



2019 Entry Requirements



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Contents

- Background 3
- Principles and Philosophy 3
- Net Zero Definitions 4
- Award Categories 4
- Entry Information Summary 4
- Award Asset Classes 6
- Eligibility Criteria 6
- Award Criteria 7
 - 1. BOMA BEST Energy Section Score 7
 - 2. Energy Use Intensity 8
 - 3. Absolute Energy Impact 9
 - 4. Carbon Emission Intensity 11
 - 5. Operations and Systems 12
 - 6. Replicability 13
 - 7. Innovation 13
 - 8. Improvement Against Baseline 14
- Appendix A: Floor Area Measurement Standards 16
- Appendix B: BOMA BEST Assessment Instructions 18
- Appendix C: Scoring for all asset classes 22

Background

The commercial real estate industry contributes heavily to Canada's growing carbon footprint. As such, we are uniquely positioned to support Canada's greenhouse gas reduction objectives as laid out in the Pan-Canadian Framework on Clean Growth and Climate Change.

In 2017, Natural Resources Canada selected BOMA Canada to create an awards-based program to recognize the leadership of building owners, managers, developers and designers who demonstrate significant progress along the path towards net zero energy and net zero carbon. BOMA Canada welcomes the opportunity to play a role in transforming the commercial real estate industry towards a cleaner future.

"Energy efficiency provides benefits for our buildings, homes, neighbourhoods, environment, and wallets," says the Honourable Amarjeet Sohi, Canada's Minister of Natural Resources. "Our government is supporting initiatives like the Net Zero Challenge to build a cleaner future for our kids, create jobs for Canadians and support our climate change goals."

Principles and Philosophy

The BOMA Canada Net Zero Challenge mission is to recognize organizations that pursue Net Zero Energy and Net Zero Carbon buildings and celebrate their experiences, facilitating the path for others to follow.

Achieving an existing building stock that is net zero energy-ready with low carbon footprint requires that buildings reach levels of energy efficiency that can be completely served by renewable energy. The Net Zero Challenge recognizes this path through its three award categories: *Best in Class*, *Innovation*, and *Most Improved*.

Best in Class focuses on building operators, managers and owners who support the development, demonstration and adoption of strategies and technologies that lead to significant reductions in energy consumption, reduce greenhouse gas emissions and offer a real return on investment.

Innovation rewards exceptional and replicable, technologies or management practices that lead to significant reductions in energy consumption or support clean forms of energy.

Most Improved emphasizes the urgency to achieve better energy efficiency and carbon footprint reduction through ongoing efforts targeting improved operations, energy efficiency and capital upgrades.

By identifying successful strategies through this award, BOMA Canada will develop a community of practice to promote replicable technologies and strategies to help mainstream these efforts, providing more building owners and managers with the tools and resources required to achieve such success. The ability for strategies to be used across the country will contribute to a long-term shift in the industry.

"We are excited to see continued innovation in renewable, efficient energy programs for buildings all across Canada," says Sean Drygas, President, Bullfrog Power. "For this reason, Bullfrog Power is proud to support BOMA Canada's Net Zero Challenge."

Net Zero Definitions

“Net Zero Energy” is defined as a building that produces as much energy as it consumes over a consecutive 12-month period, in terms of on-site usage. Examples of on-site production are: Solar Photo Voltaic (PV), Solar Thermal, Geo-Exchange, etc. Award criteria 2, 3 and 8 assess the buildings progress towards net zero energy.

“Net Zero Carbon” is defined as a building that has a net zero emission of greenhouse gases into the atmosphere over a consecutive 12-month period, related to the source of energy used on site. A zero-carbon building produces energy on-site or procures carbon-free renewable energy in an amount equal to the annual carbon emissions associated with operations. Award criterion 4 will assess the building’s progress towards net zero carbon.

Award Categories

The Challenge is composed of three award categories:

1. **Best in Class Award** recognizes buildings that have made progress towards achieving net zero energy and/or carbon and are leaders in the industry. These buildings will have 12 consecutive months of data displaying extremely efficient levels of consumption, or production, that meets their needs.
2. **Innovation Award** recognizes buildings that have put in place exceptional strategies (such as management practices or technologies) that lead to a demonstrable and replicable significant reduction in energy and/or carbon while also providing a return on investment. Innovative uses of traditional technologies or practices that enable the building to generate significant amounts of renewable energy on-site will also be recognized in this award.
3. **Most Improved Award** recognizes those buildings that are contributing to helping Canada achieve its climate change objectives by significantly improving their energy performance over their own baseline.

Buildings need not reach net zero energy and/or net zero carbon to win the Best in Class Award (or, potentially, the other awards). However, where buildings do win the Award(s) and reach net zero energy and/or carbon, we would celebrate this additional achievement too (e.g. on the trophy, in the announcement, in the marketing, etc.)

The Net Zero Challenge is national in scope, though regional champions may also be identified in each province to further encourage competition based on submission availability.

Entry Information Summary

1. Application

Applicants will be required to complete the following:

- a. Application and entry fee via the BOMA Canada Net Zero Challenge online portal.
- b. BOMA BEST Energy Section Score via the BOMA BEST Online Portal (Applicants do not need to be BOMA BEST certified to participate).
- c. Energy consumption details to obtain an ENERGY STAR Score (if applicable) and a weather normalized site Energy Use Intensity (EUI).

One application will be used for judging all award categories and asset classes.

Applicants will select the category(ies) to which they want to apply.

A building can only win one award category per year.

Previous winners are invited to apply every three (3) years to be considered in the same category or every year if applying to a different category. Unsuccessful applicants may apply every year.

2. Fees

\$795.00 per entry (payable online via credit card).

Applicants may apply to more than one award category though will only be eligible to win one (1) award. The fee remains the same regardless of how many award categories are selected.

3. Judging

BOMA Canada will calculate the score for Criterion 1 based on BOMA BEST records.

BOMA Canada's Technical Advisor (Prism Engineering) will calculate scores for Criteria 2, 3, 4 and 8 based on the energy consumption data provided.

At least three (3) BOMA Canada judges will determine the scores for Criteria 5-7.

Submissions will be assessed against every award category selected.

The minimum threshold for consideration is 50%. This is based on an aspirational scoring methodology, where 100% represents a truly net zero energy and/or carbon building. This threshold recognizes the significant efforts that applicants are devoting to their buildings as they climb ever closer to this important target.

