

GENERAL ASSEMBLY OF NORTH CAROLINA  
SESSION 2007

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SENATE BILL 668

Short Title: Energy Conservation in State Buildings. (Public)

Sponsors: Senators Cowell; Albertson, Atwater, Berger of Franklin, Brock, Dalton, Foriest, Garrou, Goss, Graham, Hartsell, Jones, Kinnaird, Malone, Nesbitt, Pittenger, Purcell, Queen, Snow, Stevens, and Swindell.

Referred to: Commerce, Small Business and Entrepreneurship.

March 12, 2007

A BILL TO BE ENTITLED

AN ACT TO PROMOTE THE CONSERVATION OF ENERGY AND WATER USE  
IN STATE, UNIVERSITY, AND COMMUNITY COLLEGE BUILDINGS.

The General Assembly of North Carolina enacts:

**PART I. REQUIRE NEW STATE, UNIVERSITY, AND COMMUNITY COLLEGE BUILDINGS AND MAJOR RENOVATIONS OF THESE BUILDINGS TO BE CONSTRUCTED USING HIGH-PERFORMANCE CONSTRUCTION STANDARDS AND PROHIBIT THE STATE FROM ACQUIRING BY PURCHASE BUILDINGS THAT DID NOT MEET STANDARDS FOR ENERGY EFFICIENCY THAT APPLIED TO THE CONSTRUCTION OR RENOVATION OF COMPARABLE STATE BUILDINGS WHEN THE BUILDINGS UNDER CONSIDERATION FOR PURCHASE WERE CONSTRUCTED OR RECEIVED A MAJOR RENOVATION.**

**SECTION 1.1.** Chapter 143 of the General Statutes is amended by adding a new Article to read:

"Article 8C.

"High-Performance Public Buildings.

**"§ 143-135.35. Findings; legislative intent.**

(a) The General Assembly finds that public buildings can be built and renovated using high-performance methods that save money, improve employee and student performance, and make employees and students more productive. High-performance public buildings are proven to cut energy and utility costs, increase performance and productivity, and reduce absenteeism.

1       (b) It is the intent of the General Assembly that State-owned buildings, The  
2 University of North Carolina, and the North Carolina Community College System be  
3 improved by adopting recognized standards for high-performance public buildings and  
4 allowing flexible methods and choices in how to achieve those standards. The General  
5 Assembly also intends that State agencies, The University of North Carolina, and the  
6 North Carolina Community College System shall document costs and savings to  
7 monitor the program under this Article and ensure that economic and environmental  
8 goals are achieved each year, and that an independent performance review be conducted  
9 to evaluate the program under this Article and determine the extent to which the results  
10 intended by this Article are being met. It is the intent and an established goal of the  
11 Leadership in Energy and Environmental Design (LEED) program, as authored by the  
12 United States Green Building Council, to increase demand for building materials and  
13 products that are extracted and manufactured locally, thereby reducing the  
14 environmental impacts, and to support the local economy. Accordingly, it is the intent  
15 of the General Assembly to emphasize this defined goal and establish a priority to use  
16 North Carolina-based resources, building materials, products, industries, manufacturers,  
17 and other businesses to provide economic development to North Carolina and to meet  
18 the objectives of this Article.

19 **"§ 143-135.36. Definitions.**

20       As used in this Article, the following definitions apply:

- 21       (1) "ASHRAE 90.1-2004" means the energy efficiency standard  
22 developed by the American Society of Heating, Refrigerating and  
23 Air-Conditioning Engineers (ASHRAE) and adopted by ASHRAE in  
24 2004.
- 25       (2) "Department" means the Department of Administration.
- 26       (3) "High-performance public buildings" means high-performance public  
27 buildings designed, constructed, and certified to a standard as  
28 identified in this Article.
- 29       (4) "Institutions of higher education" means the constituent institutions of  
30 The University of North Carolina, the regional institutions as defined  
31 in G.S. 115D-2, and the community colleges as defined in  
32 G.S. 115D-2.
- 33       (5) "LEED silver standard" means the U.S. Green Building Council  
34 Leadership in Energy and Environmental Design (LEED) green  
35 building rating standard for new buildings, as amended, and referred to  
36 as the LEED–NB Silver Standard or the U.S. Green Building Council  
37 Leadership in Energy and Environmental Design (LEED) green  
38 building rating standard for existing buildings, as amended, and  
39 referred to as the LEED-EB Silver Standard, whichever is applicable  
40 to the project.
- 41       (6) "Major facility project" means a construction project larger than 5,000  
42 gross square feet of occupied or conditioned space as defined in the  
43 North Carolina State Building Code or a building renovation project  
44 when the cost is greater than fifty percent (50%) of the insurance value

