

GENERAL ASSEMBLY OF NORTH CAROLINA
SESSION 2005

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HOUSE BILL 454*

Short Title: Water/Utilities Savings in Govt. Facilities. (Public)

Sponsors: Representatives Tolson, Pate (Primary Sponsors); Alexander, Fisher, Hackney, Insko, Luebke, and Weiss.

Referred to: State Government.

March 3, 2005

A BILL TO BE ENTITLED

1
2 AN ACT TO CLARIFY THAT GUARANTEED ENERGY SAVINGS CONTRACTS
3 INCLUDE CONSERVATION MEASURES FOR WATER AND OTHER
4 UTILITIES, TO RAISE THE CAP FOR GUARANTEED ENERGY SAVINGS
5 CONTRACTS, TO EXPAND THE STATE'S ENERGY POLICY AND
6 LIFE-CYCLE COST ANALYSIS TO INCLUDE THE CONSERVATION OF
7 WATER AND OTHER UTILITIES, AND TO MAKE CONFORMING
8 CHANGES.

9 The General Assembly of North Carolina enacts:

10 **SECTION 1.** The title of Article 3B of Chapter 143 of the General Statutes
11 reads as rewritten: "~~Energy Conservation of Energy, Water, and Other Utilities in Public~~
12 Government Facilities."

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

14 "**§ 143-64.17. Definitions.**

15 As used in this Part:

- 16 (1) "Energy conservation measure" means a facility alteration, training, or
17 services related to the operation of the facility, when the alteration,
18 training, or services provide anticipated energy savings. Energy
19 conservation measure includes any of the following:
- 20 a. Insulation of the building structure and systems within the
21 building.
 - 22 b. Storm windows or doors, caulking, weatherstripping,
23 multiglazed windows or doors, heat-absorbing or heat-reflective
24 glazed or coated window or door systems, additional glazing,
25 reductions in glass area, or other window or door system
26 modifications that reduce energy consumption.
 - 27 c. Automatic energy control systems.

- 1 d. Heating, ventilating, or air-conditioning system modifications
2 or replacements.
- 3 e. Replacement or modification of lighting fixtures to increase the
4 energy efficiency of a lighting system without increasing the
5 overall illumination of a facility, unless an increase in
6 illumination is necessary to conform to the applicable State or
7 local building code or is required by the light system after the
8 proposed modifications are made.
- 9 f. Energy recovery systems.
- 10 g. Cogeneration systems that produce steam or forms of energy
11 such as heat, as well as electricity, for use primarily within a
12 building or complex of buildings.
- 13 ~~h. Other energy conservation measures.~~
- 14 i. Faucets with automatic or metered shut-off valves, leak
15 detection equipment, water recycling equipment, and
16 wastewater recovery systems.
- 17 j. Other energy conservation measures that conserve energy,
18 water, or other utilities.
- 19 (2) "Energy savings" means a measured reduction in fuel costs, energy
20 costs, water costs, stormwater fees, other utility costs, or operating
21 ~~costs—costs, including environmental discharge fees and water and~~
22 sewer maintenance fees, created from the implementation of one or
23 more energy conservation measures when compared with an
24 established baseline of previous ~~fuel costs, energy costs, or operating~~
25 ~~costs~~such costs developed by the governmental unit.
- 26 (2a) "Governmental unit" means either a local governmental unit or a State
27 governmental unit.
- 28 (3) "Guaranteed energy savings contract" means a contract for the
29 evaluation, recommendation, or implementation of energy
30 conservation measures, including the design and installation of
31 equipment or the repair or replacement of existing equipment, in which
32 all payments, except obligations on termination of the contract before
33 its expiration, are to be made over time, and in which energy savings
34 are guaranteed to exceed costs.
- 35 (4) "Local governmental unit" means any board or governing body of a
36 political subdivision of the State, including any board of a community
37 college, any school board, or an agency, commission, or authority of a
38 political subdivision of the State.
- 39 (5) "Qualified provider" means a person or business experienced in the
40 design, implementation, and installation of energy conservation
41 measures.
- 42 (6) "Request for proposals" means a negotiated procurement initiated by a
43 governmental unit by way of a published notice that includes the
44 following:

- 1 a. The name and address of the governmental unit.
- 2 b. The name, address, title, and telephone number of a contact
- 3 person in the governmental unit.
- 4 c. Notice indicating that the governmental unit is requesting
- 5 qualified providers to propose energy conservation measures
- 6 through a guaranteed energy savings contract.
- 7 d. The date, time, and place where proposals must be received.
- 8 e. The evaluation criteria for assessing the proposals.
- 9 f. A statement reserving the right of the governmental unit to
- 10 reject any or all the proposals.
- 11 g. Any other stipulations and clarifications the governmental unit
- 12 may require.

