



Ocean County College CHP Plant & ECMs

PROJECT INFORMATION

CONCORD DIVISION
Concord Management

PROJECT LOCATION
Toms River, NJ

MARKET
Higher Education

SERVICES
Energy Audit
Feasibility Study

CONSTRUCTION COST
\$7.4 Million

ABOUT THE CLIENT

Ocean County College is an accredited, coeducational, two-year, public, community college located in Ocean County, New Jersey. Its main campus is in Toms River. Other locations include the Southern Education Center in Manahawkin and over twenty off-campus sites throughout Ocean County.



CAMPUS-WIDE ENERGY AUDIT & ECMS IMPLEMENTATION

Concord Engineering performed a campus-wide energy audit to develop Energy Conservation Measures to facilitate an energy performance contract. Calculations and surveys were performed including installation of occupancy data loggers to validate savings of a campus-wide occupancy sensor program; other measures such as variable frequency drives, energy recovery wheels and new building management were included. Cost estimates to ensure the project would meet the requirements of NJSA 40A payback of all measures in less than 10 years were also included. Concord also provided the detailed engineering and developed the construction documents to implement the ECMs. This was a large Pay for Performance (P4P) venture, with the P4P funding being instrumental in the financing of the project. A power purchase agreement for all solar PV equipment and a CCHP plant was prepared following the energy performance contract.

COMBINED COOLING HEAT AND POWER PLANT (CCHP)

Concord Engineering performed a campus-wide CCHP feasibility study that mirrored the facility master plan for the new Kean-Ocean campus expansion. The result was a favorable economic return that would increase electric reliability to the campus by generating onsite power. Additionally, the increased efficiency when compared to grid connected power plants would also reduce carbon emissions and overall energy costs to campus. Concord was awarded the engineering and construction management for the new CCHP building and plant. Of particular importance was the redesign of all new electrical distribution and interconnection throughout the campus to support a single metered service. The CCHP plant consists of a 1.1 MW Waukesha reciprocating gas engine generator with chiller- heater to provide supplemental cooling and heating to the existing central energy plants. Concord also provided commissioning/start-up services for this project as well.