WCU WEST CHESTER UNIVERSITY

UNIVERSITY POLICY

# Energy and Resource Conservation Policy

Accommodations for individuals with disabilities in accessing these policies are available upon request by emailing accessiblepolicy@wcupa.edu

## Purpose and Scope

The university has made several commitments to conserve and improve efficiencies in the use of energy and resources within our campus communities. In compliance with our Sustainability, Tracking, Assessment and Rating System (STARS) participation, WCU will create and maintain an operational "attitude" for continual improvement in efficient use of energy and resources.

## Policy Statement

Provide an integrative design to ensure optimized operations and high performance of the building(s) to consume fewer resources, reduce operating costs, increase value.

## Policy Framework

1. Annual:
    a. A comprehensive and fundamental understanding of energy and resource requirements must be annually reviewed and updated for existing and new facilities.
2. Operations:
    a. Facility operators must be continually provided professional development to adapt existing energy demands with futuristic conservation strategies in alliance to the universities sustainability goals to reduce its carbon footprint.
3. Engineering:

a. An engineering assessment must be made to have appropriate data acquisition and its dissemination to facility operators to define the conservation opportunities in each of the utility forms (electric, natural gas, fuel oil). This data will include Time of Use, Demand, Reactive power, Heat transfer, and daylighting.

4. Building energy usage will be evaluated in units of MBTU. With this data a determination will be made for the following:
    a. Resource selection based of cost.
    b. Trending and projection of MBTU loads and costs.
    c. Determination of energy required to maintain, adjust, and accommodate flexibility of resource selection. (Cost to change building / area temperature 1 degree).
5. Energy load will be evaluated for the following:
    a. Time of Use
    b. Heating and Cooling
    c. Ventilation
    d. Exhaust systems
    e. Lighting
    f. Resistive (KW) and reactive loads (KVAR)
    g. Power Factor

**Definitions**

1. Time of Use - is a method of measuring energy consumption based on when the energy is used. (Utility companies charge more during the time of day when electricity use is higher.)
2. Heating and Cooling – is the use of energy to change an environment by adding or reducing heat.

3. Ventilation – deliberate strategies of air circulation through a defined area to offset the absence of natural winds of fresh air Performs the functions of cleaning the air from dust and other small particles, localizing and removing odors, and creating a comfortable microclimate.
4. Exhaust systems – mechanical removal of potentially compromised air from within a defined space and discharged to an outdoor location.
5. Lighting – a combination of daylight and artificial means to change the illumination within a defined space to a specific color and intensity.
6. Resistive (KW) and reactive loads (KVAR) - the electric power supplied apparent power (kVA). Apparent power is broken down into active power (kW), and reactive power (kVAR). Active power provides energy for motion, heat, light and sound. Reactive power (inductive) is used to create magnetic fields necessary to drive rotating equipment such as motors, compressors, etc.
7. Power factor - = Active power (kW) / Apparent power (kVA)

GOAL of unity 1.0; corrected by capacitance.

**Reviewed by:** Associate Vice President for Facilities

**Policy Owner:** Associate Vice President for Facilities

**Approved by:**

Vice President for Finance and Administration

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Title

Date

**Effective Date:** Date

**Next Review Date:** Currently Under Review

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**Amended:**