More details on the scoring process are provided within each criterion description.

4. Deadlines/Recognition

July 15, 2019: Official entry must be completed online

July/August 2019: Judging will occur

September 11, 2019: Competition results and awards for the winners will be presented at the National Awards Gala held during BOMA Canada's National Conference (BOMEX®) September 9-11, 2019 in St. John's, Newfoundland.

5. Awards Ceremony Photos

In addition to images provided as supportive documents, all entries must submit one high resolution colour image of the building's exterior for display at the awards ceremonies and one high resolution colour image of the management team responsible for daily management and operation of the building(s).

6. Use of Information

BOMA Canada reserves the right to distribute the results obtained from these awards in confidential aggregated format. Identifiable information will not be disclosed without prior permission.

Building registration information and the building description may be used in awards program materials and with the media. Photographs may be used, with attribution, in awards program materials, with the media and in other BOMA Canada materials. All other content may be used by BOMA Canada in the creation of new industry materials. BOMA Canada will not include identifying information, such as building name, owner, etc., in these materials without the entrant's consent.

Award Asset Classes

Applicants include building operators, property / facility managers and owners from the following asset classes:

- Office
- Light Industrial
- Open Air Retail
- Enclosed Retail
- Multi-Unit Residential Buildings
- Health Care Facilities

Descriptions of each asset class are provided [here](#).

If your building identifies under a different asset class, please advise BOMA Canada.

BOMA Canada and/or the Judging Committee reserve the right not to award each of the categories for each asset class.

Eligibility Criteria

The Net Zero Challenge is a National Award. Entrants do not need to be a BOMA member nor do they need to have won locally to apply.

Building Age

There are no eligibility criteria based on the age of the building; both new and existing buildings can apply. However, 'new' is not a building design, but a building that has completed construction, their commissioning period, and has minimum 70% occupancy. With these criteria met, the building can then start the 12 months of energy data tracking needed to submit with the application.

BOMA BEST Energy Section Score

All applicants must complete the Energy Section of the BOMA BEST Assessment. While certification is not required to participate in the Net Zero Challenge, those who are already certified may save time during submission by using their certified Energy Section score. Buildings that are not currently certified, or certified buildings that wish to update the energy section, are required to upload supporting documentation in the BOMA BEST Energy Section Score for every question with a Yes and N/A answer for remote verification.

Energy Data Verification

To ensure the integrity of the data submitted for this award, all participants must have their performance and baseline period energy data, along with the associated property information (i.e. space type descriptions) verified by a third-party licensed professional (LP) to the ENERGY STAR certification standard as recognized by [Natural Resources Canada](#). This applies to all building types. ENERGY STAR Certification is not required.

Gross Floor Area Verification

To ensure the integrity of the data submitted for the award, all participants must have their building’s total Gross Floor Area verified by a third-party Licensed Professional to ensure it aligns with the ENERGY STAR methodology. Certain BOMA Measurement Standards are aligned with the ENERGY STAR Portfolio Manager definition for eligible floor area and respect rules regarding whether to include certain areas such as indoor parking. Compatible measurement standards are provided in Appendix A.

Post-Occupancy Verification

The post-occupancy verification will be undertaken by BOMA Canada’s Technical Advisor and can include verification of the ENERGY STAR inputs, remote log in onto the Direct Digital Control system (DDC), and in person or phone interview with the building operations staff.

Award Criteria

The following table outlines the relative weightings for each aspect of the award.

#	Net Zero Challenge Criteria	Best in Class (Weighting)	Innovation (Weighting)	Most Improved (Weighting)
1	BOMA BEST Energy Section Score	5	5	5
2	Energy Use Intensity	40	20	20
3	Absolute Energy Impact	10	10	10
4	Carbon Emission Intensity	20	10	10
5	Operations and Systems	15	5	5
6	Replicability	10	10	10
7	Innovation	N/A	40	N/A
8	Improvement Against Baseline	N/A	N/A	40
	TOTAL	100	100	100

The Steering Committee reserves the right to change the weightings after each year.

1. BOMA BEST Energy Section Score

Intent: This criterion recognizes the role of management programs, policies and plans, as well as specific technologies, that help buildings achieve better energy performance, as measured by the Energy Section of the BOMA BEST assessment.

Requirements: Applicants must complete the Energy Section of the BOMA BEST assessment, specifically sub-sections 1.1 to 1.5 (Demonstration of intent, Assessment, Operations and Maintenance, Systems, and Innovation). It is not necessary to complete the remainder of the assessment.

If the building is currently BOMA BEST certified (i.e. the certification is still valid), the verified Energy Section Score will be used to determine points. If a building is currently certified as part of the Portfolio Stream but was not verified, the building will be scheduled for verification in the next verification wave of the Portfolio.

If the building is not currently BOMA BEST certified or if the certification is expired, applicants must upload supporting documentation demonstrating compliance with every question answered with Yes or Not Applicable in the Energy Section. Remote verification will be conducted based on this documentation as part of the award judging process. In the case where supporting documentation is not uploaded to the Online Portal, the answer will be automatically changed to “No” and the points for that question will be forfeited.

Instructions on completing the Energy section of the BOMA BEST Assessment are provided in Appendix B.

Scoring: Applicants in all three award categories will be scored on this criterion.

Applicants receive points based on the score achieved in the verified Energy Section of the BOMA BEST assessment compared to the scoring table provided below.

BOMA BEST Energy Section Score – all asset classes	Best in Class Points	Innovation Points	Most Improved Points
Under 60%	0	0	0
60-69%	0	1	1
70-79%	0	2	2
80-89%	1	3	3
90-95%	3	4	4
95-100%	5	5	5

2. Energy Use Intensity

Intent: The cleanest kilowatt hour is the one that is not used. As such, this criterion rewards high performance buildings by looking specifically at the total actual energy use intensity over a consecutive 12-month period.

Energy use intensity (EUI) is measured in equivalent kilowatt hour per square foot (ekWh/ft²) and is calculated based on purchased energy from utility provider(s). Site EUI (not Source EUI) is the focus of this criterion.

Requirements: Applicants must identify a 12-month “current performance” period and provide complete, actual, energy consumption data for this period. The 12-month period must represent consumption at the building post-occupancy and commissioning. Modeled data is not accepted.

