

GENERAL ASSEMBLY OF NORTH CAROLINA  
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SENATE BILL DRS45310-MH-86

Short Title: Appliance Energy Efficiency Standards. (Public)

Sponsors: Senators Salvador, Woodard, and Garrett (Primary Sponsors).

Referred to:

1 A BILL TO BE ENTITLED  
2 AN ACT TO ENACT STATE ENERGY EFFICIENCY STANDARDS FOR CERTAIN  
3 APPLIANCES.

4 The General Assembly of North Carolina enacts:

5 SECTION 1. Article 7 of Chapter 143B of the General Statutes is amended by adding  
6 a new Part to read:

7 "Part 32A. North Carolina Appliance Efficiency Standards Act.

8 **"§ 143B-344.45. Lead agency; powers and duties.**

9 (a) For the purposes of this Part, the Department of Environmental Quality, State Energy  
10 Office, is designated as the lead State agency in matters pertaining to appliance standards.

11 (b) The Office shall have the following powers and duties with respect to this Part:

12 (1) To cause periodic inspections to be made of distributors or retailers of new  
13 appliances in order to determine compliance with this Part. The Office may  
14 also work with the Department of Insurance to coordinate inspections for new  
15 products that are also covered by the State Building Code.

16 (2) To cause investigations to be made of complaints received concerning  
17 violations of this Part and to report the results of such investigations to the  
18 Attorney General. The Attorney General may institute proceedings to enforce  
19 the provisions of this Part.

20 **"§ 143B-344.45A. Definitions.**

21 The following definitions apply in this Part:

22 (1) Color rendering index or CRI. – The measure of the degree of color-shift  
23 objects undergo when illuminated by a light source as compared to the color  
24 of those same objects when illuminated by a reference source of comparable  
25 color temperature.

26 (2) Commercial dishwasher. – A machine designed to clean and sanitize plates,  
27 pots, pans, glasses, cups, bowls, utensils, and trays by applying sprays of  
28 detergent solution (with or without blasting media granules) and a sanitizing  
29 rinse.

30 (3) Commercial fryer. – An appliance, including a cooking vessel, in which oil is  
31 placed to such a depth that the cooking food is essentially supported by  
32 displacement of the cooking fluid rather than by the bottom of the vessel and  
33 heat is delivered to the cooking fluid by means of an immersed electric  
34 element of band-wrapped vessel, such as electric fryers, or by heat transfer  
35 from gas burners through either the walls of the fryer or through tubes passing  
36 through the cooking fluid, such as gas fryers.