1           and the project is larger than 5,000 gross square feet of occupied or  
2           conditioned space as defined in the North Carolina State Building  
3           Code. "Major facility project" does not include any of the following:  
4           transmitter buildings, pumping stations, research facilities primarily  
5           used for sponsored laboratory experimentation, laboratory research, or  
6           laboratory training in research methods, or other similar building types  
7           as determined by the Department.

8           (7)   "Public agency" means every State office, officer, board, department,  
9           and commission and institutions of higher education.

10    **"§ 143-135.37. Standard for major facilities; reports by agencies and the**  
11    **Department.**

12           (a)   All major facility projects of public agencies shall be designed, constructed,  
13           and certified to at least the LEED silver standard that is in effect at the schematic design  
14           phase of the project and, to the extent the LEED silver standard would result in greater  
15           consumption of energy than would result using the standard under ASHRAE 90.1-2004,  
16           the energy consuming components of the project shall be designed and constructed to at  
17           least the standard under ASHRAE 90.1-2004. In addition, for new construction, the  
18           water systems shall be designed and constructed to eliminate the use of potable water  
19           for irrigation, and, for major renovations that involve water systems, the renovation  
20           shall be designed and constructed to either eliminate the use of potable water for  
21           irrigation or reduce water consumption in the building by twenty percent (20%) based  
22           on water consumption for the preceding fiscal year. This subsection applies to major  
23           facility projects that have not entered the schematic design phase prior to the effective  
24           date of this section and to the extent appropriate LEED silver standards exist for that  
25           type of building or facility.

26           (b)   Public agencies shall monitor and document ongoing operating savings  
27           resulting from major facility projects designed, constructed, and certified as required  
28           under this section. These public agencies shall report annually to the Department on  
29           major facility projects and operating savings.

30           (c)   To be able to monitor and document ongoing operating savings as required  
31           under subsection (b) of this section, all utilities going into any building that is the  
32           subject of a project under this Article shall be metered.

33           (d)   The Department shall consolidate the reports required in subsection (b) of this  
34           section and any report from the State Building Commission under G.S. 143-135.40 into  
35           one report and report to the Chairs of the General Government Appropriations  
36           Subcommittees of both the Senate and the House of Representatives, the Environmental  
37           Review Commission, and the Joint Legislative Commission on Governmental  
38           Operations by November 1 of each year beginning in 2008. In its report, the Department  
39           shall also report on the implementation of this Article, including reasons why the LEED  
40           standard was not used for the reason that it would not be practicable in accordance with  
41           G.S. 143-135.40. The Department shall make recommendations regarding the ongoing  
42           implementation of this Article, including a discussion of incentives and disincentives  
43           related to implementing this Article.

1 **"§ 143-135.38. Guidelines for administering Article; other considerations**  
2 **regarding project proposals.**

3 (a) The Department, in consultation with affected public agencies, shall develop  
4 and issue guidelines to implement this Article for public agencies. The purpose of the  
5 guidelines is to define a procedure and method for employing and verifying activities  
6 necessary for certification to at least the LEED silver standard for major facility  
7 projects.

8 (b) Major facility projects designed to meet standards identified in this Article  
9 shall include building commissioning as a critical cost-saving part of the construction  
10 process. This process shall include input from the project design and construction teams  
11 and the project ownership representatives.