Applicants must upload documentation demonstrating energy data, its associated meter information, and applicable gross floor area into the Award Portal. This data must be extracted from ENERGY STAR. This information must be verified by a third party licensed professional (LP) for accuracy to the ENERGY STAR certification standard as recognized by [Natural Resources Canada](#). ENERGY STAR Certification is not required. The gross floor area must be consistent with the floor area measurement requirements outlined in Appendix A.

If the building generated energy on-site during the identified “current performance” period, the applicant must describe the technology used and upload energy data representing the on-site generation.

Any data submitted cannot be any older than 24 months from the award submission deadline. If the selected performance period contains data that is older than 24 months from the award submission deadline, please notify BOMA Canada prior to submitting your application.

Scoring: Applicants in all three award categories will be scored on this criterion.

Applicants receive points based on the building’s EUI compared to the following scoring table.

If performance periods vary widely amongst applicants, adjustment factor for weather variation may be applied for fair comparison of buildings’ performance. If two buildings from different climate regions score similarly in all other award criteria, consideration and adjustment factor for weather normalization based on location will be applied.

If energy is generated on-site, it will be taking into consideration when calculating the Site EUI.

Example: The building purchases electricity and natural gas from two different utility providers. The building also has onsite Solar Photo Voltaic (PV) electricity production. The Site EUI will be calculated based on the purchased natural gas + the purchased electricity from the utility provider. The PV electrical production on-site lowers the requirement for purchased electricity and thus helps to reduce the EUI.

Energy Use Intensity (ekWh/ft ²) – Office*	Best in Class Points	Innovation Points	Most Improved Points
<30 ekWh/ft ²	0	0	2
<28 ekWh/ft ²	2	0	3.5
<26 ekWh/ft ²	5	0	5
<24 ekWh/ft ²	8.5	2	6.5
<22 ekWh/ft ²	12	4	8
<20 ekWh/ft ²	15.5	6	9.5
<18 ekWh/ft ²	19	8	11
<16 ekWh/ft ²	22.5	10	12.5
<14 ekWh/ft ²	26	12	14
<12 ekWh/ft ²	29.5	14	15.5
<10 ekWh/ft ²	33	16	17
<8 ekWh/ft ²	36.5	18	18.5
<6 ekWh/ft ²	40	20	20

* See Appendix C for judging criteria in other asset classes

3. Absolute Energy Impact

Intent: This criterion recognizes that it is more difficult to reduce energy use in larger buildings.

Requirements: Applicants do not need to provide any additional information for this criterion, judges will calculate the score based on data submitted in previous criteria.

Scoring: Applicants in all three award categories will be scored on this criterion.

Measured in absolute ekWh, the applicant will be compared against a pre-determined benchmark to calculate the absolute amount of energy avoided.

Formula for calculating Absolute Energy Impact in ekWh:

$$[\text{Benchmark EUI} - \text{Building EUI}] \times \text{Building Gross Floor Area}$$

Points are awarded based on the total energy consumption avoided compared to benchmark building (as per the formula) and where this value falls in the scoring table.

Example: Building A and B are both office buildings and have the same energy use intensity. Building A is 1,000 ft²; building B is 50,000 ft². Building B will score better in this category because of its larger floor area.

The benchmark is based on the average performance of BOMA BEST Gold certified buildings, or equivalent, as follows:

Asset Class	Benchmark
Office	23.9 ekWh/ft ² /yr
Enclosed Retail	23.3 ekWh/ft ² /yr
Light Industrial	24.2 ekWh/ft ² /yr
Open Air Retail	29.4 ekWh/ft ² /yr
MURB	20 ekWh/ft ² /yr
Health Care – Hospital	70 ekWh/ft ² /yr
Health Care – Long Term Care	50 ekWh/ft ² /yr
Health Care – Medical Office	28 ekWh/ft ² /yr

BOMA Canada reserves the right to update these benchmarks in the future.

Absolute Energy Impact (ekWh) – Office*	Best in Class Points	Innovation Points	Most Improved Points
>500,000 ekWh	1	1	1
>1,000,000 ekWh	2	2	2
>1,500,000 ekWh	3	3	3
>2,000,000 ekWh	4	4	4
>2,500,000 ekWh	5	5	5
>3,000,000 ekWh	6	6	6
>3,500,000 ekWh	7	7	7
>4,000,000 ekWh	8	8	8
>4,500,000 ekWh	9	9	9
>5,000,000 ekWh	10	10	10

* See Appendix C for judging criteria in other asset classes

4. Carbon Emission Intensity

Intent: To ensure the planet does not experience warming above 1.5 degrees Celsius, no new carbon can be emitted into the atmosphere beginning in 2050. This criterion assesses carbon performance and rewards the steps taken by individual buildings to eliminate or offset the carbon footprint associated with their energy use.

Measured in tonnes of CO₂e per square foot (tCO₂e/ft²), this metric uses regional emissions factors for electricity, utility provider emission factors for district energy and similar, and the national emissions factor for direct emissions such as combustion of natural gas, propane, diesel, etc.

Requirements: Applicants do not need to provide any additional information for this criterion, judges will calculate the score based on data submitted in previous criteria. The only exception is in cases where carbon offsets have been purchased.

Emissions can be offset by purchasing an equivalent amount of high-quality, made-in-Canada carbon offsets. To qualify, they must be from a Canadian offset project that has been validated by an Accredited Verifier as per ISO 14065 Standard. For more information, see the Standard Council of Canada’s [Accreditation Program for Greenhouse Gas Validation/Verification Bodies](#).

Applicants who wish to submit carbon offsets for consideration must provide the following information in the Award Portal:

- List the total quantity purchased (in tCO₂e)
- Provide evidence that the offsets apply to the performance period(s) being assessed for the Award(s); and
- Provide evidence that the applicable offsets have been validated by an Accredited Verifier as per ISO 14065 Standard

Scoring: Applicants in all three award categories will be scored on this criterion.

Applicants receive points based on the carbon intensity of the building’s performance period energy use compared to the scoring table provided below.

Example: Building A and B have the same energy use intensity. Building A is in Saskatchewan, where electricity generation is coal powered, therefore high emission. Building B is in Manitoba, where electricity generation is hydro-electric, therefore low emission. Building A will score lower on this metric because their electrical source emission is high. To improve their score, Building A can increase their on-site energy production (e.g. PV, Geothermal, etc.) or purchase offsets for their utility electrical emissions (e.g. purchase renewable energy from providers).