- 1           (4)   Commercial hot food holding cabinet. – A heated, fully enclosed compartment  
2           with one or more solid or transparent doors designed to maintain the  
3           temperature of hot food that has been cooked using a separate appliance;  
4           provided, however, that a "commercial hot food holding cabinet" shall not  
5           include heated glass merchandizing cabinets, drawer warmers, or  
6           cook-and-hold appliances.
- 7           (5)   Commercial oven. – A chamber designed for heating, roasting, or baking food  
8           by conduction, convection, radiation, and/or electromagnetic energy.
- 9           (6)   Commercial steam cooker or compartment steamer. – A device with one or  
10          more food steaming compartments in which the energy in the steam is  
11          transferred to the food by direct contact; provided, however, that "commercial  
12          steam cooker" or "compartment steamer" may include countertop models,  
13          wall-mounted models, and floor models mounted on a stand, pedestal, or  
14          cabinet-style base.
- 15          (7)   Electric vehicle supply equipment. – An electric component assembly or  
16          cluster of component assemblies designed specifically to charge batteries  
17          within electric vehicles by permitting the transfer of electric energy to a  
18          battery or other storage device in an electric vehicle.
- 19          (8)   General service lamp. – As defined in 10 C.F.R. § 430.2.
- 20          (9)   High color rendering index fluorescent lamp. – A fluorescent lamp with a  
21          color rendering index of 87 or greater that is not a compact fluorescent lamp.
- 22          (10)   Office. – The State Energy Office.
- 23          (11)   Portable electric spa. – A factory-built electric spa or hot tub which includes  
24          any combination of integral controls, water heating, or water circulating  
25          equipment.
- 26          (12)   Residential ventilating fan. – A ceiling, wall-mounted, or remotely mounted  
27          in-line fan designed to be used in a bathroom or utility room, whose purpose  
28          is to move air from inside the building to the outdoors.
- 29          (13)   State-regulated general service lamp. – Includes all of the following:  
30          a.    Shatter-resistant incandescent lamps, three-way incandescent lamps,  
31          and high lumen output incandescent lamps rated at more than 2,600  
32          lumens or, in the case of a modified spectrum lamp, more than 1,950  
33          lumens, and less than or equal to 3,300 lumens.  
34          b.    Incandescent reflector lamps that are any of the following:  
35                1.    ER30, BR30, BR40, or ER40 lamps rated at 50 watts or less.  
36                2.    BR30, BR40, or ER40 lamps rated at 65 watts.  
37                3.    R20 lamps rated at 45 watts or less.  
38          c.    Incandescent lamps that are any of the following:  
39                1.    T-shape lamps rated at less than or equal to 40 watts or greater  
40                than or equal to 10 inches in length.  
41                2.    B, BA, CA, F, G-16 1/2, G-25, G-30, and S-shape lamps.  
42                3.    M-14 lamps rated at less than or equal to 40 watts.
- 43          (14)   State-regulated incandescent reflector lamp. – A lamp, not colored or designed  
44          for rough or vibration service applications, with an inner reflective coating on  
45          the outer bulb to direct the light, an E26 medium screw base, a rated voltage  
46          or voltage range that lies at least partially within 115 to 130 volts, and that  
47          falls into either of the following categories: a bulged reflector, elliptical  
48          reflector, blown parabolic aluminized reflector, or similar bulb shape with a  
49          diameter equal to or greater than 2.25 inches, or a reflector, parabolic  
50          aluminized reflector, bulged reflector, or similar bulb shape with a diameter  
51          of 2.25 to 2.75 inches, inclusive.

**"§ 143B-344.45B. Application of Part.**

(a) The provisions of this Part shall apply to the testing, certification, and enforcement of efficiency standards for lamps and for the following types of new lamps or appliances sold, offered for sale, or installed in the State:

- (1) Commercial hot food holding cabinets.
- (2) Computers and computer monitors.
- (3) State-regulated general service lamps.
- (4) State-regulated incandescent reflector lamps.
- (5) High CRI (color rendering index) fluorescent lamps.
- (6) Portable electric spas.
- (7) Water coolers.
- (8) Residential ventilating fans.
- (9) Commercial ovens.
- (10) Commercial dishwashers.
- (11) Commercial fryers.
- (12) Commercial steam cookers.
- (13) Electric vehicle supply equipment.

(b) The provisions of this Chapter shall not apply to any of the following:

- (1) New appliances or lamps manufactured in the State and sold outside the State.
- (2) New appliances or lamps manufactured outside the State and sold at wholesale inside the State for final retail sale and installation outside the State.
- (3) Appliances or lamps installed in manufactured homes at the time of construction.
- (4) Appliances or lamps designed expressly for installation and use in recreational vehicles.

**"§ 143B-344.45C. Restriction on sale or installation.**

(a) No new appliance listed in G.S. 143B-344.45C(a) may be sold, offered for sale, or installed in the State on or after January 1, 2023, unless the energy efficiency of the appliance meets or exceeds the standards established pursuant to this Part.

(b) No new lamp listed in G.S. 143B-344.45C(a) shall be installed in the State in a building other than a residence on or after January 1, 2024, unless the energy efficiency of the lamp meets or exceeds the standards established by the Office pursuant to this Part. The Office may adopt rules to establish exemptions for certain lamps used for specified purposes.

**"§ 143B-344.45D. Energy efficiency standards.**

(a) Prohibition. – No new commercial dishwasher, commercial fryer, commercial hot food holding cabinet, commercial oven, commercial steam cooker, computer or computer monitor, electric vehicle supply equipment, faucet, high CRI fluorescent lamp, portable electric spa, residential ventilating fan, showerhead, spray sprinkler body, urinal, water closet, or water cooler shall be sold or offered for sale, lease, or rent in the State unless the efficiency of the new product meets or exceeds the efficiency standards set forth in the regulations adopted pursuant to this section. No State-regulated general service or incandescent reflector lamp shall be sold or offered for sale in the State unless the efficiency of the new product meets or exceeds the efficiency standards provided in this section.

