

GENERAL ASSEMBLY OF NORTH CAROLINA
SESSION 2021

H

3

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

A BILL TO BE ENTITLED

AN ACT TO SAVE NORTH CAROLINA TAXPAYER DOLLARS BY REQUIRING
REDUCTIONS IN ENERGY AND WATER CONSUMPTION IN PUBLIC BUILDINGS
BY 2028.

The General Assembly of North Carolina enacts:

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

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

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

...

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



* H 2 4 5 - V - 3 *

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.

- 1 i. Faucets with automatic or metered shut-off valves, leak detection
 2 equipment, water meters, water recycling equipment, and wastewater
 3 recovery systems.
 4 j. Other energy conservation measures that conserve energy, water, or
 5 other utilities.
 6 k. Building analytics systems that allow for advanced software utilizing
 7 statistical modeling and machine learning, whether supervised or
 8 unsupervised, to establish data-driven benchmarks, predict future
 9 energy performance, and find additional energy savings opportunities.

- 10 (2) "Energy savings" means a measured reduction in fuel costs, energy costs,
 11 water costs, stormwater fees, other utility costs, or operating costs, including
 12 environmental discharge fees, water and sewer maintenance fees, and
 13 increased meter accuracy, created from the implementation of one or more
 14 energy conservation measures when compared with an established baseline of
 15 previous costs, including captured lost revenues or generated revenues,
 16 developed by the governmental unit.

17"

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

19 **"§ 143-135.37. Energy and water use standards for public major facility construction and**
 20 **renovation projects; verification and reporting of energy and water use.**

21 ...

22 (b) Energy-Efficiency Standard. – For every major facility construction project of a
 23 public agency, the building shall be designed and constructed so that the calculated energy
 24 consumption is at least ~~thirty percent (30%)~~ forty percent (40%) less than the energy consumption
 25 for the same building as calculated using the energy-efficiency standard in ASHRAE 90.1-2004.
 26 For every major facility renovation project of a public agency, the renovated building shall be
 27 designed and constructed so that the calculated energy consumption is at least ~~twenty percent~~
 28 ~~(20%)~~ thirty percent (30%) less than the energy consumption for the same renovated building as
 29 calculated using the energy-efficiency standard in ASHRAE 90.1-2004. For the purposes of this
 30 subsection, any exception or special standard for a specific type of building found in ASHRAE
 31 90.1-2004 is included in the ASHRAE 90.1-2004 standard.

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

38 (c1) Outdoor Potable Water Use Standard. – For every major facility construction project
 39 of a public agency, the water system shall be designed and constructed so that the calculated sum
 40 of the outdoor potable water use and the harvested stormwater use is at least fifty percent (50%)
 41 less than the sum of the outdoor potable water use and the harvested stormwater use for the same
 42 building as calculated using the performance requirements related to plumbing under the 2006
 43 North Carolina State Building Code. Weather-based irrigation controllers shall be used for
 44 irrigation systems for major facility construction projects. For every major facility renovation
 45 project of a public agency, the Department shall determine on a project-by-project basis what
 46 reduced level of outdoor potable use or harvested stormwater use, if any, is a feasible requirement
 47 for the project. Whenever practicable, every major facility construction project or major facility
 48 renovation project of a public agency shall maintain or restore the predevelopment hydrology to
 49 reduce the rate and volume of stormwater runoff. The Department shall not require a greater
 50 reduction than is required under this subsection for a major facility construction project. To
 51 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.