

GENERAL ASSEMBLY OF NORTH CAROLINA  
SESSION 2021

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HOUSE BILL 245  
Committee Substitute Favorable 3/23/21  
Committee Substitute #2 Favorable 4/20/21

Short Title: Efficient Government Buildings & Savings Act.

(Public)

Sponsors:

Referred to:

March 10, 2021

1 A BILL TO BE ENTITLED  
2 AN ACT TO SAVE NORTH CAROLINA TAXPAYER DOLLARS BY REQUIRING  
3 REDUCTIONS IN ENERGY AND WATER CONSUMPTION IN PUBLIC BUILDINGS  
4 BY 2028.

5 The General Assembly of North Carolina enacts:

6 SECTION 1.(a) G.S. 143-64.12 reads as rewritten:

7 "§ 143-64.12. Authority and duties of the Department; State agencies and State institutions  
8 of higher learning.

9 (a) The Department of Environmental Quality through the State Energy Office shall  
10 develop a comprehensive program to manage energy, water, and other utility use for State  
11 agencies and State institutions of higher learning and shall update this program annually. Each  
12 State agency and State institution of higher learning shall develop and implement a management  
13 plan that is consistent with the State's comprehensive program under this subsection to manage  
14 energy, water, and other utility use, ~~and that addresses any findings or recommendations resulting~~  
15 ~~from the energy audit required by subsection (b1) of this section.~~ use. The energy consumption  
16 per gross square foot for all State buildings in total shall be reduced by twenty percent (20%) by  
17 ~~2010 and 2010~~, thirty percent (30%) by ~~2015-2015~~, and forty percent (40%) by 2028 based on  
18 energy consumption for the 2002-2003 fiscal year. Each State agency and State institution of  
19 higher learning shall update its management plan biennially and include strategies for supporting  
20 the energy consumption reduction requirements under this subsection. Each community college  
21 shall submit to the State Energy Office ~~a biennial~~ an annual written report of utility consumption  
22 and costs. Management plans submitted biennially by State institutions of higher learning shall  
23 include all of the following:

24 ...

25 (b1) The Department of Administration, as part of the Facilities Condition and Assessment  
26 Program, shall identify and recommend energy conservation maintenance and operating  
27 procedures that are designed to reduce energy consumption within the facility of a State agency  
28 or a State institution of higher learning and that require no significant expenditure of funds. Every  
29 State agency or State institution of higher learning shall implement these recommendations.  
30 Where energy management equipment is proposed for any facility of a State agency or of a State  
31 institution of higher learning, the maximum interchangeability and compatibility of equipment  
32 components shall be required. ~~As part of the Facilities Condition and Assessment Program under~~  
33 ~~this section, the Department of Administration, in consultation with the State Energy Office, shall~~  
34 ~~develop an energy audit and a procedure for conducting energy audits. Every five years the~~  
35 ~~Department shall conduct an energy audit for each State agency or State institution of higher~~



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1 learning, and the energy audits conducted shall serve as a preliminary energy survey. The State  
2 Energy Office shall be responsible for system level detailed surveys.

3 (b2) ~~The Department of Administration shall submit a report of the energy audit required~~  
4 ~~by subsection (b1) of this section to the affected State agency or State institution of higher~~  
5 ~~learning and to the State Energy Office. The State Energy Office shall review each audit and, in~~  
6 ~~consultation with the affected State agency or State institution of higher learning, incorporate the~~  
7 ~~audit findings and recommendations into the management plan required by subsection (a) of this~~  
8 ~~section.~~

9 ...."

10 **SECTION 1.(b)** Article 3B of Chapter 143 of the General Statutes is amended by  
11 adding a new section to read:

12 "**§ 143-64.12A. Responsible lights out.**

13 All State agencies and institutions of higher learning shall ensure that lighting in unoccupied  
14 interior spaces and upward-directed flood lighting is turned off, where feasible, on the premises  
15 of all buildings owned or leased by the State agency or institution of higher learning from  
16 midnight until 6:00 A.M., unless required for safety, emergency, or insurance purposes. The  
17 building manager or property manager of each premises owned or leased by a State agency or  
18 institution of higher learning, or an appropriate designee, shall be responsible for ensuring  
19 compliance with this section."

