



Cooper University Hospital Central Plant Upgrades, Commissioning & Grant Application Assistance

PROJECT INFORMATION

CONCORD DIVISION

Commercial/Hospitality
Commissioning
Power & Infrastructure

PROJECT LOCATION

Camden, NJ

MARKET

Health Care/Hospital

SERVICES

Engineering &
Commissioning

CONSTRUCTION COST

\$3.9 Million

ABOUT THE CLIENT

Cooper University Hospital is a teaching hospital and biomedical research facility located in Camden, NJ.



PROJECT SUMMARY

Concord performed an Investment Grade Energy Audit (IGA) which determined the potential savings derived through a variety of measures and technologies. Concord then provided engineering, prepared construction documents, solicited bids, administered construction and commissioned the ECMs

ENERGY CONSERVATION MEASURES IDENTIFIED

- New 800 BHP steam boiler with stack economizer
- Converting one of the 900 BHP watertube boilers to a cold standby unit
- A continuous blowdown heat recovery system that will preheat the boiler make-up water
- Upgrading the steam-driven boiler feed water pump station
- Instantaneous, steam-fired domestic hot water skids
- Replacement of chiller with a high-efficiency 750-Ton unit and cooling tower
- Replacement of a 1000-Ton chiller with a high-efficiency unit
- Variable Speed Drives on the chilled water pumps/pressure independent control valves on various air handling unit chilled water coils
- Replacement of three (3) critical air handling units with upgraded energy efficient units
- Install NEMA premium efficiency motors on various pumps/fans

CHP FEASIBILITY STUDY

Part of the audit also included recommendations for demand side management and generation distribution. Concord evaluated the removal of Cooper's existing aging steam generation assets and recommended replacement with a 4.6 MW combined heat and power plant. The new CHP plant would be based upon a Solar Mercury gas combustion turbine with heat recovery steam generation (HRSG). The power island equipment selected was severely hampered by restricted access and space in the central power plant and surrounding patient areas. To accommodate this challenge, Concord's recommended configurations included fuel gas compression and thermal chilling to balance the energy load profile. Concord provided technical assistance and administrative support to Cooper with preparing an application for NJ EDA funding for this project that resulted in an award of \$28 million from the state's Energy Resiliency Bank.