

# Q&A – Deep Retrofit Challenge (DRC)

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The following are responses to the questions received as part of the virtual Deep Retrofit Challenge Introductory Webinar on May 26 or received via our Better Buildings Partnership e-mail ([bbp@toronto.ca](mailto:bbp@toronto.ca)). Responses have been edited for clarity and will be updated on a weekly basis.

This is an evergreen document. Responses are subject to change prior to the launch of applications, so please review this document again once applications open and feel free to e-mail [bbp@toronto.ca](mailto:bbp@toronto.ca) to confirm responses.

1. Are institutional buildings eligible for the Deep Retrofit Challenge?

No. Institutional-type buildings (i.e. schools, hospitals, etc.) are not eligible to participate in the Deep Retrofit Challenge. Multi-unit residential and commercial office buildings, even if owned by an institution, are eligible to participate.

2. No mention of buildings that currently heat with fuel oil. I assume this is lumped under "fossil fuel heating systems"?

Yes, fuel oil heated buildings are included under 'fossil fuel' heating systems.

3. Is that [2500 square meters] requirement accumulated size? Or the minimum for one building? Is it possible to have multiple buildings count towards the 2,500 size threshold?

The 2500m<sup>2</sup> mentioned at the Introductory Webinar refers to the size of one building of that size or greater, which if accepted into the Deep Retrofit Challenge may receive up to 25% of the total retrofit cost up to a maximum of \$500,000. The incentive available under the Deep Retrofit Challenge pertains to one building, not multiple buildings.

4. Has that incentive percentage [for incentive disbursement] for smaller buildings been determined?

The City will provide details on the maximum incentive available for buildings with a gross floor area less than 2500 square metres when the Deep Retrofit Challenge application process is launched.

The incentive will be scaled proportionally for smaller buildings.

5. Can any commercial entity apply (i.e. manufacturing) or is the Challenge limited to City-owned buildings?

City-owned buildings are not eligible; the Deep Retrofit Challenge is open to privately-owned buildings. To be eligible, a building must be located within Toronto and be an Ontario Building Code Part 3 building (i.e. greater than 600 square meters or three storeys).

The following building types are eligible to participate in DRC:

- Multi-unit residential buildings (including condominiums, apartments, etc.)
- Commercial office buildings.
- Mixed-use buildings (residential and commercial, including residential over commercial).

6. Are participants allowed to get incentives from other programs as well (i.e. is double-dipping allowed)?

Participants are allowed to participate in other incentive or grant programs as well as the Deep Retrofit Challenge and stack the incentives, however the City will only cover eligible costs not already funded by other incentives or grants – you cannot double dip to cover the same expense. Challenge participants must disclose other sources of funding to the City.

For example, if a building receives grant funding for its entire retrofit from another source, the building is not eligible to participate in the Deep Retrofit Challenge.

However, if a building receives an incentive from another source to cover a portion of the retrofit costs and at least 25% of the eligible total retrofit cost is still in need of funding, then the Deep Retrofit Challenge incentive can be used to cover the remaining portion.

If a building receives financing via a City of Toronto program, such as the [Energy Retrofit Loan program](#) or [High-Rise Retrofit Improvement Support](#) program then this does not count as a grant and the building is still eligible for the maximum incentive available via the Deep Retrofit Challenge.

7. Must the building owner provide 75% of the retrofit costs?

Yes. A building owner selected to participate in the Deep Retrofit Challenge must be able to fund or source funds to pay for the total deep retrofit cost that is not covered by the Deep Retrofit Challenge incentive received. Only 25% of the total eligible deep retrofit cost, up to a maximum of \$500,000, depending on building size, may be provided under the Deep Retrofit Challenge.

It is important to note that a portion of the Deep Retrofit Challenge incentive will be held back until a building performance evaluation is conducted one year post-retrofit completion. Therefore, the building owner must be able to carry the cost of the project until the balance of the incentive is paid.

8. Will the City be also doing blower door tests at the applicable points?

Details will be released when the Deep Retrofit Challenge application process is launched. However, it is important that any high efficiency project consider air tightness testing and blower door tests, and follow proper procedures to ensure a tightly sealed envelope.

9. Are you actively promoting Passive House techniques and goals?

Participants are welcome to look for guidance via Passive House, including retrofit standards such as EnerPHit, or other low-carbon retrofit standards. These standards are generally aligned with the goals of the Deep Retrofit Challenge.

