

Higher Education Solutions

Helping our Universities become Vibrant, Growing and Green



Project Reference: University of Louisville Phase I

Project Name	University of Louisville Phase I	
Project Location	Belknap Campus / Louisville, Kentucky	
Customer Contact	Name	Larry Detherage
	Title	Associate Vice President & Physical Plant Dir.
	Address	University of Louisville, Louisville, KY 40292
	Phone Number	502-852-8185
	Email	jldeth01@louisville.edu
Siemens Contact	Name	Michael Azzara
	Title	Business Development Manager
	Location	Louisville
	Phone	502-741-0397
	Email	michael.azzara@siemens.com
Project Information	Total Contact Cost	\$21,513,289
	Type of Contract	Guaranteed Energy Savings
	Length of Contract	13.5 years
	Guaranteed energy savings	\$2,213,238 annually
	Guaranteed operational savings	\$129,691 annually
	Total guaranteed Savings	\$2,342,929 annually
	Construction Start / End Date	October 2009 / March 2011
	Project Status	In guarantee year two.
	Verification Methodology	IPMVP Options A & B
Siemens Solution Description	Siemens provided turnkey design, engineering and construction services to help the University of Louisville address critical infrastructure improvements through a Guaranteed Performance-based Solution. Conservation measures included a broad variety of heating, ventilation and air conditioning system upgrades, building automation and lighting control retrofits, and water conservation strategies in 71 buildings totaling 4.5 million square feet of space. The project was designed to reduce the university's electric use by more than 20% and natural gas and coal consumption by 40%.	

Project Scope and Description	Comprehensive Interior Lighting Upgrades	Retrofitted all T12 lamps and magnetic ballast with 28 watt T8 and electronic ballast. Installed occupancy sensors and controls.			
	Comprehensive Exterior Lighting Upgrades	Replacement of high pressure sodium outdoor and parking garage lighting with high efficiency induction lighting.			
	Building Water Fixture Retrofits	Retrofitted high flow devices with low flow devices at all university facilities.			
	Energy Management System Installation	Installed Building Automation Systems and variable frequency drives in various buildings.			
	HVAC System Upgrades	Campus wide steam trap replacement; installation of steam valve insulation jackets; attic insulation; new VAV box installations, conversion of constant volume AHUs to VAV; installed chilled water plant flow meter; installed electric submeters; replaced existing coal fired boiler with a new 83,000 PPH natural gas fired boiler; installed new cooling tower fan array; premium efficiency motors and synchronous belt installation; replacement of several AHUs in major academic buildings; installed closed loop heat rejection for single pass cooling to lab equipment.			
	Commissioning, Recommissioning, and Training	Commissioning was provided on the newly installed equipment. Recommissioning was provided on existing equipment directly affected by the newly installed equipment.			
Siemens Project Team Members	Rob Wright, Operations Mgr.	Louisville, Kentucky			
	Sieglinde Kinne, Energy Eng	Louisville, Kentucky			
	Gary Effinger, Const. Mgr.	Louisville, Kentucky			
	Michael Azzara, Bus. Dev.	Louisville, Kentucky			
Construction Manager	Messer Construction	Louisville, Kentucky			
Major Subcontractors and Consultants	ECO Engineering, Inc.	Cincinnati, Ohio			
	Hydrametrics, Inc.	Mineapolis, Minnesota			
	Staggs & Fisher	Lexington, Kentucky			
	Lockett & Farley	Louisville, Kentucky			
Performance Data			Achieved		
	Units	Guaranteed	Year 1	Year 2	Year 3
	Electric (kWh)	21,065,106	21,763,165		
	Electric (kW)	615	630		
	Gas (MCF)	84,264	123,657		
	Water (kgal)	26,659	27,679		
	Sewer (kgal)	26,659	27,679		
	US Dollars (\$)	\$2,213,238	2,690,521		