



## SHOWCASE PROJECT: SPOKANE COUNTY: SPOKANE REGIONAL HEALTH DISTRICT BUILDING

### SOLUTION OVERVIEW

Spokane County, in partnership with the State of Washington Department of Enterprise Services, partnered with McKinstry Co. to develop a project to replace aging infrastructure and implement facility improvement measures to drive energy and cost savings. Following completion of an investment grade audit of the Spokane Regional Health District building, an energy grant was secured from State of Washington Department of Commerce and a utility incentive from Avista Utilities.

The project consisted of steam plant decentralization, construction of a new boiler and domestic hot water plant, controls and system upgrades, fan-powered VAV boxes for freeze protection, garage exhaust control, lighting, and lighting controls.

The building, originally built in 1970, is one of 34 local health agencies serving Washington State's 39 Counties. Spokane Regional Health District's mission is to serve as the region's public health leader. Programs and services include: Community and Family Services. Disease Prevention Programs, Environmental Preparedness, Environmental Public Health, Food Safety Program, Laboratory Services and Opioid Treatment Program. The District has approximately 250 employees and serves a population of more than 400,000 in Spokane County.

See below for some key facts and figures from this project:

- 7.3 year payback to the Health District after grant funds and rebates
- 35 years life expectancy on main boiler system will provide a total return on investment of \$2.27M
- \$500,000 Department of Commerce grant received
- \$212,990 Avista Utility incentive received
- 2013 vs 2010 (base year) total energy use declined 23%, despite a 6% increase in days requiring heating
- 0 safety incidents in 3500 man-hours of installation labor

### SECTOR TYPE

Local Government

### LOCATION

Spokane, Washington

### PROJECT SIZE

<https://betterbuildingssolutioncenter.energy.gov/showcase-projects/spokane-county-spokane-regional-health-district-building>

For more information, visit <https://betterbuildingssolutioncenter.energy.gov>

113,000 square feet

## **FINANCIAL OVERVIEW**

Project Cost \$1,210,000

## **SOLUTIONS**

Spokane County took a multi-measure approach in creating and implementing its energy efficiency strategy for the Regional Health District building. By installing an array of condensing boilers, it decoupled the existing steam source to the facility. It installed new dual duct terminal units in floors 1-3, restroom pipe freeze protection equipment, and garage sensors to control the exhaust fans when CO levels rise above code. It also upgraded garage lighting by installing T-8 Fluorescent lighting with dedicated lighting sensors.

Additional work completed within at the facility included:

- Installation of automatic glycol feed system
- Installation of side-stream filtration system
- Upgrade of existing pneumatic valves to digital control valves with flow meters for enhanced diagnostics
- Re-use of temporary domestic hot water heaters purchased for cut-over of steam to hot water system

## **OTHER BENEFITS**

In addition to energy cost savings, Spokane is also realizing annual operational savings of about \$40,000, because the facility no longer pays O&M to the de-coupled central steam plant. The County has realized energy and operational savings a full year early, due to a tightly compressed implementation schedule. It ensured minimal occupant impact within the occupied facility by constructing during swing hours. Occupants have benefited through comfort improvements, and the County will benefit through the elimination of future needed heating system repair and replacement.

## Annual Energy Use

Baseline(2010)  
209 kBtu/sq.ft

Actual(2013)  
161 kBtu/sq.ft

**Energy Savings**  
**23%**

## Annual Energy Cost

Baseline(2010)  
\$148,800

Actual(2013)  
\$107,400

**Cost Savings**  
**\$41,400**



Outside the Regional Health District Building