



## Off Grid and the Ontario Building Code

### Building division position:

The City of Kawartha Lakes Building Division consulted with the Ministry of Municipal Affairs Buildings Branch and has taken the position to interpret a wind or solar system as providing electrical facilities. Further to this position the applicant for an off grid dwelling/cottage must still comply with all other aspects of the Ontario Building Code as they relate to electrical connections. Any proposal to omit code requirement will result in the application being denied and the applicant being directed to the Building Code Commission for decision.

### Off grid single detached dwellings – relevant code sections

- 9.34. Electrical Facilities
- 9.34.1.2. Required Facilities
  - (1) Where electrical services are available, electrical facilities shall be provided for every building in conformance with this Section.
- 9.34.2.1. Lighting of Entrances
  - (1) An exterior lighting outlet with fixture controlled by a wall switch located within the building shall be provided at every entrance to buildings of residential occupancy.
- 9.34.2.2. Outlets in Dwelling Units
  - (1) Except as provided in Sentence (2), a lighting outlet with fixture controlled by a wall switch shall be provided in kitchens, bedrooms, living rooms, utility rooms, laundry rooms, dining rooms, bathrooms, water closet rooms, vestibules and hallways in dwelling units.
  - (2) Where a receptacle controlled by a wall switch is provided in bedrooms or living rooms, such rooms need not conform to the requirements of Sentence (1).
- 9.34.2.3. Stairways
  - (1) Every stairway shall be lighted.

- (2) Except as provided in Sentence (3), 3-way wall switches located at the head and foot of every stairway shall be provided to control at least one lighting outlet with fixture for stairways with 4 or more risers in dwelling units.
- (3) The stairway lighting for basements that do not contain finished space or lead to an outside entrance or built-in garage and that serve not more than one dwelling unit is permitted to be controlled by a single switch located at the head of the stairs.
- 9.34.2.4. Basements
  - (1) A lighting outlet with fixture shall be provided for each 30 m<sup>2</sup> of floor area or fraction of it in unfinished basements.
  - (2) The outlet required in Sentence (1) nearest the stairs shall be controlled by a wall switch located at the head of the stairs.
- 9.34.2.5. Storage Rooms
  - (1) A lighting outlet with fixture shall be provided in storage rooms.
- 9.34.2.6. Garages and Carports
  - (1) A lighting outlet with fixture shall be provided for an attached, built-in or detached garage or carport.
  - (2) Except as provided in Sentence (3), lighting outlets required in Sentence (1) shall be controlled by a wall switch near the doorway.
  - (3) Where the lighting outlet and fixture required in Sentence (1) are ceiling mounted above an area not normally occupied by a parked car; or are wall mounted, a fixture with a built-in switch is permitted to be used.
  - (4) Where a carport is lighted by a light at the entrance to a dwelling unit, additional carport lighting is not required.
- 9.33.4.3. Installation and Conformance to Standards
  - (1) The carbon monoxide detector required by Article 9.33.4.2. shall,
    - (a) be permanently connected to an electrical circuit and shall have no disconnect switch between the overcurrent device and the carbon monoxide detector,
    - (b) be wired so that its activation will activate all carbon monoxide detectors within the suite, where located within a suite of residential occupancy,
    - (c) be equipped with an alarm that is audible within bedrooms when the intervening doors are closed, where located adjacent to a sleeping area, and
    - (d) conform to,

- (i) CAN/CSA-6.19, “Residential Carbon Monoxide Alarming Devices”, or
  - (ii) UL 2034, “Single and Multiple Station Carbon Monoxide Alarms”.
- 9.32.1.2. Mechanical Ventilation for Dwelling Units
  - (1) Every dwelling unit that is supplied with electrical power shall be provided with a mechanical Ventilation system in accordance with Subsection 9.32.3.
- 9.36.2.4. Smoke Alarms Cottages
  - (1) Every dwelling unit within the scope of this Section shall be provided with a smoke alarm in accordance with Subsection 9.10.19.
- 9.10.19.1. Required Smoke Alarms
  - (1) *Smoke* alarms conforming to CAN/ULC-S531, “Smoke Alarms”, shall be installed in each dwelling unit and in each sleeping room not within a dwelling unit.
- 9.10.19.3. Power Supply
  - (1) Except as permitted in Sentence
  - (2), smoke alarms shall be installed by permanent connections to an electrical circuit and shall have no disconnect switch between the overcurrent circuit device and the smoke alarm.
- 9.10.19.4. Interconnection of Smoke Alarms
  - (1) Where more than one smoke alarm is required in a dwelling unit, the smoke alarms shall be wired so that the activation of one alarm will cause all alarms within the dwelling unit to sound.

## Off grid cottages – relevant code sections

- 9.36.1. Cottages
  - 9.36.1.1. Application
    - (1) This Section applies to buildings of residential occupancy used or intended to be used as seasonal recreational buildings.
    - (2) The buildings described in Sentence (1) shall comply with all the requirements of this Part, except where they are specifically exempted in this Section.
  - 9.36.2.1
    - (3) Except as provided in Sentences (4) and (5), thermal insulation, *vapour barrier*, air barrier construction, interior finishes, plumbing, heating,

mechanical ventilation, air-conditioning and **electrical facilities** need not be provided, but where any of these are provided, they shall comply with the requirements of this Part.