**POLICY FORM**

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| **Policy Number:** | **UTY-SRS-16-0042** | | | | | |
| **Nature of Policy Development**: |  | Creation |  | Modification |  | Practice / Policy  Reaffirmation |
| **Initiated by:** |  | Chief Sustainability Officer [CSO]: Jennifer deHart | | | | |
| **Policy Title:** |  | **High Performance Building and Major Renovation** | | | | |
| **Originating Entity:** |  | Sustainability Office | | | | |
| **Date received by CPPC:** |  | **October 25, 2016** | | | | |
| **Date of Policy Implementation/Effectiveness:** |  | November 7, 2016 | | | | |
| **Replacing policy/process found where:** |  | N/A New Policy | | | | |
| **Adoption Chain:** |  | **Senior Staff** | | | | |

**Policy**

Unity College shall implement a procurement process that delivers high performance buildings, both new construction and major renovation projects, that support the campus goal of net zero energy by 2025.  
  
For the purpose of this policy, a high performance building is defined as achieving LEED Certification and also meeting the minimum (Tier 1, e.g.) specific, aggressive, and measureable energy targets identified by Unity College in project development, design, and construction.  
  
For the purpose of this policy, a stakeholder team is an appointed decision-making entity that includes institutional representatives, occupants, and operators from every function that will be affected by the project, such as sustainability, student success, security, technology, fundraising, etc., and that provides input early and often before, during, and after the project.  
  
For the purpose of this policy, a project team is an integrated team of professionals working under a single contract to provide design, documentation, and construction services through a delivery method such as “construction manager at risk” or “design-build” [as defined by the Design-Build Institute of America]. An integrated project team ensures a single point of accountability and full team ownership of energy and other goals.  
  
This policy applies to all capital projects [new construction and major renovations] over $100,000.

**Description and Rationale**

Unity College recognizes that buildings are responsible for a significant portion of energy consumption in the United States. The College is committed to modeling effective strategies to minimize or eliminate the environmental effects of

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**High Performance Building and Major Renovation [CONTINUED]**

new construction and major renovation projects by procuring high performance buildings that reduce carbon emissions, utilize resources conservatively, and regenerate natural systems.  
  
Unity College also recognizes the need to balance environmental goals with institutional needs and financial constraints, and that doing so in a thoughtful manner requires adequate time and resources. Energy performance in context with other project goals will deliver safe, productive spaces to live, learn, and work, as well as sustainably maintain. This policy establishes an integrative process for procuring new construction and major renovation projects wherein the College’s energy and environmental goals have a central role in the decision making process during acquisition, design, and construction.  
  
This policy is based on recommendations from the High Performance Building Guidelines [HPBG] Ad Hoc Committee that was established in 2016.

**Standard Operating Procedure [SOP] Included: YES NO** *[Select Yes or No]*

1. **Establish Project Objectives and Energy Performance Targets**
   1. The President will appoint representatives to the stakeholder team.
      1. The stakeholder team will participate in at least one design charrette to collect and provide feedback on programmatic, financial, timeline, and sustainability goals.
      2. The President reserves the right to require a professional facilitator for the charrette.
      3. The President reserves the right to require members of the stakeholder team to sign an agreement to the project objectives, so as to avoid costly changes later on.
   2. The stakeholder team will articulate specific objectives for the high performance project.
      1. Objectives will include:
         1. Mission of the building
         2. Requirements for the focus of design
         3. Energy and environmental targets for the project. Energy targets will be specific and measureable. Energy targets should be expressed as BTU/Sq Ft and may be determined through comparison to existing similar buildings, ENERGY STAR Target Finder, or a combination of baselines and market comparisons.
      2. The team will establish at least two tiers of project requirements and energy targets appropriate for the desired building, age, and use.
      3. The minimum tier targets (Tier 1) shall always include:
         1. LEED Certification
         2. Low Impact Design practices
      4. The highest tier targets should include
         1. SITE certification and either a
         2. Living Building Challenge and/or
         3. Net Zero Energy
      5. An example of tiered project objectives is provided below.
      6. Project objectives, including energy targets, will be included in RFPs, contracts, and other documents and agreements throughout the project.
   3. The stakeholder team will determine a project budget using:
      1. Final reports from recent construction project budgets at the College

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**High Performance Building and Major Renovation [CONTINUED]**

* + 1. Construction costs of similar projects at other institutions
    2. Anticipated fundraising capacity
    3. Anticipated borrowing capacity
    4. Other relevant materials.
  1. The President will review and approve or disapprove the project objectives, timeline, and budget determined by the stakeholder team.

