Introduction

Some states address energy efficiency one building at a time. Working with Johnson Controls, the Maryland Department of General Services (DGS) is tackling energy efficiency as well as water conservation and other upgrades at 37 state facilities. Savings from this $17.8 million project are projected to exceed $31 million over 13.5 years through energy and operational savings. It also is expected to employ hundreds of people, with more than one-third of contractors registered as minority- or women-owned business enterprises.

Challenges

• Decrease power consumption in state buildings. Governor Martin O’Malley’s EmPOWER Maryland initiative has set a goal of reducing power usage by 15 percent by 2015.
• Create a more comfortable working environment for state employees and citizens who use the buildings.
• Reduce the impact of state buildings on the environment and global climate change.

Johnson Controls Solutions

• Upgrade cooling and heating systems, plumbing and lighting fixtures; install lighting occupancy sensors.
• Integrate energy controls with automated energy management systems.
• Reduce air leaks in building envelope and replace windows.
• Install solar panels to generate electricity on-site.

Results

In addition to cost savings, taxpayers and state employees will find many other benefits:

• Reduction in energy use of 19.3 percent by 2011 through lower electricity, natural gas, fuel oil and water consumption in 37 state buildings.
• Improved working environments at 14 state buildings in Annapolis, six in Baltimore, two in Crownsville and 15 District Court/Multi-Service Center buildings.
• Increased accountability in state government, as Johnson Controls provides annual reports on the savings through detailed measurement and verification procedures.
• Wide-ranging employment opportunities for project engineers, project managers, construction managers, mechanics, technicians, electricians, mechanical and electrical service providers, design engineers, plumbers and administrative support.
• Diverse business development, as the project subcontractors include 35 percent minority business enterprises or women-owned business enterprises, which exceeds State of Maryland goal of 25 percent.
• Significant environmental impact by reducing greenhouse gases, including 15.441 million pounds of carbon dioxide, equivalent to the carbon dioxide emissions from powering 8,356 homes.