Policies and Procedures Manual

Title: Carbon Mitigation New Construction and Renovation Policy
Policy Administrator: Chief Facilities Officer
Effective Date: 09/01/2022
Approved By:

Purpose:

In 2007, former president Rev. Michael C. McFarland, S.J., joined colleges and universities nationwide to sign Second Nature's Carbon Commitment, agreeing that the College of the Holy Cross would reduce its carbon emissions over the coming decades with a goal of reaching carbon neutrality by 2040. Committed to addressing sustainability in the design of both new construction and substantial renovation of existing buildings and structures, this policy aims to mitigate carbon emissions from construction and renovation projects while promoting the Society of Jesuits' Universal Apostolic Preference, 'Caring for Our Common Home,' and balancing initial and long-term operating costs.

Policy Statement:

While all project owners implementing a campus construction or renovation project should consider how their project contributes to the College's Carbon Commitment, all project owners implementing new construction or renovation projects with budgets exceeding $5M must adhere to specific procedures that mitigate carbon emissions. These procedures range from investigation to strict requirements. If a project owner believes that an exemption from this policy would significantly benefit the College, then the project owner must present their reasoning to the leadership team in the Division of Administration & Finance for approval before continuing with the project.

Recognizing that projects with budgets under $5M vary greatly in scope and often must adhere to narrow budget/resource limits, this policy excludes project owners with projects with a budget under $5M. However, the College strongly encourages project owners with projects with a budget under $5M to consider each protocol and how their project upholds the spirit of the Carbon Commitment.

This policy encourages project owners, regardless of budget, to consult with Holy Cross' Office of Sustainability to discuss specific ways in which the project contributes to the College's Carbon Commitment. This includes, but may not be limited to, a life-cycle cost analysis, and the exploration of ways to maximize energy efficiency and reduction, utilize submetering, encourage waste diversion, minimize water usage, and prioritize green purchases.

The outlined procedures aim to reduce the amount of carbon emissions often produced by long-term operational buildings while maintaining fiscal responsibility. Therefore, this policy offers some flexibility within this procedure, including some areas that allow for even more stringent practices. If a project owner cannot perform a procedure or believes that a procedure goes against the College's best interest, the project owner must present rationale to the leadership team in the Division of Administration & Finance prior to continuing with the project by either meeting with a leadership administrator or submitting a written request. Starting in FY23, new construction and renovation projects with budgets exceeding $5M will adhere to the following:

Procedures:
- General project requirements
  - When the project adds or replaces a building structure or high energy-consuming equipment, the project owner will hire a third-party qualified engineer or architect to conduct a life-cycle cost analysis (LCCA), including an energy systems analysis, so project designers can make informed decisions about the relationship between environmental impact and fiscal responsibility.
  - The project owner will install submetering for all utilities, as allowable.
  - The project owner will utilize, at minimum, the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) Silver certification standards as a guide for best practices. LEED rating systems include Building Design and Construction (BD+C), Interior Design and Construction (ID+C), Building Operations and Maintenance (O+M), and Homes.
- Energy, including heating, cooling, & electricity
  - For project owners implementing new construction projects, the building's total energy use, which includes electricity and heating, must meet or exceed a 17% reduction of the most recent ASHRAE buildings standards.
    - This procedure excludes renovation projects that are within an existing building.
  - The Facilities Department will consider conducting an energy audit, at minimum, every 12 years in newly constructed buildings to review energy efficiency and reevaluate operating systems to maximize efficiency. The project owner must be prepared to collaborate with the Facilities Department on this task if the Department chooses to conduct the energy audit.
  - The project owner must install LED lighting in all general, task, and accent lighting.

- ○ The project owner must purchase energy efficient products as allowable, using the U.S. Environmental Protection Agency Energy Star products list for guidance.
  - ○ During the design phase, the project owner will investigate passive solar potential, including the orientation of buildings, and be prepared to provide a rationale for why it is or is not feasible.
  - ○ The project owner must utilize carbon neutral heating/cooling systems and/or commit to purchasing carbon offsets annually to meet the total operational energy demand of the project.
  - ○ The project owner must utilize on-site renewable energy, off-site renewable energy, a green power purchase agreement, or renewable energy certificates to meet all new electrical demands.
  - ○ The project owners must add, modify, and integrate building system controls into the existing building automation system (BAS) or be prepared to provide a rationale for why building system controls cannot connect to the existing BAS.
  - ○ The project owner must investigate the electrification of energy systems in order to tap into the campus' renewable electricity strategy.
- ● Waste management
  - ○ The project owner must follow the most recent state and city waste bans.
  - ○ The project owner must investigate potential waste diversion processes that would minimize trash output and should consider consulting with the College's Director of Sustainability and the College's Director of Environmental Services about the final plan before implementation.
  - ○ The project owner must implement single stream recycling processes that are convenient to building users, including custodial staff, and must investigate composting potential.
  - ○ The project owner must offer waste diversion systems that are designed for effective staff coverage and accessibility.
  - ○ The project owner will investigate whether construction and demolition materials are salvageable, striving to reuse or recycle at least 70%.
- ● Water usage
  - ○ The project owner must incorporate plants that minimize excess water use and maintenance while fitting into the campus arboretum and College's landscape strategy.
  - ○ The project owner must investigate rainfall monitoring to minimize irrigation water use.
  - ○ The project owner must investigate stormwater collection for non-potable water use during the design phase.

- The project owner must install low water valves and fixtures in all applicable areas, as allowable.
- Materials and furnishings
  - The project owner must utilize low or no volatile organic compounds (VOCs) materials and furnishings as allowable.
  - The project owner will not use chlorofluorocarbon- or halon-containing products.
  - The project owner will not use mercury or lead materials unless an alternative is unavailable.