(b) Minimum Standards. – The regulations shall provide for the following minimum efficiency standards:

- (1) Commercial hot food holding cabinets shall meet the qualification criteria of the ENERGY STAR program product specifications for commercial hot food holding cabinets, Version 2.0.
- (2) Computers and computer monitors shall meet the requirements of section 1605.3 of Title 20 of the California Code of Regulations (Title 20), as in effect on the effective date of this section, as measured in accordance with test

- 1 methods prescribed in section 1604 of Title 20 of the California Code of  
2 Regulations; provided, however, that the rules adopted by the Office shall  
3 define "computer" and "computer monitor" to have the same meaning as set  
4 forth in section 1602(v) of Title 20 of the California Code of Regulations; and  
5 provided further that the referenced portions of the California Code of  
6 Regulations shall be those adopted on or before April 1, 2021; and provided  
7 further that the Office may amend the regulations so that the definitions of  
8 "computer" and "computer monitor" and the minimum efficiency standards  
9 for computers and computer monitors conform to subsequently adopted  
10 modifications to the referenced sections of the California Code of Regulations.
- 11 (3) State-regulated general service lamps shall meet or exceed a lamp efficacy of  
12 45 lumens per watt, when tested in accordance with the applicable federal test  
13 procedures for general service lamps, prescribed in section 430.23 (gg) of  
14 Title 10 of the Code of Federal Regulations.
- 15 (4) State-regulated incandescent reflector lamps shall meet the minimum average  
16 lamp efficiency requirements for federally regulated incandescent reflector  
17 lamps contained in 42 U.S.C. § 6295(i)(1)(A). The following lamps are  
18 exempt from these requirements: ER30, BR30, BR40, and ER40 of 50 watts or  
19 less; BR30, BR40, and ER40 of 65 watts; and R20 of 45 watts or less.
- 20 (5) High CRI fluorescent lamps shall meet the minimum efficiency requirements  
21 contained in section 430.32(n)(4) of Title 10 of the Code of Federal  
22 Regulations as in effect on January 3, 2019, when tested in accordance with  
23 the test procedure prescribed in Appendix R to Subpart B of Part 430 of Title  
24 10 of the Code of Federal Regulations as in effect on January 3, 2019.
- 25 (6) Portable electric spas shall meet the requirements of the American National  
26 Standard 576 for Portable Electric Spa Energy Efficiency  
27 (ANSI/APSP/ICC-14-2019).
- 28 (7) Water coolers shall have on mode with no water draw energy consumption, a  
29 test that records the 24-hour energy consumption of a water cooler with no  
30 water drawn during the test period, less than or equal to the following, as  
31 measured in accordance with the test criteria prescribed in Version 2.0 of the  
32 ENERGY STAR program product specifications for water coolers:
- 33 a. 0.16 kilowatt-hours per day for cold-only and cook-and-cold units.  
34 b. 0.87 kilowatt-hours per day for hot-and-cold units—storage type.  
35 c. 0.18 kilowatt-hours per day for hot and cold units—on demand. For  
36 purposes of this sub-subdivision, "on demand" means that the water  
37 cooler heats water as it is requested.
- 38 (8) Residential ventilating fans shall meet the qualification criteria of the  
39 ENERGY STAR Program Requirements Product Specification for  
40 Residential Ventilating Fans, Version 4.1.
- 41 (9) Commercial ovens included in the scope of the ENERGY STAR Program  
42 Requirements Product Specification for Commercial Ovens, Version 2.2,  
43 shall meet the qualification criteria of that specification.
- 44 (10) Commercial dishwashers included in the scope of the ENERGY STAR  
45 Program Requirements Product Specification for Commercial Dishwashers,  
46 Version 2.0, shall meet the qualification criteria of that specification.
- 47 (11) Commercial fryers included in the scope of the ENERGY STAR Program  
48 Requirements Product Specification for Commercial Fryers, Version 2.0,  
49 shall meet the qualification criteria of that specification.

