

**GENERAL ASSEMBLY OF NORTH CAROLINA
SESSION 2009**

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HOUSE BILL 1125

Short Title: Require Photoelectric Smoke Detectors. (Public)

Sponsors: Representatives Insko; Hughes and Parmon.

Referred to: Science and Technology, if favorable, Commerce, Small Business, and
Entrepreneurship.

April 7, 2009

A BILL TO BE ENTITLED
AN ACT TO REQUIRE PHOTOELECTRIC SMOKE DETECTORS IN NEW OR
RENOVATED HOMES OR WHEN HOMES ARE SOLD.

Whereas, North Carolina's fire death rate in 2005, as reported by the United States Fire Administration, was 15.0 deaths per million population; and

Whereas, this fire death rate was the 19th highest rate in the nation and was nearly 20% higher than the national average; and

Whereas, public safety experts recognize that smoke detectors serve as vital early-warning devices in residential properties; and

Whereas, smoke detectors utilizing ionization technology are the most prevalent type of smoke detector in use in residential properties due to their low cost; and

Whereas, smoke detectors utilizing photoelectric technology, though costing \$8.00 to \$12.00 more than ionization-based smoke detectors, are superior for more quickly detecting smouldering fires that produce smoke but no open flames; and

Whereas, ionization-based smoke detectors have a significantly greater rate of nuisance alarms than photoelectric smoke detectors, which frequently results in the homeowner disconnecting or disabling the detector; and

Whereas, two states have already passed legislation requiring photoelectric smoke detectors in every new home and in existing homes when they are sold; and

Whereas, the largest firefighter association in North America, the International Association of Fire Fighters has endorsed only the photoelectric smoke detector; Now, therefore,

The General Assembly of North Carolina enacts:

SECTION 1. G.S. 143-138 reads as rewritten:

"§ 143-138. North Carolina State Building Code.

(a) Preparation and Adoption. – The Building Code Council may prepare and adopt, in accordance with the provisions of this Article, a North Carolina State Building Code. Before the adoption of the Code, or any part of the Code, the Council shall hold at least one public hearing. A notice of the public hearing shall be published in the North Carolina Register at least 15 days before the date of the hearing. Notwithstanding G.S. 150B-2(8a)h., the North Carolina State Building Code as adopted by the Building Code Council is a rule within the meaning of G.S. 150B-2(8a) and shall be adopted in accordance with the procedural requirements of Article 2A of Chapter 150B of the General Statutes.

The Council shall request the Office of State Budget and Management to prepare a fiscal note for a proposed Code change that has a substantial economic impact, as defined in G.S. 150B-21.4(b1), or that increases the cost of residential housing by eighty dollars (\$80.00)



1 or more per housing unit. The change can become effective only in accordance with
2 G.S. 143-138(d). Neither the Department of Insurance nor the Council shall be required to
3 expend any monies to pay for the preparation of any fiscal note under this section by any
4 person outside of the Department or Council unless the Department or Council contracts with a
5 third-party vendor to prepare the fiscal note.

6 (b) Contents of the Code. – The North Carolina State Building Code, as adopted by the
7 Building Code Council, may include reasonable and suitable classifications of buildings and
8 structures, both as to use and occupancy; general building restrictions as to location, height, and
9 floor areas; rules for the lighting and ventilation of buildings and structures; requirements
10 concerning means of egress from buildings and structures; requirements concerning means of
11 ingress in buildings and structures; rules governing construction and precautions to be taken
12 during construction; rules as to permissible materials, loads, and stresses; rules governing
13 chimneys, heating appliances, elevators, and other facilities connected with the buildings and
14 structures; rules governing plumbing, heating, air conditioning for the purpose of comfort
15 cooling by the lowering of temperature, and electrical systems; and such other reasonable rules
16 pertaining to the construction of buildings and structures and the installation of particular
17 facilities therein as may be found reasonably necessary for the protection of the occupants of
18 the building or structure, its neighbors, and members of the public at large.