12 (c) As provided in the request for proposals for construction services, the public  
13 agency may hold a preproposal conference for prospective bidders to discuss  
14 compliance with, and achievement of, standards identified in this Article for prospective  
15 respondents.

16 (d) The Department shall create a high-performance buildings advisory  
17 committee comprised of representatives from the design and construction industry  
18 involved in public works contracting, personnel from the affected public agencies  
19 responsible for overseeing public works projects, and others at the Department's  
20 discretion to provide advice on implementing this Article. Among other duties, the  
21 advisory committee shall make recommendations regarding an education and training  
22 process and an ongoing evaluation or feedback process to help the Department  
23 implement this Article.

24 (e) The Department shall review the advisory committee's recommendations  
25 under subsection (d) of this section regarding education and training. The Department  
26 shall develop one level of education and training requirements for the chief financial  
27 officer of each public agency that is appropriate for the chief financial officer's level of  
28 involvement in projects under this Article and that includes training, approved by the  
29 U.S. Green Building Council, regarding LEED certification. The Department shall  
30 develop, for each public agency that is responsible for the payment of the agency's  
31 utilities, another higher level of education and training requirements for the facility  
32 manager of the agency that is appropriate for the facility manager's level of involvement  
33 in projects under this Article and that includes training, approved by the U.S. Green  
34 Building Council, regarding LEED certification. This level of education and training  
35 shall also be a requirement for the capital project coordinator of an agency involved in a  
36 project under this Article. The Department shall develop a highest level of education  
37 and training requirements for the architects and mechanical design engineers that are  
38 involved in the design of projects under this Article that is appropriate for their level of  
39 involvement in these projects and that includes training, approved by the U.S. Green  
40 Building Council, regarding LEED certification.

41 (f) The Department may adopt rules to implement this Article. The Department  
42 may adopt architectural or engineering standards as needed to implement this Article.

43 **"§ 143-135.39. Liability for failure to meet standard.**

1 A member of the design or construction teams shall not be held liable for the failure  
2 of a major facility project to meet the LEED silver standard or other LEED standard  
3 established for the project as long as a good faith attempt was made to achieve the  
4 LEED standard set for the project.

5 **"§ 143-135.40. Use of other standard when LEED silver standard not practicable.**

6 When the Department, public agency, and the design team determine the LEED  
7 silver standard or the ASHRAE 90.1-2004 standard to be not practicable for a major  
8 facility project, then it must be determined by the State Building Commission if the  
9 standard is not practicable for that major facility project. If the State Building  
10 Commission determines the standard is not practicable for that major facility project,  
11 the State Building Commission shall determine if any LEED standard is practicable for  
12 the design and construction for that major facility project. If the LEED silver standard  
13 or the ASHRAE 90.1-2004 standard is not followed for that project or if another LEED  
14 standard is followed, the public agency shall report this information and the reasons to  
15 the Department in its report under G.S. 143-135.37, and the State Building Commission  
16 shall report this information and the reasons to the Department."

17 **SECTION 1.2.** G.S. 115D-20 is amended by adding a new subdivision to  
18 read:

19 "(14) To comply with the design and construction requirements for  
20 high-performance public buildings under Article 8C of Chapter 143 of  
21 the General Statutes."

