

TOWN OF COCHRANE

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ENERGY CODE COMPLIANCE OVERVIEW

Building Type	Part 9 – Prescriptive	Part 9 - Performance	NECB 2011
<ul style="list-style-type: none">Houses, houses with Secondary SuitesBuildings containing only dwelling units with common spaces \leq 20% floor area	●	●	●
<ul style="list-style-type: none">Purely residential buildingsAny building, where all non-residential portions (not F2) have a floor area \leq 300 m²	●		●
<ul style="list-style-type: none">Any building where non-residential occupancies have a floor area \geq 300 m²Buildings containing F2 occupancies (any size)			●

COCHRANE, AB – 5200 DEGREE DAYS (ZONE 7A)

Section 9.36 National Building Code 2019 (AB Edition)

Any building permit application received after Oct 31/2016 will be required to comply with 9.36 of the NBC 2019 (AB Edition) regardless of Development Permit application date.

Unlike Alberta's safety codes, there are several paths that you can choose to demonstrate compliance with Section 9.36. This is a critical decision for the designer and can affect both submission requirements and team members. The various compliance path types are prescriptive, trade-off, and performance compliance.

Prescriptive path

This path involves following the prescriptive requirements of Subsection 9.36.2, 9.36.3 and 9.36.4. It is typically the simplest compliance path to follow, but may not be appropriate for all buildings.

It is important to note that prescriptive path compliance for any part of the 9.36 requires meeting all requirements in that part. If this is impossible or undesirable, another compliance path should be selected.

Trade-off path

If you need more flexibility in your design, a trade-off path allows you to trade elements within the above ground building envelope to demonstrate an equivalent level of performance without meeting every prescriptive requirement found in 9.36.2.

Trade-off path requires a calculation to demonstrate that while your proposed design may not exactly meet the prescriptive requirements found in Section 9.36 overall, the amount of energy consumed will be the same or less than would be consumed by following strict prescriptive compliance. For example, if your design contains a regular framed wall with studs at 24" on the centre and a tall wall with studs at 12" on the centre, you may be able to compensate for the lesser value of the tall wall by improving the insulation in the regular wall or improving the thermal performance of the ceiling.

It is important to note that trade-off path has limitations and rules on how to calculate what may be traded off. These limitations are found in Section 9.36.2.11.

Performance path

For the most design flexibility, you could choose to use a performance compliance path. This approach is found in subsection 9.36.5 and is only applicable to houses and buildings containing residential occupancies.

For the performance compliance path, you must demonstrate that the proposed design will not consume more energy than an equivalent building built to prescriptive requirements, using an approved building energy simulation tool (computer software must meet the [ANSI/ASHRAE 140 standard](#)). Performance compliance can allow for trade-offs between building systems, and might be the only compliance path that is practical for certain buildings.

NATIONAL ENERGY CODE FOR BUILDINGS (NECB) 2017

While this may be considered overly complex for the typical house or small commercial building, it is permitted to use the NECB as a means of demonstrating compliance with Section 9.36. If you choose this path, it is important to understand you must use the NECB fully. There is no way to use parts of 9.36 and the NECB in combination to show compliance

NECB 2017

Any building permit application received after Oct 31/2016 will be required to comply with NECB 2017.

****If the Development Permit was approved or extended before Dec 1/2019 (Commercial/Industrial/Institutional ONLY), you will not be required to comply with the NECB 2017****

Unlike Alberta's safety codes, there are several methods that you can choose to demonstrate compliance with the NECB. This is a critical decision for the design team and can affect both submission requirements and team members. The various compliance path types are prescriptive, trade-off, and performance compliance, outlined below.

Prescriptive path

This path involves following the prescriptive requirements of Sections 3.2, 4.2, 5.2, 6.2 and 7.2 of the [NECB](#). It is typically the simplest compliance path to follow, but may not be appropriate for all building types.

Prescriptive path checklists are available to help applicants identify specific articles in the code. It is important to note that prescriptive path compliance for any part of the NECB requires meeting all requirements in that part. If this is impossible or undesirable, another compliance path should be selected.

Trade-off path

If you need more flexibility in your design, a trade-off path allows you to trade elements within the same part of the energy code and demonstrate an equivalent level of performance without meeting every prescriptive requirement found in the [NECB](#). For example, if your design calls for more window area than prescribed by the code, you may be able to compensate by improving the insulation in the building envelope, or improving the thermal performance of the windows themselves.

Basically, the trade-off path is a calculation to demonstrate that while your proposed design may not exactly meet the prescriptive requirements found in the NECB overall, the amount of energy consumed will be the same or less than the following strict prescriptive compliance.

It is important to note that trade-off path has limitations and rules on how to calculate what may be traded off within each Part. These limitations are found in Sections 3.3, 4.3, 5.3 and 6.3 of the NECB. To make the calculations easier, there are downloadable trade-off path calculation tools to assist you with this compliance path.

Performance path

For the most design flexibility, you should choose to use a performance path. This includes the detailed envelope trade-off path and building energy performance compliance paths. These approaches are found in subsection 3.3.4 and Part 8 of the [NECB](#).

For the NECB 2017, you must simply demonstrate that the proposed design will not consume more energy than an equivalent building built to prescriptive requirements using an approved hourly building energy simulation tool (computer software must meet the [ANSI/ASHRAE 140 standard](#)). Performance compliance can allow for trade-offs between building systems, and might be the only compliance path available for certain building types.