19 In addition, the Code may regulate activities and conditions in buildings, structures, and
20 premises that pose dangers of fire, explosion, or related hazards. Such fire prevention code
21 provisions shall be considered the minimum standards necessary to preserve and protect public
22 health and safety, subject to approval by the Council of more stringent provisions proposed by
23 a municipality or county as provided in G.S. 143-138(e). ~~These provisions may include~~
24 ~~regulations requiring the installation of either battery-operated or electrical smoke detectors in~~
25 ~~every dwelling unit used as rental property, regardless of the date of construction of the rental~~
26 ~~property. For dwelling units used as rental property constructed prior to 1975, smoke detectors~~
27 ~~shall have an Underwriters' Laboratories, Inc., listing or other equivalent national testing~~
28 ~~laboratory approval, and shall be installed in accordance with either the standard of the~~
29 ~~National Fire Protection Association or the minimum protection designated in the~~
30 ~~manufacturer's instructions, which the property owner shall retain or provide as proof of~~
31 ~~compliance.~~

32 The Code may contain provisions requiring the installation of either battery-operated or
33 electrical smoke detectors in every dwelling unit that is either (i) used as rental property, or (ii)
34 that contains a fossil fuel-burning heater or appliance, fireplace, or an attached garage. The
35 smoke detectors shall utilize either photoelectric or dual ionization and photoelectric sensor
36 technology and shall be those listed by a nationally recognized testing laboratory that is
37 OSHA-approved to test and certify to American National Standards Institute/Underwriters
38 Laboratories Standards ANSI/UL217 and shall be installed in accordance with either the
39 standard of the National Fire Protection Association or the minimum protection designated in
40 the manufacturer's instructions, which the property owner shall retain or provide as proof of
41 compliance. For purposes of this section, "photoelectric technology" or "photoelectric smoke
42 detector technology" means a smoke detector that uses a light source and a photodetector to
43 detect the presence of smoke.

44 The Code may contain provisions requiring the installation of either battery-operated or
45 electrical carbon monoxide detectors in every dwelling unit having a fossil-fuel burning heater
46 or appliance, fireplace, or an attached garage. Carbon monoxide detectors shall be those listed
47 by a nationally recognized testing laboratory that is OSHA-approved to test and certify to
48 American National Standards Institute/Underwriters Laboratories Standards ANSI/UL2034 or
49 ANSI/UL2075 and shall be installed in accordance with either the standard of the National Fire
50 Protection Association or the minimum protection designated in the manufacturer's
51 instructions, which the property owner shall retain or provide as proof of compliance. A carbon

1 monoxide detector may be combined with smoke detectors if the combined detector does both
2 of the following: (i) complies with ANSI/UL2034 or ANSI/UL2075 for carbon monoxide
3 alarms and ANSI/UL217 for smoke detectors; and (ii) emits an alarm in a manner that clearly
4 differentiates between detecting the presence of carbon monoxide and the presence of smoke.

5 The Code may contain provisions regulating every type of building or structure, wherever it
6 might be situated in the State.

7 Provided further, that building rules do not apply to (i) farm buildings that are located
8 outside the building-rules jurisdiction of any municipality, or (ii) farm buildings that are located
9 inside the building-rules jurisdiction of any municipality if the farm buildings are greenhouses.
10 A "greenhouse" is a structure that has a glass or plastic roof, has one or more glass or plastic
11 walls, has an area over ninety-five percent (95%) of which is used to grow or cultivate plants, is
12 built in accordance with the National Greenhouse Manufacturers Association Structural Design
13 manual, and is not used for retail sales. Additional provisions addressing distinct life safety
14 hazards shall be approved by the local building-rules jurisdiction.

