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## Energy Code Requirements - What does it mean? - General Information

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Improving energy efficiency standards for building construction codes supports greenhouse gas emissions reduction and reduces the demands of energy resources. Energy Efficiency includes requirements affecting building envelope, heating, ventilation and air condition (HVAC), lighting and service water heating. The same provincially trained and certified Safety Codes Officers who issue building permits and inspect construction also administer the Energy Codes. The energy code requirements within the building code applies to new construction and additions. It also only applies to conditioned spaces and exemptions include seasonally heated buildings, storage, and parking garages.

The energy code is intended to address:

- *air leakage*
- *uncontrolled thermal transfer*
- *unnecessary demand or consumption for heating and cooling, service water heating, and electrical equipment and devices*
- *inefficiency of equipment and systems*
- *unnecessary rejection of reusable waste energy*

There are three possible paths to achieve the energy efficiency requirements:

### 1. Prescriptive Path

This path's simplicity affords the least flexibility from a design perspective.

- U-Values and Energy Efficiency ratings of all windows, doors and skylights should be noted on the plans.

### 2. Performance using Trade-Off Path

This path may be appropriate for designs that may not otherwise be practically or economically achievable through fulfilling all prescriptive path requirements for some building components. Trade-offs allow prescriptive components for thermal performance levels to be traded off against others. Acceptable trade-off will be one that, despite one or more individual components falling short of prescribed values, is demonstrated to represent an equivalent or better level of efficiency then following a strictly prescriptive path.

- Detailed calculations are required to be submitted with your construction details.

### 3. Performance Path

This path is a whole-building energy simulation model of all building systems, with the goal of demonstrating through modeling that the proposed building would require no more energy to operate than a hypothetical, equivalent prescriptively designed building. While affording the most design flexibility, this path to NECB compliance required professional involvement due to the complexity of rules and limitations in the exchange between all building systems. For more information see <https://www.alberta.ca/energy-codes.aspx>

### Who can I call to assist me with completing energy code calculations?

#### Advanced Energy Advisors – Kent Pearson

403-878-6003  
kent@advancedea.com

#### Green Wave Consultants - Jason Clifton

403-795-7704  
greenwaveea@gmail.com  
<https://www.greenwaveconsultants.ca/>

#### New Home Energy – Ken Holtrop

403-795-4370 [kholtrop@newhomeenergy.ca](mailto:kholtrop@newhomeenergy.ca)

Or you can visit one of the following websites to locate an energy code advisor or enter “Energy Advisor” in your search engine:

- **Natural Resources Canada:** <https://www.nrcan.gc.ca/energy-efficiency/homes/find-service-provider/15807>

- **Canadian Association of Consulting Energy Advisors:** <https://cacea.ca/find-an-energy-advisor/>