1           (12) Commercial steam cookers shall meet the requirements of the ENERGY  
2           STAR Program Requirements Product Specification for Commercial Steam  
3           Cookers, Version 1.2.

4           (13) Electric vehicle supply equipment included in the scope of the ENERGY  
5           STAR Program Requirements Product Specification for Electric Vehicle  
6           Supply Equipment, Version 1.0 (Rev. Apr-2017), shall meet the qualification  
7           criteria of that specification.

8           (c) Testing Procedures. – The Office shall adopt procedures for testing the energy  
9           efficiency of the appliances and lamps covered by this Part if such procedures are not provided  
10           for in any other applicable code regarding the testing of appliance efficiency. The Office shall  
11           use United States Department of Energy–approved test methods, or in the absence of such test  
12           methods, other appropriate nationally recognized test methods applicable to the respective  
13           appliances and lamps. The manufacturer shall cause the testing of samples of each model of each  
14           appliance and lamp covered by this Chapter in accordance with the test procedures adopted  
15           pursuant to this section or those specified in any other applicable code regarding the testing of  
16           appliance efficiency. If products so tested are found not to be in compliance with the minimum  
17           efficiency standards established under subsection (b) of this section, the Office shall (i) charge  
18           the manufacturer of such product for the cost of product purchase and testing and (ii) provide  
19           information to the public on products found not to be in compliance with the standards.

20           In adopting test procedures for determining energy efficiency, the Office may consult with  
21           other appropriate State agencies and may adopt updated test methods when new versions of test  
22           procedures become available.

23           **"§ 143B-344.45E. Certification of compliance; product labeling.**

24           (a) Certification. – Manufacturers of appliances and lamps covered by this Chapter shall  
25           certify to the commissioner that such appliances and lamps are in compliance with the provisions  
26           of this Chapter. The commissioner shall promulgate regulations governing the certification of  
27           appliances and lamps covered by this Chapter and shall publish an annual list of such appliances  
28           and lamps. Manufacturers' certifications shall be based on test results. The commissioner shall  
29           coordinate with the certification programs of other states and federal agencies with similar  
30           standards to the maximum extent practicable, including investigating whether certification in  
31           another state can serve as a substitute for certification in the commonwealth. Single voltage  
32           external AC to DC power supplies shall be exempt from the requirements of this section.

33           (b) Labeling. – Manufacturers of new products covered by this Part shall identify each  
34           product offered for sale or installed in the State as in compliance with this Chapter by means of  
35           a mark, label, or tag on the product and packaging at the time of sale or installation. The Office  
36           shall promulgate regulations governing the identification of such products and packaging, which  
37           shall be coordinated to the greatest practical extent with the labeling programs of other states and  
38           federal agencies with equivalent efficiency standards. The Office shall allow the use of existing  
39           marks, labels, or tags which connote compliance with the efficiency requirements of this Chapter.  
40           State-regulated incandescent reflector lamps and general service lamps shall be exempt from the  
41           requirements of this subsection. The Office, in consultation with other states, product  
42           manufacturers, and other interested parties, shall study and evaluate the usefulness and  
43           effectiveness of such markings for incandescent reflector lamps and general service lamps.

44           **"§ 143B-344.45F. Enforcement; penalties.**

45           Failure to comply with any of the provisions of this Part shall constitute an unfair or deceptive  
46           act under the provisions of G.S. 75-1.1. Any person who violates any provision of this Part shall  
47           be punished by a civil penalty as provided in G.S. 75-15.2. Each violation of this Part shall  
48           constitute a separate offense, and each day such violation continues shall constitute a separate  
49           offense."

50           **SECTION 2.** The State Energy Office may adopt temporary rules and shall adopt  
51           permanent rules to implement the provisions of this act.

1                   **SECTION 3.** Section 1 of this act becomes effective January 1, 2023, except that the  
2 portions of Part 32A of Article 7 of Chapter 143B of the General Statutes, as enacted by Section  
3 1 of this act, regulating lamps, become effective January 1, 2024. The remainder of this act is  
4 effective when it becomes law.