22 **SECTION 1.3.** The Department of Administration shall monitor the  
23 development of construction or other energy efficiency standards to determine whether  
24 there is a standard that the Department and the high-performance building advisory  
25 committee, established under G.S. 143-135.38, as enacted in Section 1.1 of this act,  
26 determine would better fulfill the intent of Article 8C of Chapter 143 of the General  
27 Statutes, as enacted by Section 1.1 of this act, to achieve energy efficiency and  
28 increased energy savings in major facility projects, as defined in G.S. 143-135.36, as  
29 enacted in Section 1.1 of this act, in buildings of the State, The University of North  
30 Carolina, and the North Carolina Community College System than the LEED silver  
31 standard defined in G.S. 143-135.36, as enacted in Section 1.1 of this act, and, if so,  
32 whether Article 8C of Chapter 143 of the General Statutes, as enacted in Section 1.1 of  
33 this act, should be amended to provide for the use of this standard rather than the LEED  
34 silver standard under that Article. Specifically, the Department of Administration shall  
35 monitor the development of improved energy efficiency standards developed by the  
36 American Society of Heating, Refrigerating and Air-Conditioning Engineers, the  
37 ASHRAE standards, and monitor whether the State Building Code Council adopts  
38 improved ASHRAE standards or any other energy efficiency standards for inclusion in  
39 the State Building Code under Article 9 of Chapter 143 of the General Statutes that  
40 result in greater energy efficiency and increased energy savings in major facility  
41 projects in State, University System, and community college buildings than the LEED  
42 silver standard. No later than January 1, 2009, and again January 1, 2010, the  
43 Department of Administration shall report to the Chairs of the General Government  
44 Appropriations Subcommittees of both the Senate and the House of Representatives, the

1 Environmental Review Commission, and the Joint Legislative Commission on  
2 Governmental Operations on the results of its monitoring under this section, including  
3 any recommendations for administrative or legislative proposals.

4 **SECTION 1.4.(a)** The Department of Administration shall conduct a  
5 performance review of the high-performance buildings program established under  
6 Article 8C of Chapter 143 of the General Statutes, as enacted by Section 1.1 of this act.  
7 The performance review shall include at least all of the following:

- 8 (1) Identification of the costs of implementing high-performance building  
9 standards in the design and construction of major facility projects  
10 subject to that Article.
- 11 (2) Identification of operating savings attributable to the implementation  
12 of high-performance building standards, including, but not limited to,  
13 savings in energy, utility, and maintenance costs.
- 14 (3) Identification of any impacts on employee productivity from using  
15 high-performance buildings standards.
- 16 (4) Evaluation of the effectiveness of the high-performance building  
17 standards established under this Article.
- 18 (5) Any recommendations for any changes in those standards that may be  
19 supported by the Department's findings.

20 **SECTION 1.4.(b)** No later than December 1, 2010, the Department of  
21 Administration shall make a preliminary report of its findings under its performance  
22 review under subsection (a) of this section and its recommendations and, on or before  
23 July 1, 2011, a final report to the Chairs of the General Government Appropriations  
24 Subcommittees of both the Senate and the House of Representatives, the Environmental  
25 Review Commission, and the Joint Legislative Commission on Governmental  
26 Operations.

27 **SECTION 1.5.** Article 6 of Chapter 146 of the General Statutes is amended  
28 by adding a new section to read:

29 **"§ 146-23.2. Purchase of buildings constructed or renovated to a certain energy**  
30 **efficiency standard.**

31 (a) A State agency shall not acquire by purchase any building unless the building  
32 was designed and constructed to at least the same standard for energy efficiency that the  
33 design and construction of a comparable State building was required to meet at the time  
34 the building under consideration for purchase was constructed. Further, a State agency  
35 shall not acquire by purchase any building that had a major renovation unless the major  
36 renovation of the building was designed and constructed to at least the same standard  
37 for energy efficiency that the design and construction of a major renovation of a  
38 comparable State building was required to meet at the time the building under  
39 consideration for purchase was renovated.

40 (b) This section does not apply to the purchase of a building having historic,  
41 architectural, or cultural significance under G.S. 143-23.1. This section does not apply  
42 to buildings that are acquired by devise or bequest."  
43

1 **PART II. RETROFIT EXISTING STATE, UNIVERSITY, AND COMMUNITY**  
2 **COLLEGE BUILDINGS WITH ENERGY CONSERVATION MEASURES**  
3 **THAT HAVE A HIGH RETURN IN ENERGY SAVINGS AND THAT REQUIRE**  
4 **NO SIGNIFICANT EXPENDITURE OF FUNDS AND APPROPRIATE FUNDS**  
5 **TO A RESERVE FOR THE COSTS OF THESE RETROFITS.**

