

Sustainable Building Policy

University Facilities

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Approved by: Clemson University Administrative Council 3/4/2005

Clemson University Environmental Committee 10/11/2004

Abstract: *The responsible use of all forms of energy and the good health of the community are high priorities of Clemson University. This policy makes a clear statement that the University embraces these priorities and will invest in them through every major building project. Contained in the policy are procedures, responsibilities, exemptions and requirements that will render the policy useful. This document identifies those projects that will be LEED certified, and those that will adhere to sustainable building practices.*

1.0 Sustainable Building

1.1 Purpose

The purpose of a University wide policy on sustainable building is to demonstrate the University's commitment to environmental, economic, and social stewardship, to yield cost savings through reduced operating costs, to provide healthy environments for students, faculty, staff and visitors, and to contribute to the University's goals of protecting, conserving, and enhancing the region's and the State's environmental resources.

1.2 Policy

It is the policy of Clemson University to finance, plan, design, construct, manage, renovate, and maintain its facilities in a sustainable fashion. This applies to new construction and major remodels (in excess of 50% of state replacement value) in which the total project building square footage meets the criteria given. The latest edition of the US Green Building Council's LEED rating system and accompanying Reference Guide shall be used as a design and measurement tool to determine what constitutes a sustainable building by national standards. All new facilities over 5,000 gross square feet and major capital renovations costing more than 50% of building replacement value shall meet and acquire a LEED Silver rating at a minimum.

Design and project management teams are encouraged to meet higher LEED rating levels.

1.3 Organizations Affected

All University divisions, departments and offices and their contractors responsible for financing, planning, designing, developing, constructing, renovating and managing University-owned facilities and buildings regardless of location will comply with this policy.

1.4 Definitions

- Sustainable Building

Sustainable building integrates building materials and methods that promote environmental quality, economic vitality, and social benefit through the design, construction and operation of the built

environment. Sustainable building merges sound, environmentally responsible practices into one discipline that looks at the environmental, economic and social effects of a building or built project as a whole. Sustainable design encompasses the following broad topics: efficient management of energy and water resources, management of material resources and waste, protection of environmental quality, protection of health and indoor environmental quality, reinforcement of natural systems, and integrating the design approach.

- Replacement Value

A building's replacement value is the most recent value as published by the State Property Office.

- Life Cycle Cost Analysis

An inclusive approach to costing a program, facility, or group of facilities that encompasses planning, design, construction, operation and maintenance over the useful life of the facilities and finally any demolition or disassembly costs. Life Cycle Cost Analysis looks at the net present value of design options as investments. The goal is to achieve the highest, most cost-effective environmental performance possible over the life of the project.

- LEED Rating System

LEED stands for Leadership in Energy and Environmental Design, and is a, consensus-based, market-driven green building rating system. It is based on existing, proven technology and evaluates environmental performance from a "whole building" perspective. LEED is a certifying system designed for rating new and existing commercial, institutional, and multi-family residential buildings. It contains prerequisites and credits in five categories: Sustainable Site Planning, Improving Energy Efficiency, Conserving Materials and Resources, Embracing Indoor Environmental Quality, and Safeguarding Water. There are four certification levels: Certified, Silver, Gold, and Platinum.

1.5 Procedures and Responsibilities

All University employees whose responsibilities include planning, designing, constructing or renovating University-owned or leased facilities shall be responsible for ensuring that facilities and buildings comply with 1.2.

The University's Campus Planning Office shall be responsible for annually evaluating and reporting to the Clemson University Environmental Committee how well applicable University construction and renovation projects meet the goal of sustainability.

The authority to determine the appropriate level of Sustainable Building (i.e. sustainable building best practices or LEED silver) is the Chief Facility Officer of Clemson University who will rely on recommendations from the Campus Planning Office.

1.6 Budgeting and Financing

All capital construction which falls under this policy will be expected to budget to meet at minimum the LEED Silver rating. Budget planning and life cycle cost analysis to achieve a higher rating of gold or platinum is encouraged. The program, division, department or other unit initiating the project will budget accordingly.

1.7 Education

University capital project managers currently managing or likely to manage projects which fit the criteria in 1.2 will be responsible to attend introductory LEED training and annual follow-up training.

1.8 Exemptions

Buildings whose primary use is for agricultural or machinery storage, animal shelters, and similar uses are exempt from this policy due to the nature of the LEED rating system. Also exempted are site work, landscape and infrastructure projects. These exceptions, however, are only for the LEED rating system. Every project should address to the fullest extent possible sustainable building practices. Sustainable practices include those elements of planning, design and construction that promote the efficient use of energy and material resources, the conservation of water, and the protection of land and water environments. Projects utilizing the sustainable practices approach will use the LEED process and rating system to the fullest extent possible.

1.9 Requirements Table

	Sustainable Practices	LEED Silver (or higher)
Renovations to buildings value < 50% of building replacement	X	
Renovations to buildings value ≥ 50% of building replacement for projects equal to or greater than \$1,000,000		X
New or renovated landscapes and infrastructure.	X	
New Building Construction less than 5,000 gross square feet	X	
New Building Construction ≥ 5,000 gross square feet.		X

1.10 Cost

Building in a sustainable manner at the Silver certification level is typically 1%-5% of building construction cost. A recent Clemson University large renovation project shows that the cost is close to the 5% level. These costs however will result in savings for the institution many times over the initial investment. A recent study¹ completed for the State of California estimated the cost savings to be ten-fold over the life of a building. Beyond capital costs, there will be incremental costs to include Project Manager training in LEED certification, commissioning, application costs, and follow-on reporting to the Clemson University Environmental Committee.

1.11 Expiration

This policy will expire five years from the Effective Date noted on page 1. In year four, a study is to be engaged to identify and propose modifications to the policy.

¹The Costs and Financial Benefits of Green Buildings. Greg Kats, Capital E. October 2003.