

SHOWCASE PROJECT: CITY OF GILLETTE CITY HALL

SOLUTION OVERVIEW

The City of Gillette leadership continues to strive to operate City facilities as efficiently as possible to demonstrate stewardship of tax resources. That commitment led to the implementation of a policy to update and replace end-of-useful-life and inefficient HVAC equipment with more efficient systems.

Staff suggested targeting City Hall as the logical and first site to commence the HVAC upgrade program since it is the center of City operations. Community residents frequently visit the building, making it a visible focal point for the city to showcase its commitments to energy efficiency.

Gillette City Hall is a three-story building built in 1984. An addition was built in 2000 expanding two two of the floors to provide additional office space. The current building has a floor area of 85,527 square feet and includes offices, conference rooms, utility billing services, a gym, locker rooms, a server room and the police department. The building is occupied from 7 am to 5 pm Monday through Friday with the police department open twenty-four hours a day, every day of the year.

In addition to establishing a policy focused on long-term investments in efficiency projects, City Council allocated funding for a multi-year phased approach to replacing equipment. Administrative Services, the department responsible for the project, was given over \$900,000 for the first phase with successive phases expected to receive funding via a five year capital improvements budget.

SECTOR TYPE

Local Government

LOCATION

Gillette, Wyoming

PROJECT SIZE

85,500 Square Feet

FINANCIAL OVERVIEW

Project Cost \$900,000

SOLUTIONS

The city contracted with a service provider to perform a retrocommissioning project at City Hall, with

the intention to identify opportunities for HVAC system improvement and efficiency. The resulting report provided suggestions for upgrades to the system including replacing the controls system. In addition, the report focused on complimentary and sequenced equipment replacements in order to conduct the upgrades in a pragmatic, phased approach. The city is acting on these recommendations, taking a phased approach to multiple upgrades.

Phase I: HVAC Upgrade

Prior to upgrades, the city had a combination of dated controls and thermostats responsible for controlling interior temperature throughout city hall. The city found that these controls were inefficient and contributing to energy losses. By replacing the existing control system as well as pneumatic thermostats, the city was able more effectively regulate conditions in the building.

A major component of Phase I was the replacement of a cooling tower that was approximately 5 to 10 years beyond its useful life.

Phase II: Boiler Upgrade

This phase is expected to start in early 2015 and be completed by summer 2015. Two boilers will be replaced with higher efficiency units.

OTHER BENEFITS

The new control system and sub-meters will improve reporting capabilities and data tracking for the City Administrator and elected officials. Staff are able to report more accurately on energy performance. In addition, staff is in the planning stages for replacing equipment in another building with equipment similar to City Hall in an effort to replicate the positive outcome experienced of the project.

Annual Energy Use

(Source EUI)

Baseline(2012-2013)



Expected(2014-2015)



Actual()



Energy Savings

24%

Annual Energy Cost

Baseline(2012-2013)



Expected(2014-2015)



Actual()



Cost Savings

\$24,500



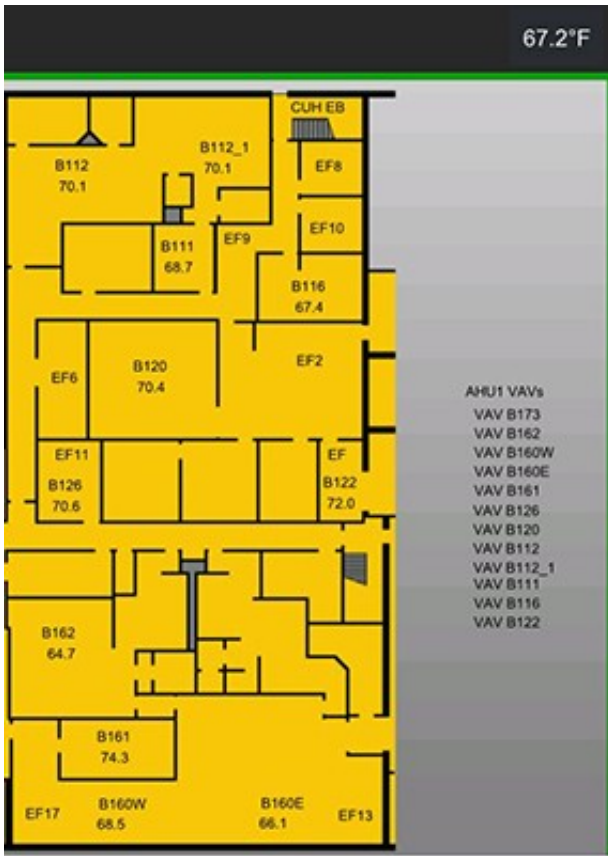
Gillette City Hall



New cooling tower #1



New chillers



Screen Shot of UI for new Control System