6  
7 **SECTION 2.1.(a)** The Department of Administration shall administer and  
8 oversee the implementation of a program whereby all of the following energy  
9 conservation measures, as defined in G.S. 143-64.17, shall be fully implemented no  
10 later than July 1, 2009, in each building owned by the State, The University of North  
11 Carolina, or the North Carolina Community College System:

- 12 (1) Lighting Systems. – The installation of exit signs that employ  
13 light-emitting diode (LED) technology; the replacement of  
14 incandescent light bulbs with compact fluorescent light bulbs; and  
15 where appropriate, as determined by the Department of  
16 Administration, the installation of occupancy sensors or optical  
17 sensors.
- 18 (2) Water Systems. – The installation of aerators in sink faucets that  
19 reduce the flow of water to a rate of no more than five-tenths gallons  
20 per minute (.5 g.p.m.); the installation of shower heads that reduce the  
21 flow of water to a rate of no more than one and five-tenths gallons per  
22 minute (1.5 g.p.m.); where appropriate, as determined by the  
23 Department of Administration, the resetting of hot water heaters to a  
24 water temperature of 120 degrees; the training of staff to monitor the  
25 use of irrigation systems and to base the use of the system on the  
26 moisture content of the soil, and either the elimination of potable water  
27 for irrigation or the reduction of water consumption in the building by  
28 twenty percent (20%) based on water consumption for the 2006-2007  
29 fiscal year.
- 30 (3) Heating, Ventilation, and Air-conditioning (HVAC) Systems. – For  
31 HVAC equipment that is subject to replacement, the review of the  
32 specifications for the replacement HVAC equipment to ensure that it is  
33 not oversized; and, for building automation systems that are  
34 programmable, the training to ensure that these systems are properly  
35 programmed.
- 36 (4) Minor Equipment. – For minor motorized equipment that is subject to  
37 replacement, the replacement of minor equipment with equipment that  
38 has premium efficiency motors. For purposes of this subdivision,  
39 'premium efficiency motor' means a motor that meets or exceeds a set  
40 of minimum full-load efficiency standards developed by the National  
41 Electrical Manufacturers Association (NEMA), the NEMA standards.

42 **SECTION 2.1.(b)** Consistent with G.S. 150B-2(8a)h., the Department of  
43 Administration shall develop or revise its architectural and engineering standards to  
44 provide assistance in determining which energy conservation measures are best suited to

1 the unique characteristics of each building and in determining the specifications for the  
2 energy conservation measures under this section. The development or revision of the  
3 architectural and engineering standards shall be completed by October 1, 2007.

4 **SECTION 2.1.(c)** Prior to implementing this section and no later than  
5 September 1, 2007, the Department of Administration shall report to the Joint  
6 Legislative Commission on Governmental Operations and the Environmental Review  
7 Commission on its plan to implement this section.

8 **SECTION 2.1.(d)** In order to protect the integrity of historic buildings, this  
9 section does not apply to the extent it would require the implementation of 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 Chapter 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; or any historic  
16 property owned by the State or assisted by the State.

17 **SECTION 2.2.(a)** There is appropriated from the General Fund to the Office  
18 of State Budget and Management the sum of three million dollars (\$3,000,000) for the  
19 2007-2008 fiscal year to be placed in a reserve. No later than September 1, 2007, the  
20 Office of State Budget and Management shall develop a plan to allocate funds from this  
21 reserve to the State agencies, the Board of Governors of The University of North  
22 Carolina, and the State Board of Community Colleges for the costs of implementing the  
23 energy conservation measures as directed under this part. Subject to subsection (b) of  
24 this section, the Office of State Budget and Management shall make allocations from  
25 this reserve to the State agencies, the Board of Governors of The University of North  
26 Carolina, and the State Board of Community Colleges in conformance with its  
27 allocation plan under this subsection.

28 **SECTION 2.2.(b)** No State agency, constituent institution of The University  
29 of North Carolina, or community college as defined in G.S. 115D-2 shall receive any  
30 funds under subsection (a) of this section unless it has submitted its most recent plan for  
31 its management of energy, water, and other utility use that is due under G.S. 143-64.12,  
32 as amended by Section 3.1 of this act.