All projects must meet the minimum requirements set by the Deep Retrofit Challenge however, the City will not be actively promoting use of one standard or approach to completing a deep retrofit project.

10. The distribution of the incentives at different stages of a project such as design/retrofit/post-retrofit performance evaluation - has the percentage of the total incentive available at each stage (based on size of building) been determined?

Details will be made available when the Deep Retrofit Challenge application process is launched.

11. Are you able to comment more on rent increases? Is there a time duration for the no rent increase requirement (e.g. one year, 10 years, etc.)?

There is no time limit to the requirement. Property owners must agree not to apply for any rent increases above the guideline, as identified in the Residential Tenancies Act, in connection with any portion of improvements funded through the Deep Retrofit Challenge.

12. Is there a conflict between this City program and IESO Save on Energy or can the building owner apply to both?

A participant selected for the Deep Retrofit Challenge is able to also participate in the IESO Save on Energy program. See answer to Question #9 for more details about stacking incentives.

13. Can a company become a partner if the City is still looking for partners for this program?

The City is not actively looking for additional partners in the Deep Retrofit Challenge. However, if you feel that your organization can contribute to the Deep Retrofit Challenge, please email us at [bbp@toronto.ca](mailto:bbp@toronto.ca).

14. Can grants from other funding agencies help building owners reach the 20-year payback threshold?

More details about the 20 year payback period requirement will be released when the Deep Retrofit Challenge application process is launched.

15. Do buildings that have already begun retrofits qualify for the program? For example, older buildings will have undergone ongoing maintenance and upgrades. If a multi-unit residential building (MURB) hadn't known about this program and very recently done something, such as roof replacement, then why wouldn't you include that? Perhaps a limit of 12 months back?

Buildings that have already begun the deep retrofit that they are seeking funding for through the Challenge are not eligible to participate in the Deep Retrofit Challenge.

16. Will the cost of an energy audit or carbon neutral studies be an eligible expense and be covered by the funding?

Details will be available when the Deep Retrofit Challenge application process is launched.

17. What is the rationale behind the 20-year payback?

Natural Resources Canada, the City's funding partner for the Deep Retrofit Challenge, established the 20-year payback requirement as part of their Green Infrastructure Phase II, Energy Efficient Buildings Program. The intent of this requirement is to demonstrate and model affordable deep energy retrofit projects, which is considered to be a 20-year payback period or better.

18. Will energy models be required and if so, with which software? CanQuest, eQuest or another?

Yes, participants must submit calibrated pre-and post- energy models of the building once the building is accepted into the Deep Retrofit Challenge. The participant may use CanQuest, eQuest, EnergyPlus, or any other Department of Energy (DOE)-based software, or any other commercial software programs to produce the energy model. The City's prefers building owners to obtain an open source energy model that other building owners can use, but likely will not be an absolute requirement. The details will be clarified and confirmed when the Deep Retrofit Challenge application process is launched.

19. For Multi-unit Residential Buildings, does the 50% energy reduction also apply to common area energy consumption? Does the requirement including the energy usage in each individual unit as well?

The minimum 50% reduction in total energy use intensity and greenhouse gas (GHG) emissions relates to the entire building i.e. energy data aggregated from all utility accounts (and other energy sources) must be used in energy and emissions reduction calculations to assess whether the building's retrofits have achieved the Deep Retrofit Challenge's energy reduction requirement.

20. Is solar hot water included in this program?

Yes, solar hot water systems could be eligible as part of a deep retrofit under the Deep Retrofit Challenge.

21. Is the 20 year payback requirement calculated before or after the incentive?

Details will be released when the Deep Retrofit Challenge application process is launched.

22. Where will this public data be accessible? Will benchmarking data be available as a result of this Challenge?

All participants in the Challenge must make their project information including utility data, design, project costs and more (to be further disclosed at launch of the application process) available to the public in an effort to inform and motivate other building owners and build market confidence. This data will be made available on the City's website.

23. Will the use of geoexchange for heating and cooling rather than electricity be a preferred component in the City's evaluation of project applications?

More details will be released when the Deep Retrofit Challenge application process is launched.

