

# Federal Energy and Water Management AWARDS 2014

*Main Photo: The building renovation incorporated window films to reduce solar heat gains on building glazing systems.*

*Inset Photos: Interior lighting is controlled through a combination of multi-level switching, dimming, occupancy sensors, and daylight sensors for maximum energy savings and enhanced productivity.*



## Jeffrey DeVore, Stephen Grimes, Gerry Mitchell, Alfonso Sanchez U.S. Air Force Wright-Patterson Air Force Base, Ohio

In FY 2013 a team of architects and engineers from Wright-Patterson's 88 Air Base Wing Civil Engineering Division successfully salvaged and renovated an underused, historic 53,000 square foot hangar built in 1934, increasing usable laboratory space by 60% while reducing water use by 45% and energy use by about 30%.

The new energy efficient building allowed the Air Force Research Laboratory's Power Control Division, formerly located in multiple locations, to consolidate. An improved thermal envelope with spray foam insulation, stringent HVAC requirements, high-efficiency glazing, reduced

exterior lighting, and occupancy sensors are projected to reduce energy use by 9.8 billion Btu and energy costs by more than \$141,000 per year. Water savings are estimated at 62,000 gallons per year.

The building design surpassed the required Leadership in Energy & Environmental Design Silver criteria to achieve Wright-Patterson's first Gold Certification. Further, the renovation/consolidation project allowed for the demolition of building 450, reducing Wright-Patterson's footprint by 148,300 square feet and saving an additional 8.7 billion Btu annually.