33  
34 **PART III. REQUIRE THE DEPARTMENT OF ADMINISTRATION TO**  
35 **CONDUCT ENERGY AUDITS EVERY THREE YEARS FOR EACH STATE,**  
36 **UNIVERSITY, AND COMMUNITY COLLEGE BUILDING; REQUIRE**  
37 **ANNUAL UPDATES OF STATE AND AGENCY PLANS TO MANAGE**  
38 **ENERGY, WATER, AND OTHER UTILITY USE; BRING THE NORTH**  
39 **CAROLINA COMMUNITY COLLEGE SYSTEM WITHIN THE PURVIEW OF**  
40 **PART 1 OF ARTICLE 3B OF CHAPTER 143 OF THE GENERAL STATUTES,**  
41 **WHICH ADDRESSES ENERGY POLICY AND LIFE-CYCLE COST**  
42 **ANALYSES; AND APPROPRIATE FUNDS TO ESTABLISH AN ADDITIONAL**  
43 **FCAP TEAM AND TO CREATE A RESERVE FOR COMMISSIONING**



1 EXISTING STATE, UNIVERSITY, AND COMMUNITY COLLEGE  
2 BUILDINGS TO REDUCE ENERGY CONSUMPTION.

3  
4 SECTION 3.1.(a) G.S. 143-64.12 reads as rewritten:

5 "§ 143-64.12. Authority and duties of the Department; State agencies.

6 (a) The Department of Administration shall develop a comprehensive program to  
7 manage energy, water, and other utility use for State government and shall update this  
8 program annually. Each State agency and each State institution of higher learning shall  
9 develop and implement a management plan that is consistent with the State's  
10 comprehensive program under this subsection to manage energy, water, and other utility  
11 use. Each State agency shall update its management plan annually.

12 ~~(a1) The General Assembly authorizes and directs that State agencies and State~~  
13 ~~institutions of higher learning shall carry out the construction and renovation of State~~  
14 ~~facilities, under their jurisdiction facilities of State agencies and State institutions of~~  
15 ~~higher learning in such a manner as to further the policy declared herein, ensuring set~~  
16 ~~forth under this section and to ensure the use of life-cycle cost analyses and practices to~~  
17 ~~conserve energy, water, and other utilities.~~

18 (b) The Department of Administration shall develop and implement policies,  
19 procedures, and standards to ensure that State purchasing practices improve efficiency  
20 regarding energy, water, and other utility use and take the cost of the product over the  
21 economic life of the product into consideration. The Department of Administration shall  
22 adopt and implement Building Energy Design Guidelines. These guidelines shall  
23 include energy-use goals and standards, economic assumptions for life-cycle cost  
24 analysis, and other criteria on building systems and technologies. The Department of  
25 Administration shall modify the design criteria for construction and renovation of  
26 facilities of State agencies or State institutions of higher learning to require that a  
27 life-cycle cost analysis be conducted pursuant to G.S. 143-64.15.

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

41 ~~The Department of Administration shall develop a comprehensive program to~~  
42 ~~manage energy, water, and other utility use for State government.~~

43 ~~Each State agency shall develop and implement a management plan that is consistent~~  
44 ~~with the State's comprehensive program to manage energy, water, and other utility use.~~

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

2 (h) When conducting an energy audit under this section, the Department of  
3 Administration shall identify and recommend any facility of a State agency or State  
4 institution of higher learning as suitable for building commissioning to reduce energy  
5 consumption within the facility or as suitable for installing an energy savings measure  
6 pursuant to a guaranteed energy savings contract under Part 2 of this Article.

7 (i) Consistent with G.S. 150B-2(8a)h., the Department of Administration may  
8 adopt architectural and engineering standards to implement this subsection."