*Sample project objectives for residence hall major renovation:*

|  |  |
| --- | --- |
| Building Mission | Provide safe, supportive, sustainable residential experience for incoming students. |
| Focus of Design | Renovate all rooms, hallways, bathrooms, common areas, window systems, roof, siding… etc. Make ADA compliant. |
| Budget | $2.5 M |
| Tier 1 Mission Critical Targets | * Site EUI pre-renewables: ­­­< 50 kBTU/ft2/yr * LEED Certified * ENERGY STAR® specifications * Separate metering for each utility type * Low Impact Design (LID) practices * Two user manuals and outcome-based trainings: occupants and operators |
| Tier 2 Highly Desirable Targets | * Net Zero Energy * Site EUI pre renewables: ­­­< 40 kBTU/ft2/yr * LEED Silver Certified |
| Tier 3 If Possible Targets | * Net Positive Energy * LEED Gold Certified * SITES Certified * Architectural integrity * Recycled/surplus resources * Visual displays of current energy efficiency * National and global recognition |

1. **Prioritize Energy Performance in Project Team / Design Package Evaluation & Selection**
   1. Unity College will issue a firm fixed-price performance based RFP to identify a project team.
   2. The President has the authority to approve a consulting service to assist with RFP language as needed.
   3. Unity College will partner with a project team that is best qualified to deliver a high performance building. The prospective teams will be evaluated based on how well they satisfy relevant criteria such as the following:
      1. The project team has been successful with multidisciplinary collaboration.
      2. The project team has been successful in controlling costs, schedule, and program value while delivering on energy performance goals.
      3. The project team clearly reflects the project goals and can provide examples of measured energy performance from past successful projects.
      4. The project team is able to deliver the highest tier of project objectives within the fixed budget.
      5. The project team submits energy modeling with the design package to substantiate how it will achieve the goals.
      6. The project team has an appetite for problem solving and attitude of innovation.

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**High Performance Building and Major Renovation [CONTINUED]**

* 1. The project team that is selected will be bound contractually to deliver the energy and environmental performance outcomes to which they committed.

1. **Ensure High Performance During Design**
   1. Prior to finalization of design documents, the stakeholder team and project team will hold at least three more charrettes utilizing an “Integrative Process” based on ANSI Consensus National Guide 2.0 for Design and Construction of Sustainable Buildings and Communities – February 2, 2012. See the LEEDv4 Reference Guide for full details.
   2. At least one charrette will be used “before pen hits paper,” prior to schematic design, to establish a performance assurance plan to measure and verify performance of the building. The plan should align with either or both of the LEEDv4 Advanced Energy Metering or Enhanced Commissioning, Monitoring Based Commissioning requirements, and should also include strategies for other applicable performance goals defined by the stakeholder team. Once the plan is established, the project team is required to design in the metering, controls programming, and circuiting required to deliver the measurement and verification data so that commissioning and operations teams can confirm whether or not the project hits the energy target.
   3. At least one charrette will be used during schematic design, and another during design development, at each of which the stakeholder team will work with the project team to ensure high performance energy strategies are used, such as:
      1. Integrate simple and passive strategies.
      2. Use energy modeling and life cycle analysis to identify favorable long term investments.
      3. Consider long term maintenance requirements when comparing strategies.
      4. Use an integrated approach to find synergies and tradeoffs across disciplines, such as selecting efficiencies that enable down-sizing of HVAC.
      5. Maximize use of cost-saving modular, replicable, and standardized building constructions and plans.
      6. Size the glazing area to balance daylighting, thermal performance, and architectural benefits.
   4. The project team will be required to provide life cycle cost analysis for alternative strategies that are proposed during schematic design, and again for any changes proposed during design development and construction documentation.
2. **Ensure Cost Control Measures During Design and Construction**
   1. Unity College will require that the project team utilize cost control measures during design and construction, such as:
      1. Integrate experienced subcontractors early in the design process
      2. Maximize the use of offsite prefabrication
      3. Use a continuous, integrated approach to value engineering during construction
      4. Provide cost estimates throughout design, specifically at Schematic Design, Design Development, and 50% Construction Documents.
3. **Verify Performance During Operation**
   1. The stakeholder team will work with the project team to verify performance during the first year or more of operation of the building.
   2. Ten months after occupancy, during warranty inspection, the college’s commissioning authority will review execution of the measurement and verification plan.
   3. Unity College reserves the right to employ innovative means to incentivize the project team for superior performance such as withholding a percent of project funds until performance targets are verified, or awarding an additional amount of money if targets are exceeded by a predetermined amount.