

CASE STUDY

Heidelberg University Tiffin, OH



The Client

Heidelberg University is a private, non-profit institution established in Tiffin, Ohio in 1850. Heidelberg enrolls over 1,300 students annually. The 110-acre campus houses 1,110 students in seven residence halls.

The Challenge

Miller Hall Dormitory and the attached Hoernemann Refectory had a much higher Energy Utilization Index (EUI) rating than other buildings on campus. The buildings, which encompass 66,460 sq. ft., were both served by an end-of-life non-condensing hot water boiler. To keep the building fully operational, equipment replacements needed to be addressed within a tight timeline in the shoulder months, when heating and cooling would not be needed.

Our Solution

- Plug Smart replaced the end-of-life boiler with a new high-efficiency hydronic heating hot water boiler plant that significantly reduced the gas consumption as compared to the existing system.
- Converted three-way valves to two way valves in dorm rooms for variable flow pumping.
- Paired the system with non proprietary, open-front-end BACnet controls, which allow for better set point control, comfort control, smarter heating and cooling, and advanced energy efficiency strategies.
- Plug Smart identified and secured \$50,600 of utility rebates associated with the project.

\$1.04M

Investment ...

\$123K

Annual Savings



Annual energy saved:
349,493 kWh

Pollution avoided
annually: 531,299
pounds CO₂

Equivalent to taking 51
cars off the road



One (1) high efficiency
condensing boiler and
one (1) high-efficiency
non-condensing boiler

3 variable-speed AHUs
capable of economizer
control & demand
controlled ventilation

3 – 120-gallon indirect
fired “Smart Tanks” to
provide domestic
hot water

“One of the great things about working with Plug Smart was their ability to respond to the unexpected. Because the renovation work and projects involved existing buildings and equipment, there were a couple fairly serious issues that happened beyond the original scope. They were poised and quick to respond to those, and never were thrown off course by what was encountered. It didn't cost us any money or any more time, and they kept their promises, just as they committed at the beginning of the project.”

—Rod Morrison,
Heidelberg University
Associate VP of Facilities