24. Can this retrofit be only for one building or two?

The Deep Retrofit Challenge will select a total of 10 to 16 buildings to participate. A building owner may submit more than one application to participate in the Deep Retrofit Challenge with each building having its own application.

25. Having participated in this webinar, are we on the contact list to get notified when the program is open to applications?

Yes, we will notify all those who registered for the Introductory Webinar when there are further updates to share on the Deep Retrofit Challenge. Updates will also be available on the City's Deep Retrofit Challenge [website](#).

26. How will emergency power be available to large residential buildings after a power outage, as most generators are diesel or natural gas now?

Emergency power strategies may be expanded to include battery storage as well as traditional combustion generation. A fossil fuel generator, used only for emergencies, typically contributes a small percentage to overall building emissions when compared to a fossil fuel heating system – as the low run hours of the generator consume little energy compared to a heating system with high run hours. To fully reach net zero, emergency generators may either use renewable fuels or the remaining emissions may be offset using carbon credits.

27. Is the requirement a 50% reduction from the existing equipment's energy usage?

The 50% minimum energy/emissions reduction requirement under the Deep Retrofit Challenge is based on the building's total energy use intensity and GHG emissions – i.e. the reduction is from a whole building perspective, including the existing equipment's energy usage.

28. Will there be any targets/requirements for the embodied carbon impact of materials and processes used in the deep retrofit?

Only operational carbon will be used to determine project performance. More details will be released when the Deep Retrofit Challenge application process is launched.

29. What is the denominator in "energy intensity"?

When considering energy intensity, we look at the total energy use divided by the floor area of the building. The result will be your total energy per square meter value.

30. Can utility bills substitute for energy modelling?

Once selected, participants will need to provide the City with both utility bills and calibrated pre- and post retrofit energy modelling of their deep retrofit design.

31. Will the Challenge consider a current energy usage from a pre-Covid year, since energy usage during 2020-2022 would not reflect a real scenario for an office building?

The City will consider the use of pre-COVID-19 utility data on a case-by-case basis. Utility bills showing energy data for the previous 12 months must be submitted as part of the application process, however additional months can be provided.

32. What is the minimum R<sup>2</sup>-Value for the Measurement & Verification and [energy model]?

Measurement and verification will be performed by the City according to International Performance Measurement and Verification Protocol (IPMVP) protocols prior to retrofit commencement and one year post-retrofit.

33. For the specific rules and details which are soon to be released, will the City be consulting stakeholders on these requirements, or will this be based on internal analysis, best practices, etc?

The City is currently relying on our internal stakeholders, including our internal building experts, our partners and our legal advisors to draft the Deep Retrofit Challenge details and eligibility requirements. The City will also refer to best practices of similar existing building energy retrofit programs.

34. When will the final Challenge program requirements be available?

We are aiming to launch further details and the application for the Deep Retrofit Challenge in June 2022.

35. Most buildings don't have capacity to do energy use gathering to the standard of the IPMVP. Would we have to install submetering and other equipment monitoring devices? Is there an incentive available for doing so?

If a building is selected to participate in the Deep Retrofit Challenge, the City will coordinate and conduct the Measurement and Verification process as per International Performance Measurement and Verification Protocol (IPMVP). Because energy reductions of at least 50% are required for the Deep Retrofit Challenge, whole building

analysis based on utility bills will typically be sufficient to satisfy the Challenge requirements. As such, we don't expect that the installation of additional metering/monitoring devices will be required.

However, best practices to understand building operation and ensure good ongoing performance would include installation of data collection and monitoring systems, as well as using this data to identify and respond to performance issues. For example, monitoring showing poor performance could trigger equipment repair or recommissioning. These additional metering/monitoring devices would be an eligible cost under the Deep Retrofit Challenge.

36. Would the cost charged by Toronto Hydro to provide more power to the building be eligible for funding through the Challenge?

Electrical service upgrades required to enable a deep retrofit would be an eligible cost under the Deep Retrofit Challenge.

37. How many applications do you anticipate will be submitted for the Challenge?

We do not know how many applications the City will receive.

38. Would a heritage building on a campus qualify for the Deep Retrofit Challenge?

As long as the building meets the eligibility requirements (see question 5) then yes, they may participate. Heritage buildings must still comply with heritage-related regulations and processes.

39. Are student residences at universities and colleges eligible for this program?

See answer to Question 1.