

Renovation Energy Upgrade Proposal (REUP)

The REUP checklist is to collect and summarize the energy upgrade information for a renovation project. The form must be filled out by an Energy Advisor, unless otherwise permitted by City staff. It applies to:

- 1&2 Family Dwellings
- Infill or coach house
- Ground-access townhouse or multi-plex (duplex, triplex etc.) units

For other building types, please contact green.buildings@vancouver.ca to discuss your project.

A pre-renovation ('D) EnerGuide Assessment (by an Energy Advisor) is **REQUIRED** if:

the construction value is >\$20,000. An assessment completed within the last 4 years is acceptable

A post-renovation ('E') EnerGuide Assessment (and the post-retrofit REUP form) is also **REQUIRED** if:

the construction value is >\$75,000.

Additional Energy Upgrades (points system) are **REQUIRED** to be selected if:

the construction value is >\$75,000 - 2 points

the building is being converted into 2 or more strata lots - 2 points

the building is being relocated from another municipality or from another lot within the City - 2 points

The above requirements are **EXEMPTED** if the entire scope of work is limited to the following:

Alarm System Installation / Retrofit

Electric Vehicle Charging Station Installation / Retrofit

Heat Pump Installation / Retrofit

Photovoltaic Installation / Retrofit

Re-ducting or re-piping

Seismic Upgrade

Temporary Building (must be officially recognized by City as temporary, less than 1 year occupancy)

Retrofit of recently built home: retrofit of a home with up-to-date energy performance (i.e. received Building Permit after January 1st 2015). If the work includes any additions (i.e. added floor area) or comprehensive work to energy systems, the project is not exempt.

Building Envelope repair: (from VBBL 11.2.1.2 (5)): where building envelope repair involves more than 60% of an opaque portion of a building face, the building envelope on the entire vertical section of that building face shall be replaced and upgraded to the thermal resistance and air-tightness requirements of Part 10, except if the scope is limited to the replacement of windows

Window Replacement: window replacements that don't impact the building envelope (including rough openings) are exempt.

Site / External work: scope of work is exterior to the building envelope and is independent of the building's operations. This includes canopy/awning, site work such as soil remediation, trenching, drainage systems, foundation repair, and patio or deck additions (without light, power, heat systems etc.)

Minor damage repair: includes fire or flood damage, localized to a small portion of building. The building is brought back to at least original condition and performance

Remove & Replace "Re & Re": minor removal or replacement of items and fixtures. Projects that include millwork, alterations to interior walls, overhauling of kitchens or washrooms, or other projects impacting multiple components or are deemed as comprehensively new work are not exempt

Upgrade Relaxations and Flexibility (see VBBL Section 11.7)

1) Envelope - new and existing upgraded

Exterior walls or ceiling (new or upgraded existing) do not need to achieve full R-values for the following situations:

- A) Minor wall addition / alteration: scope of work wall area is <5% of total home wall area
- B) Minor roof addition / alteration: scope of work roof area is <5% of total home ceiling area
- C) Localized duct, electrical, or damage repair: impacted walls are < 60% of the area of a single wall / ceiling face

A) Wall addition or upgrade

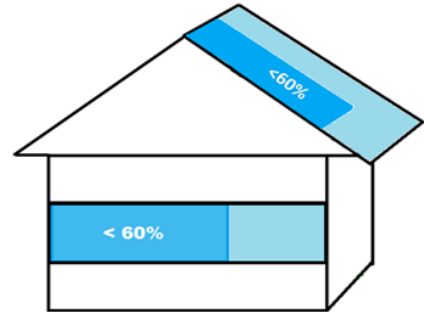
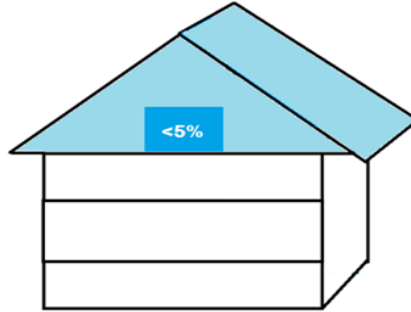
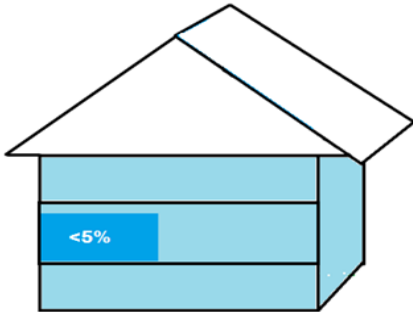
<5% total home wall area =
exempt from full R values

B) Ceiling addition or upgrade

<5% total home ceiling (roof) area =
exempt from full R values

C) Localized repair

<60% of a single wall / ceiling face
exempt from full R values



For any of the above situations, the wall thickness and insulation can match the existing wall cavity, to a minimum of 2x4" R14 nominal (RSI 2.5 W/m2K), and the existing roof cavity to a minimum of 2x6" R22 nominal (RSI 3.87 W/m2K)
If insulation is being added, proper moisture and weather barriers must be installed per VBBL Section 9.25

2) Other upgrade flexibility

The Alternative Upgrade tool can also be used to offset (by staff discretion) upgrades that are overly burdensome in the specific house context, by selecting a number of equivalent upgrades.

Heritage Homes (and homes with heritage features)

In general, energy efficiency in heritage homes need not be in full compliance with the current VBBL provided it achieves an "acceptable" level of performance. "Acceptable" is clarified as the following features:

Windows

Original windows can be put back in place, provided the frame is adequately re-sealed, the assemblies are in acceptable or restored condition, and:

If replacements are required, double-pane replica windows can be installed. These windows do not have to meet or USI 1.4 W/m2K or NAFS criteria, but site-built or custom products need a professional sign-off.

Sloped Glazing

Original sloped glazing and skylights can be put back in place, provided the frame is adequately caulked and re-sealed, and the assemblies are in acceptable condition.

If replacements are required, replica skylights do not have to meet NAFS criteria, but site-built or custom products need a professional sign-off

Exterior Doors (side-hinged and sliding)

Original doors can be put back in place, provided the door assembly and frame are in acceptable or restored condition, and are adequately re-sealed. For side-hinged doors, weather stripping and sill sweeps are installed on the door slab and frame

If a replacement is required, a replica door does not have to meet USI 1.8 W/m2K for side-hinged or USI 1.4 W/m2K for sliding doors. They do not have to meet NAFS criteria, but custom site-built products need a professional sign-off.

Envelope (wall and ceiling) Insulation

Affected 'new' walls need only meet R14 within a 2x4" wall cavity, to avoid the impact of furring-in the cavity width on interior or exterior space. A proper moisture barrier per Section 9.25 must be installed where needed.

If insulation can not be added due to moisture or other concerns: the project may use the alternative upgrade flexibility tool to propose alternative upgrades to offset installing insulation.