



# Efficiency Now

It's never been more important.



Denver Federal Center: *Denver, Colorado*

## Federal center demonstrates renewable energy, reducing costs and emissions

### Background:

As the regional home of federal agencies such as the U.S. Bureau of Reclamation and U.S. Geological Survey, the Denver Federal Center is a 640-acre GSA complex with more than 90 buildings. Its managers wanted to make sure they were saving energy and money – and that the tenants were satisfied and working in a productive atmosphere.

### Opportunity:

The Denver Federal Center needed to upgrade and replace aging equipment, increase operational efficiency, improve water efficiencies, reduce emissions, and employ renewable energy to demonstrate its practicality. Most of all, they wanted to manage utility costs in order to make good business decisions. After listening to these goals, Johnson Controls suggested a comprehensive approach using one of the Department of Energy's Super Energy Savings Performance Contracts (ESPC). Johnson Controls delivered traditional building improvements, such as lighting retrofits, HVAC equipment upgrades, and new high-efficiency chillers and pumps. Johnson Controls also recommissioned an existing solar hot water system, improved an irrigation control system, and installed a system to automate electric and gas meter readings. Solar panels were installed on the childcare center on-site to demonstrate the power of renewable resources to the children.

### Results: \$450,000 annual savings

The Denver Federal Center's energy and operating costs have been reduced by more than \$450,000 per year. The water savings for the project total nearly 11 million gallons per year, and emissions have been reduced by more than 16 million pounds of carbon dioxide, 40,500 pounds of nitrogen oxides, and 93,600 pounds of sulfur dioxide. The Denver Federal Center was recognized in 2001 with a GSA Environmental Award for these achievements.

Efficiency makes sense for everything from the wallet to the environment. Efficiency measures can be accomplished quickly, they're relatively easy, and there's a real payback. The world needs efficiency, and Johnson Controls has everything necessary to provide it. We've got the experts, we've got the technology, and we've got ingenuity and integrity built into everything we do. For more examples of energy and operational solutions for buildings around the world, visit [johnsoncontrols.com/efficiencynow](http://johnsoncontrols.com/efficiencynow).

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