9 **SECTION 3.1.(b)** G.S. 143-64.10 reads as rewritten:

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

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

- 12 (1) That the State shall take a leadership role in aggressively undertaking  
13 the conservation of energy, water, and other utilities in North Carolina.
- 14 (2) That State facilities and the facilities of the State universities and  
15 community colleges have a significant impact on the State's  
16 consumption of energy, water, and other utilities.
- 17 (3) That practices to conserve energy, water, and other utilities that are  
18 adopted for the design, construction, operation, maintenance, and  
19 renovation of these facilities and for the purchase, operation, and  
20 maintenance of equipment for these facilities will have a beneficial  
21 effect on the State's overall supply of energy, water, and other utilities.
- 22 (4) That the cost of the energy, water, and other utilities consumed by  
23 these facilities and the equipment for these facilities over the life of the  
24 facilities shall be considered, in addition to the initial cost.
- 25 (5) That the cost of energy, water, and other utilities is significant and  
26 facility designs shall take into consideration the total life-cycle cost,  
27 including the initial construction cost, and the cost, over the economic  
28 life of the facility, of the energy, water, and other utilities consumed,  
29 and of operation and maintenance of the facility as it affects the  
30 consumption of energy, water, or other utilities.
- 31 (6) That State government shall undertake a program to reduce the use of  
32 energy, water, and other utilities in ~~State~~State, university, and  
33 community college facilities and equipment in those facilities in order  
34 to provide its citizens with an example of energy-use, water-use, and  
35 utility-use efficiency.

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

41 **SECTION 3.1.(c)** G.S. 143-64.11 is amended by adding a new subdivision  
42 to read:

43 "(10) 'State institution of higher learning' means any constituent institution  
44 of The University of North Carolina, any regional institution as

1                   defined in G.S. 115D-2, and any community college as defined in  
2                   G.S. 115D-2."

3                   **SECTION 3.1.(d)** G.S. 143-64.11(7) reads as rewritten:

4                   "(7) "State agency" means the State of North Carolina or any board,  
5                   bureau, commission, department, ~~institution~~, or agency of the State."

6                   **SECTION 3.1.(e)** G.S. 143-64.16 reads as rewritten:

7                   "**§ 143-64.16. Application of Part.**

8                   The provisions of this Part shall not apply to municipalities or counties, nor to any  
9                   agency or department of any municipality or ~~county~~; ~~provided, however, this Part shall~~  
10                  ~~apply to any board of a community college. Community college is defined in~~  
11                  ~~G.S. 115D-2(2).county."~~

12                  **SECTION 3.2.** The Department of Administration shall establish and train  
13                  an additional team to examine existing facilities of State agencies and State institutions  
14                  of higher learning to identify and recommend energy conservation maintenance and  
15                  operating procedures designed to reduce energy consumption and to conduct energy  
16                  audits and identify a facility as suitable for building commissioning or for installing an  
17                  energy savings measure under the Facilities Condition and Assessment Program  
18                  (FCAP) under G.S. 143-64.12, as amended by Section 3.1 of this act.

19                  **SECTION 3.3.** There is appropriated from the General Fund to the  
20                  Department of Administration the sum of two hundred sixty-five thousand seven  
21                  hundred eighty-seven dollars (\$265,787) for the 2007-2008 fiscal year to establish and  
22                  support three Building System Engineer II positions to comprise the additional team the  
23                  Department of Administration is directed to establish under Section 3.2 of this act and  
24                  the sum of two hundred fifty-two thousand two hundred eighty-seven dollars (\$252,287)  
25                  for the 2008-2009 fiscal year to continue and support these three positions.

26                  **SECTION 3.4.(a)** There is appropriated from the General Fund to the Office  
27                  of State Budget and Management the sum of five million dollars (\$5,000,000) for the  
28                  2007-2008 fiscal year to be placed in a reserve. No later than September 1, 2007, the  
29                  Office of State Budget and Management shall develop a plan to allocate funds from this  
30                  reserve to the State agencies, the Board of Governors of The University of North  
31                  Carolina, and the State Board of Community Colleges for the costs of commissioning  
32                  existing buildings of the State, The University of North Carolina, and the North  
33                  Carolina Community College System for existing buildings that are identified as  
34                  suitable for building commissioning to reduce energy consumption under  
35                  G.S. 143-64.12, as amended by Section 3.1 of this act. Subject to subsection (b) of this  
36                  act, the Office of State Budget and Management shall make allocations from this  
37                  reserve to the State agencies, the Board of Governors of The University of North  
38                  Carolina, and the State Board of Community Colleges in conformance with its  
39                  allocation plan under this subsection.