Carbon Emission Intensity (Tonnes CO ₂ e/ft ²) – Office*	Best in Class Points	Innovation Points	Most Improved Points
<0.0100 tCO ₂ e/ft ²	2	1	1
<0.0089 tCO ₂ e/ft ²	4	2	2
<0.0078 tCO ₂ e/ft ²	6	3	3
<0.0067 tCO ₂ e/ft ²	8	4	4
<0.0056 tCO ₂ e/ft ²	10	5	5
<0.0045 tCO ₂ e/ft ²	12	6	6
<0.0034 tCO ₂ e/ft ²	14	7	7

<0.0023 tCO ₂ e/ft ²	16	8	8
<0.0012 tCO ₂ e/ft ²	18	9	9
<0.0001 tCO ₂ e/ft ²	20	10	10

* See Appendix C for judging criteria in other asset classes

5. Operations and Systems

Intent: Improving and maintaining building performance depends on a solid foundation of well executed management programs, plans, and policies surrounding the building’s operations and technologies. This criterion recognizes the importance of day-to-day operations on improving a building’s performance.

Requirements: Applicants must identify and describe the top 3 to 5 strategies believed to have had the most important impact on reducing the building’s overall energy and carbon intensity. The strategies listed can be either technology or management-based and must represent the day-to-day, ongoing practices in place at the building that have had a positive impact on energy efficiency.

Only strategies that target energy and carbon will be considered.

Applicants are asked to identify the building’s top 3-5 strategies and provide the following information for each strategy:

- Description of the technology or management process in place that is believed to be positively associated with energy or carbon efficiency
- Description of the framework put in place to ensure the ongoing success of the strategy (i.e. ongoing maintenance, training systems, oversight, monitoring, etc.)
- Supporting documentation clearly showing the above

Supporting documentation must be uploaded and can include such information as pictures/images; specification sheets of the technologies that have been implemented; Table of Contents of the programs in place to support them; document listing names of courses taken by operations staff, etc. Applicants may upload a maximum of 5 attachments.

If an innovative strategy is described here, it cannot also earn points in Criterion 7.

The space designated for this criterion has a character limit (with spaces) of 4500.

Example: Applicants may wish to provide details on the ultra-efficient equipment that is in place at the building and the management programs in place to support them.

Scoring: Applicants in all three award categories will be scored on this criterion.

Applicants receive points based on the following:

- Judge’s assessment of the described strategy
- Completeness of the description for each strategy
- Presence and value of supporting documentation

Operations and Systems – all asset classes	Best in Class Points	Innovation Points	Most Improved Points
Operations and Systems	15	5	5

6. Replicability

Intent: To reach net zero energy and net zero carbon we must understand what works and what does not. Through this award, BOMA Canada wishes to develop communities of practice on net zero energy and net zero carbon strategies. The successful efforts put in place in one building will be shared across the country, to create a database of successes from which other building managers can learn.

Requirements: Applicants must describe the learning experiences gained from putting in place at least one (1) project, technology or process (maximum of 3 initiatives) that sought to improve energy efficiency or carbon intensity at the building. Within reason, there is no time frame limit for when the project was implemented. The project/technology/practice described can be the same as one previously described in criteria 5 or 7.

In this criterion, applicants are required to emphasize lessons learned. The judges will be seeking to understand specifically what was learned from the process so that these lessons may inform larger communities of practice and help improve practices across Canada. Applicants are encouraged to consider the following types of questions when formulating their submission:

- What were some of the roadblocks that were encountered along the way?
- What might you have done differently?
- What are some of the key lessons that you learned from this experience?

Unlike Criterion 5 and 7, supporting documentation is not required in this criterion however applicants are welcome to provide them as desired if they assist the story. Applicants may upload a maximum of 5 attachments.

The space designated for this criterion has a character limit (with spaces) of 4500.

Scoring: Applicants in all three award categories will be scored on this criterion.

Applicants receive points based on the Judge’s assessment of the quality and compelling nature of the story (e.g. extent to which the management team has learned from its failures or successes; how the efforts might apply in different circumstances; how different parties were engaged and their reactions; etc.)

Replicability – all asset classes	Best in Class Points	Innovation Points	Most Improved Points
Replicability	10	10	10

7. Innovation

Intent: Though many technologies and practices already exist to assist buildings in becoming ultra-efficient and carbon free, it is nevertheless through the implementation of new ideas and by taking risks that we may get there sooner. As such, those building managers and owners who are pushing market transformation by investing in new technologies are rewarded here.

Requirements: Applicants to the Innovation Award must identify and describe one (1) OR two (2) significant innovative solutions being undertaken at the building that are having (or are expected to have) a positive impact on moving the building towards net zero energy or net zero carbon. Innovations targeting other objectives (e.g. water efficiency) will not be considered.

The definition of innovation used for the purposes of this award is “a new idea, method, or device” (Merriam Webster). As such, applicants are expected to be describing solutions related to energy or carbon that are new and pushing the boundaries of what already exists. Since innovation is a constantly moving target, applicants to this award must make the case for why their solution can be considered innovative. Solutions may include several components/strategies/technologies as well as the innovative use of traditional components/strategies/technologies. Initiatives already described under Criterion 5 will not be recognized here.

Applicants must provide the following information in the Award Portal:

- a) Date of implementation
- b) Description of the technology/practice
- c) Case for why the technology/practice meets the definition of “innovative”
- d) Description of the real impacts on energy performance (using real data, not based on the vendor spec sheet). If the innovation did not perform as expected, we still want to hear about it (no points will be lost).
- e) Description of the steps put in place to ensure ongoing energy performance
- f) Presence of supporting documentation

Supporting documentation must be uploaded and can include such information as pictures/images; specification sheets of the technologies that have been implemented; Table of Contents of the programs in place to support them; document listing names of courses taken by operations staff, etc. Applicants may upload a maximum of 5 attachments.

The space designated for this criterion has a character limit (with spaces) of 4500.

Scoring: This criterion is only applicable to candidates of the Innovation Award.

Applicants to the Best In Class and Most Improved Awards are not scored on this section; the section can be left blank.