15 Provided further, that no building permit shall be required under the Code or any local
16 variance thereof approved under subsection (e) for any construction, installation, repair,
17 replacement, or alteration costing five thousand dollars (\$5,000) or less in any single family
18 residence or farm building unless the work involves: the addition, repair, or replacement of load
19 bearing structures; the addition (excluding replacement of same size and capacity) or change in
20 the design of plumbing; the addition, replacement or change in the design of heating, air
21 conditioning, or electrical wiring, devices, appliances, or equipment, the use of materials not
22 permitted by the North Carolina Uniform Residential Building Code; or the addition (excluding
23 replacement of like grade of fire resistance) of roofing.

24 Provided further, that no building permit shall be required under such Code from any State
25 agency for the construction of any building or structure, the total cost of which is less than
26 twenty thousand dollars (\$20,000), except public or institutional buildings.

27 For the information of users thereof, the Code shall include as appendices [the following:]

- 28 (1) Any rules governing boilers adopted by the Board of Boiler and Pressure
29 Vessels Rules,
- 30 (2) Any rules relating to the safe operation of elevators adopted by the
31 Commissioner of Labor, and
- 32 (3) Any rules relating to sanitation adopted by the Commission for Public
33 Health which the Building Code Council believes pertinent.

34 In addition, the Code may include references to such other rules of special types, such as
35 those of the Medical Care Commission and the Department of Public Instruction as may be
36 useful to persons using the Code. No rule issued by any agency other than the Building Code
37 Council shall be construed as a part of the Code, nor supersede that Code, it being intended that
38 they be presented with the Code for information only.

39 Nothing in this Article shall extend to or be construed as being applicable to the regulation
40 of the design, construction, location, installation, or operation of (1) equipment for storing,
41 handling, transporting, and utilizing liquefied petroleum gases for fuel purposes or anhydrous
42 ammonia or other liquid fertilizers, except for liquefied petroleum gas from the outlet of the
43 first stage pressure regulator to and including each liquefied petroleum gas utilization device
44 within a building or structure covered by the Code, or (2) equipment or facilities, other than
45 buildings, of a public utility, as defined in G.S. 62-3, or an electric or telephone membership
46 corporation, including without limitation poles, towers, and other structures supporting electric
47 or communication lines.

48 Nothing in this Article shall extend to or be construed as being applicable to the regulation
49 of the design, construction, location, installation, or operation of industrial machinery.
50 However, if during the building code inspection process, an electrical inspector has any
51 concerns about the electrical safety of a piece of industrial machinery, the electrical inspector

1 may refer that concern to the Occupational Safety and Health Division in the North Carolina
2 Department of Labor but shall not withhold the certificate of occupancy nor mandate
3 third-party testing of the industrial machinery based solely on this concern. For the purposes of
4 this paragraph, "industrial machinery" means equipment and machinery used in a system of
5 operations for the explicit purpose of producing a product. The term does not include
6 equipment that is permanently attached to or a component part of a building and related to
7 general building services such as ventilation, heating and cooling, plumbing, fire suppression or
8 prevention, and general electrical transmission.

9 In addition, the Code may contain rules concerning minimum efficiency requirements for
10 replacement water heaters, which shall consider reasonable availability from manufacturers to
11 meet installation space requirements and may contain rules concerning energy efficiency that
12 require all hot water plumbing pipes that are larger than one-fourth of an inch to be insulated.

13 No State, county, or local building code or regulation shall prohibit the use of special
14 locking mechanisms for seclusion rooms in the public schools approved under
15 G.S. 115C-391.1(e)(1)e., provided that the special locking mechanism shall be constructed so
16 that it will engage only when a key, knob, handle, button, or other similar device is being held
17 in position by a person, and provided further that, if the mechanism is electrically or
18 electronically controlled, it automatically disengages when the building's fire alarm is activated.
19 Upon release of the locking mechanism by a supervising adult, the door must be able to be
20 opened readily."

21 **SECTION 2.** This act becomes effective January 1, 2011, and applies to new
22 dwellings constructed on or after that date, existing dwellings sold on or after that date, or
23 rental housing for which a lease is signed or renewed on or after that date.