20 **SECTION 2.** G.S. 143-64.17 reads as rewritten:

21 "**§ 143-64.17. Definitions.**

22 As used in this Part:

- 23 (1) "Energy conservation measure" means a facility or meter alteration, training,  
24 or services related to the operation of the facility or meter, when the alteration,  
25 training, or services provide anticipated energy ~~savings~~ savings, generate  
26 revenue, or capture lost revenue. Energy conservation measure includes any  
27 of the following:
- 28 a. Insulation of the building structure and systems within the  
29 building-building, including proper building envelope and duct sealing  
30 of all applicable areas in the building.
  - 31 b. Storm windows or doors, caulking, weatherstripping, multiglazed  
32 windows or doors, heat-absorbing or heat-reflective glazed or coated  
33 window or door systems, additional glazing, reductions in glass area,  
34 or other window or door system modifications that reduce energy  
35 consumption.
  - 36 c. Automatic energy control systems.
  - 37 d. Heating, ventilating, or air-conditioning system modifications or  
38 replacements.
  - 39 e. Replacement or modification of lighting fixtures to increase the energy  
40 efficiency of a lighting system without increasing the overall  
41 illumination of a facility, unless an increase in illumination is  
42 necessary to conform to the applicable State or local building code or  
43 is required by the light system after the proposed modifications are  
44 made.
  - 45 f. Energy recovery systems.
  - 46 g. Cogeneration systems that produce steam or forms of energy such as  
47 heat, as well as electricity, for use primarily within a building or  
48 complex of buildings.
  - 49 h. Repealed by Session Laws 2006-190, s. 2, effective August 3, 2006,  
50 and applicable to contracts entered into or renewed on or after that  
51 date.

- i. Faucets with automatic or metered shut-off valves, leak detection equipment, water meters, water recycling equipment, and wastewater recovery systems.
  - j. Other energy conservation measures that conserve energy, water, or other utilities.
  - k. Building analytics systems that allow for advanced software utilizing statistical modeling and machine learning, whether supervised or unsupervised, to establish data-driven benchmarks, predict future energy performance, and find additional energy savings opportunities.
- (2) "Energy savings" means a measured reduction in fuel costs, energy costs, water costs, stormwater fees, other utility costs, or operating costs, including environmental discharge fees, water and sewer maintenance fees, and increased meter accuracy, created from the implementation of one or more energy conservation measures when compared with an established baseline of previous costs, including captured lost revenues or generated revenues, developed by the governmental unit.

...."

**SECTION 3.** G.S. 143-135.37 reads as rewritten:

**"§ 143-135.37. Energy and water use standards for public major facility construction and renovation projects; verification and reporting of energy and water use.**

...

(b) Energy-Efficiency Standard. – For every major facility construction project of a public agency, the building shall be designed and constructed so that the calculated energy consumption is at least ~~thirty percent (30%)~~ forty percent (40%) less than the energy consumption for the same building as calculated using the energy-efficiency standard in ASHRAE 90.1-2004. For every major facility renovation project of a public agency, the renovated building shall be designed and constructed so that the calculated energy consumption is at least ~~twenty percent (20%)~~ thirty percent (30%) less than the energy consumption for the same renovated building as calculated using the energy-efficiency standard in ASHRAE 90.1-2004. For the purposes of this subsection, any exception or special standard for a specific type of building found in ASHRAE 90.1-2004 is included in the ASHRAE 90.1-2004 standard.

(c) Indoor Potable Water Use Standard. – For every major facility construction or renovation project of a public agency, the water system shall be designed and constructed so that the calculated indoor potable water use is at least ~~twenty percent (20%)~~ thirty percent (30%) less than the indoor potable water use for the same building as calculated using the fixture performance requirements related to plumbing under the 2006 North Carolina State Building Code.