Innovation – all asset classes	Best in Class Points	Innovation Points	Most Improved Points
Innovation	N/A	40	N/A

8. Improvement Against Baseline

Intent: This criterion recognizes that significant improvement in energy consumption over time is needed to move towards a high-performance future. Buildings that have improved their performance since their baseline period are rewarded in this criterion.

Requirements: In Criterion 2, applicants are asked to identify a 12-month “current performance” period. In this criterion, applicants must also identify a 12-month period representing the “baseline performance”. Like the current performance period, this data must represent consumption at the building post-occupancy and commissioning. Modeled data will not be accepted. No data within the baseline performance period can be any older than five (5) years from the award submission deadline.

The baseline and current performance periods will be compared against each other to determine the improvement against baseline. In addition to the two 12-month periods representing baseline and current performance, applicants must also provide energy data for the periods between baseline and current to ensure that the performance year is not an anomaly. Including baseline and current periods,

the total amount of data provided must represent 36 months, at a minimum. It cannot represent more than 60 months (no more than 3 years separating the baseline and current performance periods).

The energy data, its associated meter information, and applicable gross floor area for the “baseline performance” period must be verified by a third party licensed professional (LP) for accuracy to the ENERGY STAR certification standard as recognized by [Natural Resources Canada](http://www.nrcan.gc.ca). ENERGY STAR Certification is not required. The gross floor area must be consistent with the floor area measurement requirements outlined in Appendix A. The data for the interim period (between the baseline and current performance period) does not need to be verified by a licensed professional.

Scoring: This criterion is only applicable to candidates of the Most Improved Award.

Applicants to the Best In Class and Innovation Awards are not scored on this section; the section can be left blank.

Formula for calculating Improvement Against Baseline as a reduction percentage (%):

$$\frac{[(\text{Baseline EUI} - \text{Performance EUI}) / \text{Baseline EUI}] \times 100}{}$$

Applicants receive points based on the Improvement percentage energy reduction achieved between a baseline and performance year compared to the scoring table provided below.

Improvement Against Baseline (reduction percentage) – Office*	Best in Class Points	Innovation Points	Most Improved Points
>5 %	NA	NA	4
>10 %	NA	NA	8
>15 %	NA	NA	12
>20 %	NA	NA	16
>25 %	NA	NA	20
>30 %	NA	NA	24
>35%	NA	NA	28
>40 %	NA	NA	32
>45 %	NA	NA	36
>50 %	NA	NA	40

* See Appendix C for judging criteria in other asset classes

For more information on the Net Zero Challenge please contact
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Appendix A: Floor Area Measurement Standards

GFA requirements

Consistent with the gross floor area (GFA) measurement standards used to benchmark energy and water in BOMA BEST and in ENERGY STAR Portfolio Manager, the following standards must be used to be eligible for the Net Zero Challenge.

The term Gross Floor Area (GFA) is used to refer to the floor measurement that includes the following areas:

- Lobbies
- Tenant Areas
- Common Areas
- Meeting Rooms
- Break Rooms
- Atriums (ground floor only)
- Restrooms
- Elevator Shafts
- Stairwells
- Mechanical Equipment Areas
- Basements
- Storage Rooms

The following spaces must not be included in this measurement:

- Exterior spaces
- Balconies
- Patios
- Exterior Loading Docks
- Driveways
- Covered Walkways
- Outdoor Courts (Tennis, Basketball, etc.)
- The interstitial plenum space between floors (which house pipes and ventilation)
- Crawl Spaces
- Parking (indoor or outdoor)

Compatible measurement standards

The following BOMA Measurement Standards are consistent with the above definition of GFA.

Office and Universal:

- BOMA 1996 Office Standard (“Gross Measured Area”) – This measurement includes major vertical penetrations (i.e. “virtual floors”). The vertical penetration area must be excluded from the total GFA for the purposes of the Net Zero Challenge.
- BOMA 2010 Office Standard (“Interior Gross Area”) – This measurement includes the indoor parking areas. Indoor parking areas must be excluded from the total GFA for the purposes of the Net Zero Challenge. Energy associated with indoor parking must also be excluded from the entered energy consumption data.

- BOMA 2009 Gross Area Standard (“Exterior Gross Area”) – This measurement includes the indoor parking areas. Indoor parking areas must be excluded from the total GFA for the purposes of the Net Zero Challenge. Energy associated with indoor parking must also be excluded from the entered energy consumption data.

Enclosed Shopping Centres and Open Air Retail:

- BOMA 2010 Retail Standard (“Exterior Gross Area”) – This measurement includes the indoor parking areas. Indoor parking areas must be excluded from the total GFA for the purposes of the Net Zero Challenge. Energy associated with indoor parking must also be excluded from the entered energy consumption data.
- BOMA 2009 Gross Area Standard (“Exterior Gross Area”) – This measurement includes the indoor parking areas. Indoor parking areas must be excluded from the total GFA for the purposes of the Net Zero Challenge. Energy associated with indoor parking must also be excluded from the entered energy consumption data.

Light Industrial:

- BOMA 2004, 2009 or 2012 Industrial Standard (Method A) (“Exterior Gross Area”) – This measurement includes the indoor parking areas. Indoor parking areas must be excluded from the total GFA for the purposes of the Net Zero Challenge. Energy associated with indoor parking must also be excluded from the entered energy consumption data.
- BOMA 2009 Gross Area Standard (“Exterior Gross Area”) – This measurement includes the indoor parking areas. Indoor parking areas must be excluded from the total GFA for the purposes of the Net Zero Challenge. Energy associated with indoor parking must also be excluded from the entered energy consumption data.

Multi-Unit Residential Buildings:

- BOMA 2010 Multi-Unit Residential Standard (Method B) (“Exterior Gross Area”) – This measurement includes the indoor parking areas. Indoor parking areas must be excluded from the total GFA for the purposes of the Net Zero Challenge. Energy associated with indoor parking must also be excluded from the entered energy consumption data.
- BOMA 2009 Gross Area Standard (“Exterior Gross Area”) – This measurement includes the indoor parking areas. Indoor parking areas must be excluded from the total GFA for the purposes of the Net Zero Challenge. Energy associated with indoor parking must also be excluded from the entered energy consumption data.

