



Canada Green Building Council
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Criteria and Application Process for CaGBC's Experienced Modellers List

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**UPDATE* The CaGBC is not currently accepting new applications to the Experienced Modeller's List. Please note, with the release of CIR 1255, all energy modellers are now able to submit the Minimum Energy Performance documentation directly to the CaGBC for LEED Canada Building Design and Construction v2009 and LEED Building Design and Construction v4 projects at no additional cost.*

CaGBC's Experienced Modellers List (the *List*) was published on December 16th, 2011 to replace NRCan's Experienced Consultants for New Buildings List, which was referenced by projects pursuing LEED Canada Energy and Atmosphere (EA) Prerequisite 2 and Credit 1. The evaluation of the first applicants to the *List* served to inform the development of the criteria and application process outlined herein.

This document outlines the general criteria by which individuals were accepted on the *List*, as well as the process necessary to maintain status on the *List*.

Energy models for the purposes of LEED Canada certification may be created or reviewed by an individual while they are listed on *CaGBC's Experienced Modellers List*. However, projects also have the option to submit energy models directly to the CaGBC for a detailed review during the certification process without having to be created by an individual on the *List* or having to first undergo the third party review process. Only individuals that have been evaluated and accepted to the *List* can perform third party energy model reviews under LEED Canada.

Definition of a CaGBC Experienced Modeller

The energy modelling profession in Canada is growing rapidly in response to market demand in the green building industry. As such, the CaGBC defines an experienced modeller as a dynamic learner and an industry professional who possesses the following attributes:

1. Thorough knowledge in relevant physical sciences (e.g., heat transfer, fluid dynamics);
2. In-depth understanding of building technologies (from building sciences to mechanical/electrical systems);
3. Knowledge and understanding of LEED Canada modelling guidance and reference documents, and all related energy modelling rules, protocols, codes and standards;
4. Proficiency and advanced capability in the application of building energy modelling software;
5. Displays professional rigour in the application of all of the above; and
6. Is recognized by his/her peers as an expert in this field.



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Expectations of a CaGBC Experienced Modeller

The CaGBC expects individuals on *CaGBC's Experienced Modellers List* to create high quality energy models and to provide comprehensive reviews for the LEED Canada certification process. As such, the following qualities are expected of such individuals:

1. Be familiar with more than one modelling software;
2. Be familiar with modelling of diverse building types and complex building systems, and additional programming and/or engineering calculations not provided by the software;
3. Be familiar with modelling using LEED Canada modelling guidance and reference documents, and all related energy modelling rules, protocols, codes and standards;
4. Have had several models successfully pass review by external peers through the various review paths available to LEED Canada projects, or through an equivalent level of review; and
5. Have a minimum 5 years of full-time-equivalent¹ modelling experience directly creating energy models and/or overseeing those creating energy models.

Additional expectations of Experienced Modellers are outlined in a set of *Responsibilities and a Code of Ethics*, which must be signed and returned prior to being listed. The *Responsibilities and Code of Ethics* may be found at the end of the published [List](#).

Acceptance to CaGBC's Experienced Modellers List

To be accepted to the *List*, applicants must have met a minimum threshold under each of the following mandatory criterion, as well as a minimum overall threshold. Applicants were not required to show experience under criteria 5 and 6 to be considered for the *List*. Details of the criteria are provided below.

Criterion 1: Background/Education

The LEED Canada certification process hinges on the professional integrity of individuals governed by professional associations and/or regulating bodies. Specifically, only individuals who are professional engineers, certified technologists, or architects registered and in good standing with their applicable professional association will be acknowledged as experienced under this criterion. The applicant's educational background and area of discipline/specialty will also be considered during the evaluation process. Background/Education is assigned a maximum score of 20.

Criterion 2: General Modelling Experience

The CaGBC considers experienced modellers as those with a minimum of 5 full-time equivalent years of recent experience directly working with energy modelling. That is, if the applicant's role is split between energy modelling and other duties (such as management, design, sales, etc.), only the portion of time spent directly involved in energy modelling should be counted in this category. General modelling experience is assigned a maximum score of 20.

¹ Note that if the modeller's professional role is not solely energy modelling, the amount of time spent on energy modelling is approximated and applied against the applicant's overall work experience. Only the portion of time spent directly involved in energy modelling should be counted towards the 5 years of full-time equivalent experience.



Criterion 3: Modelling Experience - Portfolio

In this section the CaGBC seeks to understand the applicant's overall energy model creation experience, based on building type, software used, project role, energy code applied, the level of work that has been reviewed, and modelling challenges faced. Applicants are not required to list every model in their portfolio, but they are strongly encouraged to use this section to highlight the breadth and diversity of their experience. Specifically, the applicant should demonstrate their level of experience with different types of modelling software; the breadth of various building types and complex building systems; experience in creating reference models; familiarity with both ASHRAE and MNECB energy codes; and most importantly, that several models have successfully passed external peer reviews through the various paths available to LEED Canada projects, or through an equivalent level of review. The applicant's modelling experience portfolio is assigned a maximum score of 30.

Criterion 4: Modelling Experience – Detail

This section requires applicants to provide further information on 5 projects that they have created and allows the Evaluation Committee to gauge the depth of their experience in creating energy models. The applicant should demonstrate their experience in directly creating models and highlight models that have successfully passed external peer reviews through the various paths available to LEED Canada projects or through an equivalent level of review. In the case where complex models have not yet gone through a peer review, the applicant should highlight such project experience if it demonstrates a high level of modelling expertise. Specific project experience in modelling is assigned a maximum score of 30.

Criterion 5: Review Experience – Portfolio

Experience in peer reviewing energy models is not mandatory for admission to the List. However, as reviewing modelling work adds to an applicant's breadth of modelling knowledge, it is considered valuable experience. Applicants are encouraged to provide further information for up to 5 building types that they have reviewed. Experience in this category may be assigned a maximum score of 10.

Criterion 6: Additional Experience

In this section applicants may list any significant contributions to the energy modelling community, or describe any special experience not already covered in earlier sections, such as a background in areas related to energy modelling (e.g., HVAC&R design). This criterion is not mandatory for admission to the List. Experience in this category may be assigned a maximum score of 10.

Note: as of 2016, no new applications will be accepted.



Evaluation Committee

A CaGBC Committee called the “Modelling Experience Evaluation Committee” has been created to evaluate the experience and performance of members of the List.

The committee comprises 5 individuals, all of whom must have knowledge of energy modelling. The composition of the committee is outlined below; members may satisfy more than one category.

- At least 2 Energy and Engineering Technical Advisory Group (E&E TAG) members
- At least 2 members not on E&E TAG
- At least 2 members who do not work for organizations providing energy modelling services
- At least 2 individuals already on the *List*

Re-application Process

To ensure the *List* remains current, individuals must re-apply to the *List* on an annual basis. The re-application process consists of re-signing the *Responsibilities and Code of Ethics* document to re-affirm that the member wishes to remain on the *List* and that they remain committed to upholding their responsibilities with respect to their role in the LEED Canada certification process. There is no fee associated with the annual re-affirmation process. Individuals on the *List* will be evaluated on an on-going basis to ensure they maintain the performance standards outlined in the *Responsibilities and Code of Ethics* document. Members that do not maintain the required level of performance may be removed from the *List* at the CaGBC’s discretion.

Individuals who miss the re-application deadline will be removed from the *List* on December 31st of the given year.