13 (7) "State governmental unit" means the State or a department, an agency,
14 a board, or a commission of the State, including the Board of
15 Governors of The University of North Carolina and its constituent
16 institutions."

17 **SECTION 3.** G.S. 143-64.17G reads as rewritten:

18 **"§ 143-64.17G. Report on guaranteed energy savings ~~contracts~~contracts entered**
19 **into by local governmental units.**

20 A local governmental unit that enters into a guaranteed energy savings contract must
21 report the contract and the terms of the contract to the Local Government Commission.
22 The Commission shall compile the information and report it biennially to the Joint
23 Commission on Governmental Operations. In compiling the information, the Local
24 Government Commission shall include information on the energy savings expected to
25 be realized from a contract and, with the assistance of the Office of State Construction,
26 shall evaluate whether expected savings have in fact been realized."

27 **SECTION 4.** G.S. 143-64.17H reads as rewritten:

28 **"§ 143-64.17H. ~~Guaranteed~~Report on guaranteed energy savings ~~contract~~**
29 **reporting requirements~~contracts entered into by State governmental~~**
30 **units.**

31 A State governmental unit that enters into a guaranteed energy savings contract must
32 report the contract and the terms of the contract to the State Energy Office of the
33 Department of Administration within 30 days of the date the contract is entered into. In
34 addition, within 60 days after each annual anniversary date of a guaranteed energy
35 savings contract, the State governmental unit must report the status of the contract to the
36 State Energy Office, including any details required by the State Energy Office. The
37 State Energy Office shall compile the information for each fiscal year and report it to
38 the Joint Legislative Commission on Governmental Operations and to the Local
39 Government Commission annually by December 1. In compiling the information, the
40 State Energy Office shall include information on the energy savings expected to be
41 realized from a contract and shall evaluate whether expected savings have in fact been
42 realized."

43 **SECTION 5.** G.S. 142-63 reads as rewritten:

44 **"§ 142-63. Authorization of financing contract.**

1 Subject to the terms and conditions set forth in this Article, a State governmental
2 unit that has solicited a guaranteed energy conservation measure pursuant to
3 G.S. 143-64.17A or G.S. 143-64.17B or the State Treasurer, as designated by the
4 Council of State, is authorized to execute and deliver, for and on behalf of the State of
5 North Carolina, a financing contract to finance the costs of the energy conservation
6 measure. The aggregate principal amount payable by the State under financing contracts
7 entered pursuant to this Article shall not exceed ~~fifty million dollars (\$50,000,000)~~
8 seventy-five million dollars (\$75,000,000) at any one time."

9 **SECTION 6.** G.S. 143-64.10 reads as rewritten:

10 **"§ 143-64.10. Findings; policy.**

11 (a) The General Assembly ~~hereby finds:~~finds all of the following:

12 (1) That the State shall take a leadership role in aggressively undertaking
13 ~~energy~~the conservation of energy, water, and other utilities in North
14 ~~Carolina;~~Carolina.

15 (2) That State facilities have a significant impact on the State's
16 consumption of ~~energy;~~energy, water, and other utilities.

17 (3) That ~~energy conservation~~ practices to conserve energy, water, and
18 other utilities that are adopted for the design, construction, operation,
19 maintenance, and renovation of these facilities and for the purchase,
20 operation, and maintenance of equipment for these facilities will have
21 a beneficial effect on the State's overall supply of ~~energy;~~energy,
22 water, and other utilities.

23 (4) That the cost of the ~~energy~~energy, water, and other utilities consumed
24 by these facilities and the equipment for these facilities over the life of
25 the facilities shall be considered, in addition to the initial ~~cost;~~cost.

