples, and case studies from projects that have achieved certification.

For more information on workshops and the Accreditation Exam, visit the Website: www.cagbc.org.