Health Care:

- BOMA 1996 Office Standard (“Gross Measured Area”)
- BOMA 2010 Office Standard (“Interior Gross Area”) – This measurement includes the indoor parking areas. Indoor parking areas must be excluded from the total GFA for the purposes of the Net Zero Challenge. Energy associated with indoor parking must also be excluded from the entered energy consumption data.
- BOMA 2009 Gross Area Standard (“Exterior Gross Area”) – This measurement includes the indoor parking areas. Indoor parking areas must be excluded from the total GFA for the purposes of the Net Zero Challenge. Energy associated with indoor parking must also be excluded from the entered energy consumption data.

Appendix B: BOMA BEST Assessment Instructions

To meet criterion 1. BOMA BEST Energy Section Score, applicants are required to complete the Energy Section of the BOMA BEST assessment. As such, applicants must register the building in the BOMA BEST Online Portal to access the questionnaire.

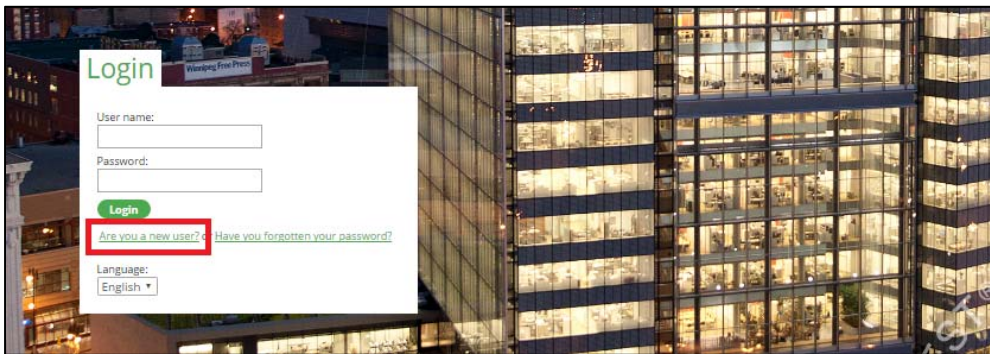
If the building is currently BOMA BEST certified (i.e. the certification is still valid) and has been verified, skip to Step 4 of this Appendix. Judges will use the verified Energy Section score for the purposes of this submission.

If the building is not currently BOMA BEST certified or if the certification is expired, applicants will be required to register a username and create a building. Follow Steps 1-4 of this Appendix.

If a building is not currently BOMA BEST certified, applicants to the Net Zero Challenge must upload supporting documentation demonstrating compliance with **every question** answered with Yes or Not Applicable (N/A) in the Energy Section. Remote verification will be conducted based on this documentation as part of the award judging process. In the case where supporting documentation is not uploaded to the BOMA BEST Online Portal, the answer will be automatically changed to “No” and the points for that question will be forfeited.

Step 1: Create a username

- Visit: <https://boma.credit360.com>
- Click on “Are you a new user?” to create your username



- Complete the information requested regarding your company and contact information. **NOTE: For your company name, enter “Company Name-Your Name” (e.g. Management Company A-Jane Smith)**

Register your company

Enter your details to register your company on the BOMA BEST Online Portal. NOTE: For your company name, enter “Company Name – Your Name” (e.g. Management Company A – Jane Smith)

Company details

Company name:

⚠️ this field is required

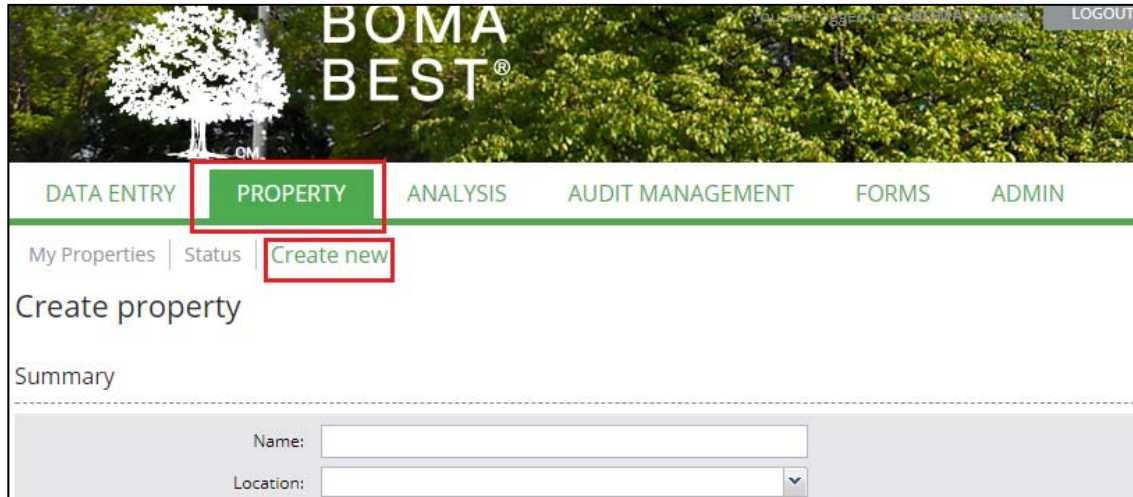
Country:

- You will receive an email with a link. Click on this link to finalize the registration process. The link is valid for 60 minutes. **Your username is your email address.**

e. You can now log in.

Step 2: Create a building

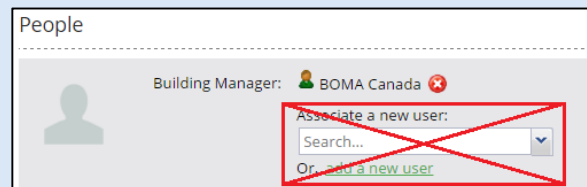
- Click on the Property tab at the top.
- From there, the “Create New” tab will be visible.
- Click on “Create New” and complete the form



The screenshot shows the BOMA BEST web application interface. At the top, there is a navigation bar with tabs: DATA ENTRY, PROPERTY (highlighted with a red box), ANALYSIS, AUDIT MANAGEMENT, FORMS, and ADMIN. Below the navigation bar, there is a sub-navigation bar with links: My Properties, Status, and Create new (highlighted with a red box). The main content area is titled 'Create property' and has a 'Summary' section. Below the summary, there are input fields for 'Name:' and 'Location:'.