(c1) Outdoor Potable Water Use Standard. – For every major facility construction project of a public agency, the water system shall be designed and constructed so that the calculated sum of the outdoor potable water use and the harvested stormwater use is at least fifty percent (50%) less than the sum of the outdoor potable water use and the harvested stormwater use for the same building as calculated using the performance requirements related to plumbing under the 2006 North Carolina State Building Code. Weather-based irrigation controllers shall be used for irrigation systems for major facility construction projects. For every major facility renovation project of a public agency, the Department shall determine on a project-by-project basis what reduced level of outdoor potable use or harvested stormwater use, if any, is a feasible requirement for the project. Whenever practicable, every major facility construction project or major facility renovation project of a public agency shall maintain or restore the predevelopment hydrology to reduce the rate and volume of stormwater runoff. The Department shall not require a greater reduction than is required under this subsection for a major facility construction project. To reduce the potable outdoor water as required under this subsection, weather-based irrigation

1 controllers, landscape materials that are water use efficient, and irrigation strategies that include  
2 reuse and recycling of the water may be used.

3 ...."

4 **SECTION 4.(a)** Each State agency and State institution of higher learning shall, no  
5 later than October 1, 2022, conduct a preliminary practicality and economic feasibility analysis  
6 of implementing energy conservation measures for all buildings greater than 20,000 square feet  
7 in size and that have been in use for more than 10 years. Energy conservation measures are  
8 deemed to be economically feasible if the resulting energy savings will cover the cost of  
9 implementing the measures within 10 years. Each State agency and State institution of higher  
10 learning shall submit its findings to the State Energy Office. If the agency or institution of higher  
11 learning determines that it is not practical or economically feasible to implement energy  
12 conservation measures, the agency or institution of higher learning shall include findings of fact  
13 supporting that determination in the findings it submits to the State Energy Office. If the State  
14 agency or State institution of higher learning determines that it is practical and economically  
15 feasible to implement energy conservation measures, the agency or institution of higher learning  
16 shall do so. The energy conservation measures may be achieved by issuing a request for proposal  
17 for a guaranteed energy savings contract for all covered buildings owned by the agency or  
18 institution of higher learning. If the agency or institution of higher learning issues a request for  
19 proposal for a guaranteed energy savings contract for one or more buildings, the agency or  
20 institution of higher learning shall issue the request for proposal no later than April 1, 2023. The  
21 agency or institution of higher learning shall follow the process provided in Part 2 of Article 3B  
22 of Chapter 143 of the General Statutes. The definitions provided in G.S. 143-64.17 shall apply  
23 for purposes of this section.

24 **SECTION 4.(b)** No later than October 1, 2027, each State agency and State  
25 institution of higher learning shall repeat the process set forth in subsection (a) of this section for  
26 all buildings greater than 10,000 square feet in size and that have been in use for more than 10  
27 years. If the agency or institution of higher learning issues a request for proposal for a guaranteed  
28 energy savings contract for one or more buildings, the agency or institution of higher learning  
29 shall issue the request for proposal no later than April 1, 2028.

30 **SECTION 4.(c)** This section shall not apply to any building for which a practicality  
31 and economic feasibility analysis of implementing energy conservation measures has been  
32 conducted within three years prior to the effective date of this section.

33 **SECTION 4.(d)** In implementing this section, a State agency or State institution of  
34 higher learning may include additional improvements and upgrades to provide healthy indoor  
35 environments, increase resilience, conserve water resources, and apply to building sustainability  
36 rating or certification systems.

37 **SECTION 4.(e)** This section is effective when it becomes law. This section shall not  
38 be interpreted to prohibit any State agency or State institution of higher learning from issuing  
39 any request for proposal for a guaranteed energy savings contract.

40 **SECTION 5.(a)** For purposes of this act, "State institution of higher learning" has  
41 the same meaning as in G.S. 143-64.11.

42 **SECTION 5.(b)** This act shall apply only to State buildings managed by the  
43 Department of Administration pursuant to Article 36 of Chapter 143 of the General Statutes and  
44 State institutions of higher learning.

45 **SECTION 6.** Except as otherwise provided, this act is effective when it becomes  
46 law. Section 3 of this act applies to every major facility construction project and every major  
47 facility renovation project of a public agency, as those terms are defined in G.S. 143-135.36, that  
48 has not entered the schematic design phase prior to the effective date of this act.