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Energy Reduction at West Point: A Systems Approach to a Cultural Problem

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Abstract: The West Point Energy Council (WPEC) sponsors a Cadet Capstone seeking solutions to the overconsumption of electrical energy at the United States Military Academy (USMA). USMA routinely exceeds the electrical quota as set in its contract with Orange and Rockland Utilities, the local power company. As a result, the Academy is at risk to losing access to all electricity from its power provider. WPEC asks the Cadet Capstone to focus on the base-load usage of the Academy rather than specifically targeting reduction of peak usage. Comprehensive literature review suggests a building's heating, ventilation, and air conditioning (HVAC) systems as well as lighting are the biggest contributors to energy base-loads. The Capstone focuses on affecting those systems, which in turn lowers the base-load, through policy change. Our research reveals cadets are unaware of USMA's dire energy situation. This lack of awareness is the main driver of energy inefficiency at the Academy at the cadet level.

Keywords: Energy Usage, United States Military Academy, Net Zero