26 (5) That the cost of ~~energy~~energy, water, and other utilities is significant
27 and facility designs shall take into consideration the total life-cycle
28 cost, including the initial construction cost, and the cost, over the
29 economic life of the facility, of the ~~energy~~energy, water, and other
30 utilities consumed, and of operation and maintenance of the facility as
31 it affects ~~energy consumption; and~~ the consumption of energy, water,
32 or other utilities.

33 (6) That State government shall undertake a program to reduce ~~energy~~the
34 use of energy, water, and other utilities in State facilities and
35 equipment in those facilities in order to provide its citizens with an
36 example of ~~energy use~~energy-use, water-use, and utility-use
37 efficiency.

38 (b) It is the policy of the State of North Carolina to ensure that ~~energy~~
39 ~~conservation~~practices to conserve energy, water, and other utilities are employed in the
40 design, construction, operation, maintenance, and renovation of State facilities and in
41 the purchase, operation, and maintenance of equipment for State facilities."

42 **SECTION 7.** G.S. 143-64.11(2) reads as rewritten:

43 "(2) "Energy-consumption analysis" means the evaluation of all energy-
44 consuming ~~systems~~systems, including systems that consume water or

1 other utilities, and components of these systems by demand and type
2 of ~~energy, energy or other utility use,~~ including the internal energy load
3 imposed on a facility by its occupants, equipment and components,
4 and the external energy load imposed on the facility by climatic
5 conditions."

6 **SECTION 8.** G.S. 143-64.11(2b) reads as rewritten:

7 "(2b) "Energy-consuming system" includes but is not limited to any of the
8 following equipment or measures:

- 9 a. Equipment used to heat, cool, or ventilate the facility;
10 b. Equipment used to heat water in the facility;
11 c. Lighting systems;
12 d. On-site equipment used to generate electricity for the facility;
13 e. On-site equipment that uses the sun, wind, oil, natural gas,
14 liquid propane gas, coal, or electricity as a power source; and
15 f. Energy conservation ~~measures—~~measures, as defined in
16 G.S. 143-64.17, in the facility design and construction that
17 decrease the ~~energy—energy, water, or other utility~~ requirements
18 of the facility."

19 **SECTION 9.** G.S. 143-64.11(3) reads as rewritten:

20 "(3) "Facility" means a building or a group of buildings served by a central
21 ~~energy—~~distribution system for energy, water, or other utility or
22 components of a central ~~energy—~~distribution system."

23 **SECTION 10.** G.S. 143-64.12 reads as rewritten:

24 **"§ 143-64.12. Authority and duties of State agencies.**

25 (a) The General Assembly authorizes and directs that State agencies shall carry
26 out the construction and renovation of State facilities, under their jurisdiction in such a
27 manner as to further the policy declared herein, ensuring the use of life-cycle cost
28 analyses and ~~energy conservation practices.~~practices to conserve energy, water, and
29 other utilities.

30 (b) The Department of Administration shall develop and implement policies,
31 procedures, and standards to ensure that State purchasing practices improve ~~energy~~
32 efficiency regarding energy, water, and other utility use and take the cost of the product
33 over the economic life of the product into consideration. The Department of
34 Administration shall adopt and implement Building Energy Design Guidelines. These
35 guidelines shall include energy-use goals and standards, economic assumptions for
36 life-cycle cost analysis, and other criteria on building systems and technologies. The
37 Department of Administration shall modify the design criteria for construction and
38 renovation of facilities to require that a life-cycle cost analysis be conducted pursuant to
39 G.S. 143-64.15. The Department of Administration, as part of the Facilities Condition
40 and Assessment Program, shall identify and recommend energy conservation
41 maintenance and operating procedures that are designed to reduce energy consumption
42 within the facility and that require no significant expenditure of funds. State
43 departments, institutions, or agencies shall implement these recommendations. Where

1 energy management equipment is proposed for State facilities, the maximum
2 interchangeability and compatibility of equipment components shall be required.

3 The Department of Administration shall develop a comprehensive ~~energy~~
4 ~~management~~ program to manage energy, water, and other utility use for State
5 government. Each State agency shall develop and implement an ~~energy~~ a management
6 plan that is consistent with the State's comprehensive ~~energy~~ management
7 ~~program~~ program to manage energy, water, and other utility use.

