Higher Education Solutions

Helping our Universities become Vibrant, Growing and Green

Project Reference:
University of Louisville Phase II

Project Name	**University of Louisville Phase II**	
Project Location	Health Science Campus and 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	$23,777,880
	Type of Contract	Guaranteed Energy Savings
	Length of Contract	15.5 years
	Guaranteed energy savings	$1,914,886 annually
	Guaranteed operational savings	$64,243 annually
	Total guaranteed Savings	$1,979,129 annually
	Construction Start / End Date	May 2011 / November 2012
	Project Status	In Performance Assurance
	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, water conservation strategies, and power factor correction. Work took place in 19 buildings totaling 1.7 million square feet of space.	

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.
	Exterior Lighting Upgrades	Replacement of high pressure sodium parking garage lighting with high efficiency induction lighting.
	Building Water Fixture Retrofits	Retrofitted high flow devices with low flow devices at all city facilities.
	Energy Management System Installation	Installed Building Automation Systems and variable frequency drives in various buildings.
	HVAC System Upgrades	Campus wide steam trap replacement; steam valve insulation jackets; attic insulation; fume hood proximity sensors; occupancy control of VAV boxes; replaced existing coal fired boiler with a new 78,000 PPH natural gas fired boiler with economizer; premium efficiency motors and synchronous belt installation; rebuild of six AHUs in two major research facilities; removal of internally lined ductwork; fume hood rebalancing in six research facilities, and installation of new capacitor banks for power factor correction.
	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

Performance Data	**Units**	**Guaranteed**	**Achieved**		
			Year 1	**Year 2**	**Year 3**
	Electric (kWh)	12,098,164			
	Electric (KVA)	40,132			
	Gas (MCF)	12,151			
	STM (000’ lbs)	66,163			
	CHW (ton-hr)	3,974			
	Water (kgal)	3,999			
	Sewer (kgal)	3,999			
	US Dollars ($)	$1,914,886			