Energy Conservation Policy for Public Facilities

Findings;
(a) The Catawba County Board of Commissioners hereby finds:
1. That it is important to take a leadership role in undertaking energy conservation;
2. That Catawba County facilities have a considerable impact on the region's consumption of energy;
3. That energy conservation practices adopted for the design, construction, operation, maintenance, and renovation of these facilities and for the purchase, operation, and maintenance of equipment for these facilities will have a beneficial effect in reducing emissions from electrical generating units (EGUs) that contribute to air pollution;
4. That the cost of energy is significant and facility designs shall take into consideration the total life-cycle cost, including the initial construction cost, and the cost, over the economic life of the facility, of the energy consumed, and of operation and maintenance of the facility as it affects energy consumption; and
5. That local government shall undertake a program to reduce energy use in Catawba County facilities and equipment in those facilities in order to provide its citizens with an example of energy-use efficiency.

(b) It is the policy of Catawba County to ensure that energy conservation practices are employed in the design, construction, operation, maintenance, and renovation of Catawba County facilities and in the purchase, operation, and maintenance of equipment for Catawba County facilities.

Definitions
For purposes of this Policy:
1. "Economic life" means the projected or anticipated useful life of a facility.
2. "Energy-consuming system" includes but is not limited to the following equipment or measures:
   a. Equipment used to heat, cool, or ventilate the facility;
   b. Equipment used to heat water in the facility;
   c. Lighting systems;
d. On-site equipment used to generate electricity for the facility;

e. On-site equipment that uses the sun, wind, oil, natural gas, liquid propane gas, coal, or electricity as a power source; and

f. Energy conservation measures in the facility design and construction that decrease the energy requirements of the facility.

(3) "Facility" means a building or a group of buildings served by a central energy distribution system or components of a central energy distribution system.

(4) "Life-cycle cost analysis" means an analytical technique that considers certain costs of owning, using, and operating a facility over its economic life, including but not limited to:

a. Initial costs;

b. System repair and replacement costs;

c. Maintenance costs;

d. Operating costs, including energy costs; and

e. Salvage value.

(5) "Energy conservation measure" means a facility alteration, training, or services related to the operation of the facility, when the alteration, training, or services provide anticipated energy savings. Energy conservation measure includes any of the following:

a. Insulation of the building structure and systems within the building.

b. Storm windows or doors, caulking, weatherstripping, multiglazed windows or doors, heat-absorbing or heat-reflective glazed or coated window or door systems, additional glazing, reductions in glass area, or other window or door system modifications that reduce energy consumption.

c. Automatic energy control systems.

d. Heating, ventilating, or air-conditioning system modifications or replacements.

e. Replacement or modification of lighting fixtures to increase the energy efficiency of a lighting system without increasing the overall illumination of a facility, unless an increase in illumination is necessary to conform to the applicable State
or local building code or is required by the light system after the proposed modifications are made.

f. Energy recovery systems.
g. Cogeneration systems that produce steam or forms of energy such as heat, as well as electricity, for use primarily within a building or complex of buildings.
h. Other energy conservation measures.

(6) "Energy savings" means a measured reduction in fuel costs, energy costs, or operating costs created from the implementation of one or more energy conservation measures when compared with an established baseline of previous fuel costs, energy costs, or operating costs.

**Life-cycle cost analysis.**

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

1. The coordination, orientation, and positioning of the facility on its physical site;
2. The amount and type of fenestration employed in the facility;
3. Thermal characteristics of materials and the amount of insulation incorporated into the facility design;
4. The variable occupancy and operating conditions of the facility, including illumination levels; and
5. Architectural features, which affect energy consumption.

(b) The life-cycle cost analysis performed for any facility shall include, but not be limited to, the following:

1. An energy-consumption analysis of the facility's energy-consuming systems;
2. The initial estimated cost of each energy-consuming system being evaluated;
3. The estimated annual operating cost of all utility requirements; and
4. The estimated annual cost of maintaining each energy-consuming system.

(c) The **Catawba County** requires each entity to conduct a life-cycle cost analysis pursuant to this section for the construction or the renovation of any facility of 20,000 or more gross square feet.
(d) Each agency shall use the life-cycle cost analysis over the economic life of the facility in selecting the optimum system or combination of systems to be incorporated into the design of the facility.

Authority and duties of Catawba County Agencies

(a) Catawba County Board of Commissioners authorizes and directs that Catawba County agencies shall carry out the construction and renovation of Catawba County facilities, under their jurisdiction in such a manner as to further the policy declared herein, ensuring the use of life-cycle cost analyses and energy-conservation practices.

(b) The Finance and Maintenance Departments shall identify and recommend energy conservation maintenance and operating procedures that are designed to reduce energy consumption within facilities, in conjunction with appropriate personnel, which require no significant expenditure of funds. Relevant Catawba County departments, institutions, or agencies shall implement these recommendations.