8 (c) through (g) Repealed by Session Laws 1993, c. 334, s. 4."

9 **SECTION 11.** G.S. 143-64.15 reads as rewritten:

10 **"§ 143-64.15. Life-cycle cost analysis.**

11 (a) A life-cycle cost analysis shall include, but not be limited to, all of the
12 following elements:

- 13 (1) The coordination, orientation, and positioning of the facility on its
14 physical ~~site~~; site.
- 15 (2) The amount and type of fenestration employed in the ~~facility~~; facility.
- 16 (3) Thermal characteristics of materials and the amount of insulation
17 incorporated into the facility ~~design~~; design.
- 18 (4) The variable occupancy and operating conditions of the facility,
19 including illumination ~~levels~~; and levels.
- 20 (5) Architectural features ~~which~~ that affect ~~energy consumption~~; the
21 consumption of energy, water, and other utilities.

22 (b) The life-cycle cost analysis performed for any State facility shall, in addition
23 to the requirements set forth in subsection (a) of this section, include, but not be limited
24 to, all of the following:

- 25 (1) An energy-consumption analysis of the facility's energy-consuming
26 systems in accordance with the provisions of subsection (g) of this
27 ~~section~~; section.
- 28 (2) The initial estimated cost of each energy-consuming system being
29 compared and ~~evaluated~~; evaluated.
- 30 (3) The estimated annual operating cost of all utility
31 ~~requirements~~; requirements.
- 32 (4) The estimated annual cost of maintaining each energy-consuming
33 ~~system~~; and system.
- 34 (5) The average estimated replacement cost for each system expressed in
35 annual terms for the economic life of the facility.

36 (c) ~~The General Assembly requires each~~ Each entity ~~to~~ shall conduct a life-cycle
37 cost analysis pursuant to this section for the construction or the renovation of any State
38 facility or State-assisted facility of 20,000 or more gross square feet. For the
39 replacement of heating, ventilation, and air conditioning equipment in any State facility
40 or State-assisted facility of 20,000 or more gross square feet, the entity shall conduct a
41 life-cycle cost analysis of the replacement equipment pursuant to this section when the
42 replacement is financed under a guaranteed energy savings contract or financed using
43 repair and renovation funds.

1 (d) The life-cycle cost analysis shall be certified by a registered professional
2 engineer or bear the seal of a North Carolina registered architect, or both. The engineer
3 or architect shall be particularly qualified by training and experience for the type of
4 work involved, but shall not be employed directly or indirectly by a fuel provider, utility
5 company, or group supported by fuel providers or utility funds. Plans and specifications
6 for facilities involving public funds shall be designed in conformance with the
7 provisions of G.S. 133-1.1.

8 (e) In order to protect the integrity of historic buildings, no provision of this
9 Article shall be interpreted to require the implementation of ~~energy-cost~~ measures to
10 conserve energy, water, or other utility use that conflict with respect to any property
11 eligible for, nominated to, or entered on the National Register of Historic Places,
12 pursuant to the National Historic Preservation Act of 1966, P.L. 89-665; any historic
13 building located within an historic district as provided in Chapters 160A or 153A of the
14 General Statutes; any historic building listed, owned, or under the jurisdiction of an
15 historic properties commission as provided in Chapter 160A or 153A; nor any historic
16 property owned by the State or assisted by the State.

17 (f) Each State agency shall use the life-cycle cost analysis over the economic life
18 of the facility in selecting the optimum system or combination of systems to be
19 incorporated into the design of the facility.

20 (g) The energy-consumption analysis of the operation of energy-consuming
21 systems utilities in a facility shall include, but not be limited ~~to~~to, all of the following:

- 22 (1) The comparison of two or more system ~~alternatives;~~alternatives.
- 23 (2) The simulation or engineering evaluation of each system over the
24 entire range of operation of the facility for a year's operating ~~period;~~
25 and period.
- 26 (3) The engineering evaluation of the ~~energy-consumption of energy,~~
27 water, and other utilities of component equipment in each system
28 considering the operation of such components at other than full or
29 rated outputs."

30 **SECTION 12.** This act is effective when it becomes law.