LOAD MANAGEMENT

LM Case Study: Improving Funding Potential

AGENCY

NYC Department of Education

FACILITY

K801

MEASURES IMPLEMENTED

Fan Scheduling
Chiller Plant Scheduling
Optimized Start
DAT Control

SYSTEMS USED

Air System | Univents | Chiller Plant

FUEL SOURCE

Electricity

10% Electricity **10%** Peak Demand
in energy reductions

$53,683
in annual energy cost savings

276 Metric Tons
in annual avoided GHG emissions

Project Description

Facility Description

K801 is a 300,000 ft^2 administrative building run by the Department of Education (DOE), built in 1963. This office building has 23 floors serviced by six air-handling units (AHUs), four steam boilers, 563 electric univents, and three centrifugal chillers. The existing HVAC controls for K801 include mainly ineffective pneumatic controls for the AHUs, failed timers for the univents and no centralized BAS.

Project Background

With virtually no automated control, all units ran 24/7, 365 days of the year. In addition, operators were rightfully concerned about being unable to catch up to load if units were shut down. The Load Management team ran an analysis on zone temperature fluctuations based on various tests, and developed recommendations that were sensitive to the lack of automated controls. Together, the Load Management team and the DOE team developed a schedule for the two largest HVAC units, which included optimizing Discharged Air Temperature (DAT) Control. This schedule could be handled manually by the facility operators and still save energy.

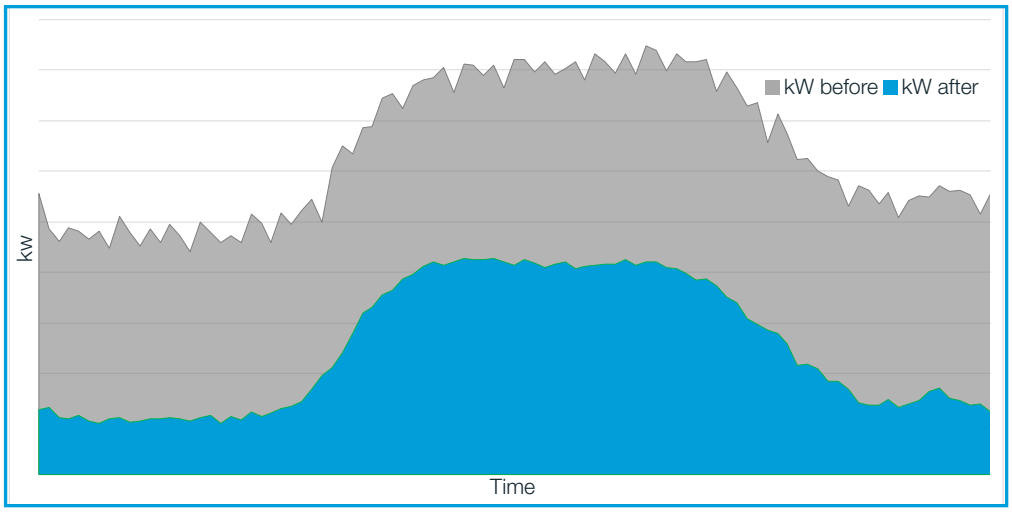
Project Results

As a result of the energy and cost savings realized from the analysis and manual implementation, K801 became optimally positioned to successfully submit an ExCEL application. Two reasons for DOE's success include: 1) they had a clear understanding of where funding was required, having exhausted all no-cost energy savings opportunities, and 2) they were committed to realizing energy savings.

To Implement This at Your Facility, have…

- A consistent occupancy schedule that does not vary week to week
- Processes to shut down or setback HVAC units
- A readiness to consider new ways of building operation
- A facilities team enthusiastic about optimizing their building's energy consumption!

Daily Load Profile Change



Energy

NYC DCAS
Citywide Administrative Services

Contact Us!

If interested in implementing a similar project, please contact Elizabeth Taveras (Etaveras@dcas.nyc.gov).
For more information about this project please contact Lisa Williams (LWilliams85@schools.nyc.gov).