40                  **SECTION 3.4.(b)** No State agency, constituent institution of The University  
41                  of North Carolina, or community college as defined in G.S. 115D-2 shall receive any  
42                  funds under subsection (a) of this section unless it has submitted its most recent plan for  
43                  its management of energy, water, and other utility use that is due under G.S. 143-64.12,  
44                  as amended by Section 3.1 of this act.

1  
2 **PART IV. REQUIRE LIFE-CYCLE COST ANALYSES TO BE COMMENCED**  
3 **AND CERTIFIED AT THE SCHEMATIC DESIGN PHASE OF**  
4 **CONSTRUCTION OR RENOVATION PROJECTS AND TO BE UPDATED,**  
5 **AMENDED, AND RECERTIFIED AS NEEDED AT LATER PHASES OF**  
6 **CONSTRUCTION; AND APPROPRIATE FUNDS TO ESTABLISH A**  
7 **POSITION IN THE DEPARTMENT OF ADMINISTRATION DEDICATED TO**  
8 **CONDUCTING LIFE-CYCLE COST ANALYSES.**

9  
10 **SECTION 4.1.** G.S. 143-64.15(a) reads as rewritten:

11 "(a) A life-cycle cost analysis shall be commenced at the schematic design phase  
12 of the construction or renovation project, shall be updated or amended as needed at the  
13 design development phase, and shall be updated or amended again as needed at the  
14 construction document phase. A life-cycle cost analysis shall include, but not be limited  
15 to, all of the following elements:

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

25 **SECTION 4.2.** G.S. 143-64.15A reads as rewritten:

26 **"§ 143-64.15A. Certification of life-cycle cost analysis.**

27 ~~All State agencies under the jurisdiction of the Department of Administration~~Each  
28 State agency and each State institution of higher learning performing a life-cycle cost  
29 analysis for the purpose of constructing or renovating any State facility or facility of a  
30 State institution of higher learning shall, prior to selecting a design option or advertising  
31 for bids for construction, shall submit the life-cycle cost analysis to the Department for  
32 certification. certification at the schematic design phase and again when it is updated or  
33 amended as needed in accordance with G.S. 143-64.15. The Department shall review  
34 the material submitted by the State ~~agency,~~agency or State institution of higher learning,  
35 reserve the right to require ~~agencies~~an agency or institution to complete additional  
36 analysis to comply with certification, perform any additional analysis, as necessary, to  
37 comply with G.S. 143-341(11), and require that all construction or renovation  
38 conducted by the State ~~agency~~or State institution of higher learning comply with the  
39 certification issued by the Department."

40 **SECTION 4.3.** There is appropriated from the General Fund to the  
41 Department of Administration the sum of one hundred thousand dollars (\$100,000) for  
42 the 2007-2008 fiscal year to establish and support a Building System Engineer III  
43 position, which position shall be dedicated to conducting life-cycle cost analyses under  
44 Part 1 of Article 3B of Chapter 143 of the General Statutes, as amended by Part III and

1 Part IV of this act and the sum of ninety-five thousand fifty dollars (\$95,050) for the  
2 2008-2009 fiscal year to continue and support this position.

3  
4 **PART V. EFFECTIVE DATES**

5  
6 **SECTION 5.1.** Section 1.5, Section 2.1 through Section 2.2, Section 3.3,  
7 and Section 4.2 of this act become effective July 1, 2007. The remaining sections of  
8 this act are effective when the act becomes law. Section 1.1 and Section 1.2 of this act  
9 apply to contracts for the design of major facility projects, as defined in  
10 G.S. 143-135.36, as enacted in Section 1.1 of this act, that are entered into on or after  
11 that date. Section 4.1 of this act applies to contracts entered into on or after that date.