Tips on creating a new building

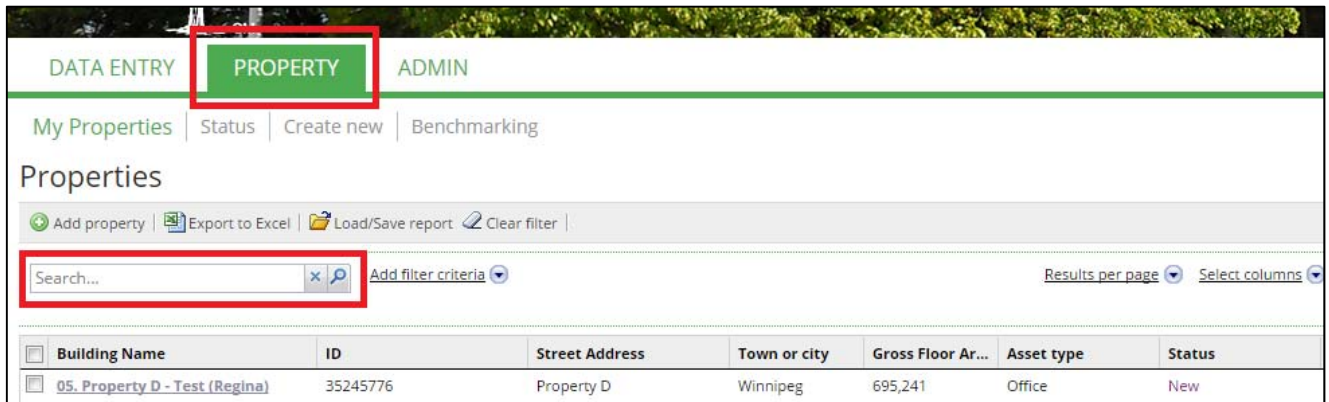
- **Name:** If you are creating the building in the context of the award, add the word “AWARD” to your building name.
- **Property Type:** Pick the descriptor that most closely resembles your building.
- **Questionnaire Type:** Refers to the BOMA BEST questionnaire you will be using. Building descriptions are available [here](#).
- **“As of”:** This question allows you to track when you make changes to your new building entry. Select “Today”.
- **Energy Star Section:** Return to this section later once you have reviewed the instructions in the BOMA BEST questionnaire pertaining to entering energy consumption.
- **PEOPLE section:** Cannot be modified. Contact info@bomabest.org for details about adding users to your building.



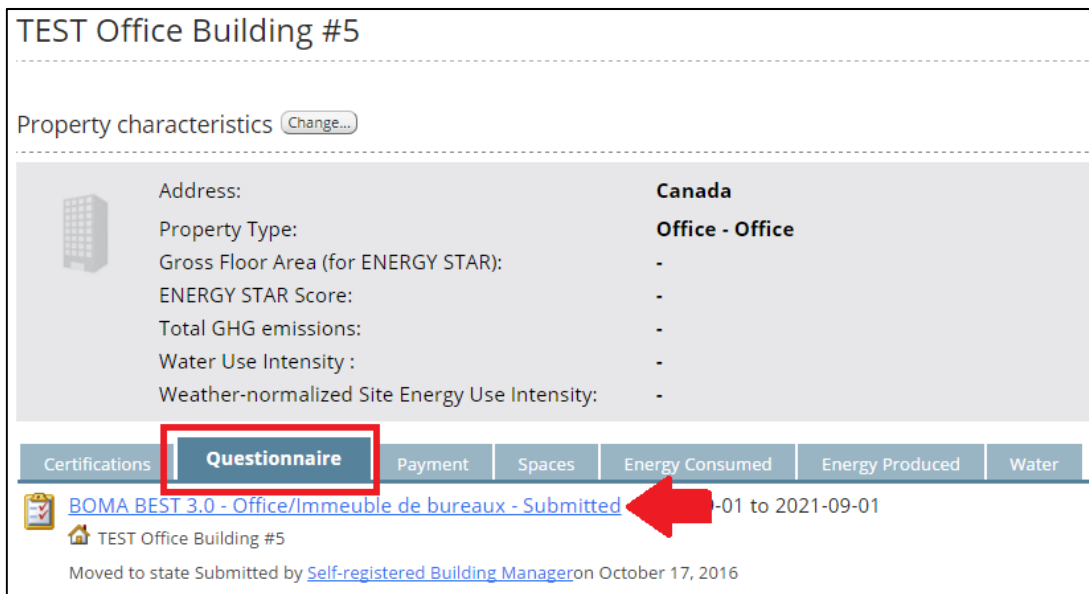
The screenshot shows the 'People' section of the BOMA BEST web application. It displays the 'Building Manager' field with a user icon and the text 'BOMA Canada'. Below this, there is a section titled 'Associate a new user:' which contains a search input field with the placeholder text 'Search...' and a dropdown arrow. Below the search field, there is a link that says 'Or, add a new user'. The entire 'Associate a new user:' section is highlighted with a red box and has a large red 'X' drawn over it, indicating that this section cannot be modified.

Step 3: Accessing and completing the BOMA BEST Questionnaire

- The building now exists in your account.
- Write to info@bomabest.org to notify us that you have registered a building in the context of the Net Zero Challenge (please include the building name as it appears in BOMA BEST in your email).
- To locate your building in the future, click on **“Property”**
- Find the property in question (you can use the Search function)



- Once you are on the building’s Property Characteristics page, click on the **“Questionnaire”** tab.
- Click on the questionnaire for your building. A new tab will open.



- The **“Welcome”** tab contains some helpful tips for navigating through the questionnaire
- In the context of the Net Zero Challenge you will have to visit the following tabs:
 - BEST Practices:** The system default requires that everyone answer the BEST Practices. If you are not pursuing a certification, simply answer “No” to each BEST Practice. You will not be penalized.
 - Energy:** Complete the entire section. Answer only those questions for which you can provide supporting documentation. You **MUST** upload supporting documentation (either pictures or

documents) for each question where you have answered “YES” or “N/A”. Points will not be awarded for questions where there is no supporting documentation.

- i. If you wish to try your hand at the other sections (not required for the Net Zero Challenge), click the “Next” tab to navigate through the questionnaire.



- j. You may leave the questionnaire at any time and return to it by clicking “Save”.
- k. To see your answers, click on the “Submit” button that appears once you are on the last tab. You may do this as often as you like. Don’t worry, no one is notified when you click “submit”. It is simply submitting your questionnaire to the system for calculation.



