

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

(a) Program Established. – The Sustainable Energy-Efficient Buildings Program is established within the Department to be administered by the Department. This program applies to any major facility construction or renovation project of a public agency that is funded in whole or in part from an appropriation in the State capital budget or through a financing contract as defined in G.S. 142-82.

(a1) Net Savings Required. – The requirements of this section apply to a major facility construction or renovation project only if the Department determines that the application of the requirements to the project will result in an anticipated net savings. There is an anticipated net savings if the cost of construction or renovation in accordance with the requirements of this section plus the estimated operating costs for the first 10 years post-construction would be less than the cost of construction or renovation if the project were not subject to the requirements of this section plus the estimated operating costs for the first 10 years post-construction. All third-party certification costs before and after construction or renovation shall be included in determining construction and operating costs. Renovation projects that will include guaranteed energy savings contracts, as defined by G.S. 143-64.17, and executed in accordance with the provisions of Part 2 of Article 3B of Chapter 143 of the General Statutes, are exempt from the requirements of this subsection.

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

(d) Performance Verification. – In order to be able to verify performance of a building component or an energy or water system component, the construction contract shall include provisions that require each building component and each energy and water system component to be commissioned, and these provisions shall be included at the earliest phase of the construction process as possible and in no case later than the schematic design phase of the project. Such commissioning shall continue through the initial operation of the building. The project design and construction teams and the public agency shall jointly determine what level of commissioning is appropriate for the size and complexity of the building or its energy and water system components.

(e) Separate Utility Meters. – In order to be able to monitor the initial cost and the continuing costs of the energy and water systems, a separate meter for each electricity, natural gas, fuel oil, and water utility shall be installed at each building undergoing a major facility construction or renovation project. Each meter shall be installed in accordance with the United States Department of Energy guidelines issued under section 103 of the Energy Policy Act of 2005 (Pub. L. 109-58, 119 Stat. 594 (2005)). Starting with the first month of facility operation, the public agency shall compare data obtained from each of these meters by month and by year with the applicable energy-efficiency standard under subsection (b) of this section and the applicable water use standard for the project under subsection (c) of this section and report annually no later than August 1 of each year to the Office of State Construction within the Department. If the average energy use or the average water use over the initial 12-month period of facility operation exceeds the applicable energy-efficiency standard under subsection (b) of this section or exceeds the applicable water use standard under subsection (c) of this section by fifteen percent (15%) or more, the public agency shall investigate the actual energy or water use, determine the cause of the discrepancy, and recommend corrections or modifications to meet the applicable standard.

(f) Locally Sourced Materials. – To achieve sustainable building standards as required by this section, a major facility construction or renovation project may utilize a building rating system so long as the rating system (i) provides certification credits for, (ii) provides a preference to be given to, (iii) does not disadvantage, and (iv) promotes building materials or furnishings, including masonry, concrete, steel, textiles, or wood that are manufactured or produced within the State. (2008-203, s. 1; 2011-394, s. 8(b); 2013-242, s. 1.)