

Design and Assessment of HVAC and Plug Loads for a Campus Energy Master Plan

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Extended Abstract

The Reforming Energy Vision (REV) Campus Challenge is part of Governor Andrew M. Cuomo's strategy to kick-start an affordable clean energy system for New York State. The REV Campus Challenge facilitates colleges and universities to meet their financial, environmental, academic, and community goals through clean energy solutions that also assist progress of total clean energy use in New York State. As an engineering intern for this project, my responsibilities included preliminary energy analysis, benchmarking, on-site faceplate data verification, and assembly and organization of data. The purpose of this data was to create a campus energy assessment that promotes clean energy and energy conservation.

Plug load was assessed under the direction of TRANE mechanical and electrical engineers. The Energy Master Plan (EMP) was finalized by compiling and analyzing field data. The EMP is a "Roadmap" of straightforward steps to pursue clean energy goals with a 2 year outlook. Based on American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) standards, energy conservation methods will be discussed as well as the recommendations that were found.