

turn-key building solutions



The Baltimore County Employees Federal Credit Union (BCEFCU), a newly constructed office building in Baltimore, Maryland, was completed in 2003. Faced with comfort issues within various spaces of the building, a problematic chiller with multiple compressor failures and other building operational deficiencies, BCEFCU contracted with Global Facility Solutions (GFS) to perform a facility audit and HVAC system review to identify solutions to resolve building issues and achieve optimal mechanical system performance.

GFS developed a turn-key design-build project and system re-commissioning to address issues with building operation and energy usage at a low risk, fixed price investment to BCEFCU.

the BCEFCU project plan

- > Correct operational deficiencies with the central chiller & provide a guaranteed operational warranty
- > Address 2nd floor comfort issues
- > Correct issues with the central boiler reset
- > schedule and overheating within the building.
- > Improve air supply to the building

project plan:

Central Chiller Upgrade

Since building occupation, BCEFCU replaced a total of ten compressors and spent over \$90K fixing and maintaining the air cooled chiller.

GFS identified installation and refrigerant piping issues that reduced system capacity by as much as 5 - 10%. To correct deficiencies and provide a guaranteed operational warranty, GFS recommended and replaced the existing system with a new high efficiency 70-ton pack-aged air cooled chiller.



One of the boilers servicing the building

Comfort Issues

Tenants on the second floor of the BCEFCU building faced comfort issues due to direct sunlight from the south and west windows of the building. GFS evaluated and resolved this problem by correcting errors to the central boiler, air handlers, and variable-air-volume (VAV) boxes and improving overall performance.

implementation:

GFS completed the initial facility audit and provided engineering services and construction management for the recommendations. To assist with the project, GFS teamed with Electrical Automation Services, Inc. for evaluation and upgrades to the controls. The final project, delivered on schedule, was accomplished for a fixed price.



New Carrier High-Efficiency Chiller

"The project ran very smoothly," says Bob Calloway, president of GFS. "The mechanical upgrades, EMS and new chiller all work very well and are providing energy savings with reliable operation."

results:

- > **Improved building comfort & performance:**
The BCEFCU facility is now functioning at optimal performance. Comfort issues are resolved.
- > **Reduced costs:**
The project improved the overall energy efficiency and costs are down over 25%.
- > **Reduced tenant complaints:**
Tenant complaints have been reduced dramatically.

"We were very pleased [with the project]," says Trisha LaMartina, facility manager.

"The upgrades will also save on the building's energy bill so we'll see cost savings as well."