



# Public Review

## Vancouver Building By-law (VBBL)

### Proposed change to Lighting Trade-offs

**Topic:** Lighting Trade-offs

**Code change number:** 24-0018

**Code reference:** 10.2.2.2. ASHRAE 90.1, and 10.2.2.3. NECB

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## Description of the proposed change

The intention of this limitation is to prevent LPD results, through the application of trade-offs over numerous renovations, that could otherwise not be achieved as a regular new construction project. Allowing under-lit spaces to be renovated to their maximum allowance without taking into account the existing over-lit spaces (through previous trade-off applications) can result in total building/tenancy LPD limits being exceeded by excessive amounts.

## Justification

A building/tenancy, through the use of lighting trade-offs and multiple renovations, can produce lighting power levels greatly exceeding the maximum allowable for a new building/tenancy, by either ASHRAE 90.1 or NECB . The problem stems from the standard practice that partially renovating a building's/tenancy's lighting does not require the accounting of the existing lighting within areas not being renovated. As a result, over-lit spaces are not considered when under-lit spaces are renovated with new lighting added to reach their individual space allowance.

## Proposed VBBL content

### Legend

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10.2.2.2. ASHRAE 90.1

l) lighting Space by Space Method application, per ASHRAE 90.1, Section 9.6.1.d., being replaced by "The interior lighting power allowance is the sum of lighting power allowances of all spaces and subspaces. Trade-offs among spaces and subspaces are not permitted." (See Note A-10.2.2.2.(2)(l).)

### 10.2.2.3. NECB

i) lighting Trade-off Path application, per NECB, Section 4.3., shall be permitted using whole building application only. Trade-offs among spaces and subspaces are not permitted with the application of the Space by Space Method. (See Note A-10.2.2.3.(1)(i).)

Notes to Part 10

#### **A-10.2.2.2.(2)(l) and A-10.2.2.3.(1)(i) Lighting Trade-off Limited to Whole Building**

The intention of this limitation is to prevent LPD results, through the application of trade-offs over numerous renovations, that could otherwise not be achieved as a regular new construction project. Allowing under-lit spaces to be renovated to their maximum allowance without taking into account the existing over-lit spaces (through previous trade-off applications) can result in total building/tenancy LPD limits being exceeded by excessive amounts.