Step 4: Providing energy consumption and production data

To earn performance points (EUI, ENERGY STAR Score and WUI) in the Energy Section of the BOMA BEST Assessment, the Online Portal must be synchronized with your ENERGY STAR Portfolio Manager account and be successfully pulling the ENERGY STAR Score (if applicable) and the Weather Normalized Site EUI to the building’s Property Characteristics summary box.

Property characteristics <small>Change...</small>	
Address:	1400 Park Rd S, Lakeview, Oshawa, ON, L1J 8M5, Canada
Property Type:	Enclosed Shopping Centre
Gross Floor Area (for ENERGY STAR):	400,000 Square Feet
ENERGY STAR Score:	-
Total GHG emissions:	0 Metric Tons CO2e
Water Use Intensity :	2.18 m ³ /m ²
Weather-normalized Site Energy Use Intensity:	0.000 GJ/m ²

To synchronize your BOMA BEST account with your building’s ENERGY STAR Portfolio Manager account, follow [these instructions](#).

NOTE: For the purposes of the Net Zero Challenge Awards, all performance data, regardless of certification status, must be verified by a licensed professional (LP) to the ENERGY STAR certification standard as recognized by [Natural Resources Canada](#). Even BOMA BEST Certified buildings must perform this additional data verification step to be eligible to the Net Zero Challenge Awards.

Appendix C: Scoring for all asset classes

Criterion 2: Energy Use Intensity (< x ekWh/ft²)

Best in Class Points	Innovation Points	Most Improved Points	Office	Enclosed Retail	Open Air Retail	Industrial	MURB	Hospital	Medical Office	Long Term Care
0	0	2	30	33	36	40	22	80	34	60
2	0	3.5	28	31	34	37	21	76	32	57
5	0	5	26	29	31	35	19	72	29	53
8.5	2	6.5	24	26	29	32	18	68	27	50
12	4	8	22	24	27	30	17	63	25	47
15.5	6	9.5	20	22	24	27	15	59	22	43
19	8	11	18	20	22	25	14	55	20	40
22.5	10	12.5	16	17	20	22	13	51	18	37
26	12	14	14	15	17	19	11	47	15	33
29.5	14	15.5	12	13	15	17	10	43	13	30
33	16	17	10	11	13	14	9	38	11	27
36.5	18	18.5	8	8	10	12	7	34	8	23
40	20	20	6	6	8	9	6	30	6	20

Criterion 3: Absolute Energy Impact (> x ekWh)

Best in Class Points	Innovation Points	Most Improved Points	Office	Enclosed Retail	Open Air Retail	Industrial	MURB	Hospital	Medical Office	Long Term Care
1	1	1	500,000	2,300,000	360,000	600,000	363,000	8,000,000	340,000	900,000
2	2	2	1,000,000	4,600,000	720,000	1,200,000	726,000	16,000,000	680,000	1,800,000
3	3	3	1,500,000	6,900,000	1,080,000	1,800,000	1,089,000	24,000,000	1,020,000	2,700,000
4	4	4	2,000,000	9,200,000	1,440,000	2,400,000	1,452,000	32,000,000	1,360,000	3,600,000
5	5	5	2,500,000	11,500,000	1,800,000	3,000,000	1,815,000	40,000,000	1,700,000	4,500,000
6	6	6	3,000,000	13,800,000	2,160,000	3,600,000	2,178,000	48,000,000	2,040,000	5,400,000
7	7	7	3,500,000	16,100,000	2,520,000	4,200,000	2,541,000	56,000,000	2,380,000	6,300,000
8	8	8	4,000,000	18,400,000	2,880,000	4,800,000	2,904,000	64,000,000	2,720,000	7,200,000
9	9	9	4,500,000	20,700,000	3,240,000	5,400,000	3,267,000	72,000,000	3,060,000	8,100,000
10	10	10	5,000,000	23,000,000	3,600,000	6,000,000	3,630,000	80,000,000	3,400,000	9,000,000

Criterion 4: Carbon Emission Intensity (< x tCO₂e/ft²)

Best in Class Points	Innovation Points	Most Improved Points	Office	Enclosed Retail	Open Air Retail	Industrial	MU RB	Hospital	Medical Office	Long Term Care
2	1	1	0.0100	0.0178	0.0194	0.0185	0.0118	0.0431	0.0183	0.0323
4	2	2	0.0089	0.0159	0.0173	0.0165	0.0106	0.0386	0.0163	0.0289
6	3	3	0.0078	0.0139	0.0152	0.0145	0.0093	0.0341	0.0144	0.0255
8	4	4	0.0067	0.0120	0.0132	0.0125	0.0081	0.0296	0.0124	0.0221
10	5	5	0.0056	0.0101	0.0111	0.0105	0.0068	0.0251	0.0104	0.0188
12	6	6	0.0045	0.0082	0.0090	0.0085	0.0056	0.0207	0.0084	0.0154
14	7	7	0.0034	0.0063	0.0069	0.0065	0.0043	0.0162	0.0065	0.0120
16	8	8	0.0023	0.0044	0.0049	0.0046	0.0031	0.0117	0.0045	0.0086
18	9	9	0.0012	0.0025	0.0028	0.0026	0.0018	0.0072	0.0025	0.0052
20	10	10	0.0001	0.0005	0.0007	0.0006	0.0005	0.0027	0.0005	0.0018

Criterion 8: Improvement Against Baseline (% reduction)

Best in Class Points	Innovation Points	Most Improved Points	Office	Enclosed Retail	Open Air Retail	Industrial	MU RB	Hospital	Medical Office	Long Term Care
N/A	N/A	4	5	5	5	4	5	3	3	3
N/A	N/A	8	10	10	10	8	10	6	6	6
N/A	N/A	12	15	15	15	12	15	9	9	9
N/A	N/A	16	20	20	20	16	20	12	12	12
N/A	N/A	20	25	25	25	20	25	15	15	15
N/A	N/A	24	30	30	30	24	30	18	18	18
N/A	N/A	28	35	35	35	28	35	21	21	21
N/A	N/A	32	40	40	40	32	40	24	24	24
N/A	N/A	36	45	45	45	36	45	27	27	27
N/A	N/A	40	50	50	50	40	50	30	30	30