

Catholic University of America

620 Michigan Ave., N.E.
Washington, D.C. 20064



Project Information

- Project Size: 23 buildings, 2,200,000 sq. ft.
- Project Type: College/University
- Project Dates: 04/1998 –12/2001 (completed in three phases)
- Project Value: \$4,859,503

List of Improvements

- ▶ Energy efficient lighting
- ▶ Central steam plant upgrades
- ▶ Metering and billing systems
- ▶ Steam trap replacements
- ▶ Energy management systems
- ▶ Power generation
- ▶ Air/water balancing
- ▶ Variable frequency drive installation
- ▶ Control valve installation
- ▶ Water efficiency upgrades
- ▶ Mechanical system enhancements
- ▶ Installation of campus-wide utility sub-metering system

Guaranteed Savings

Utility	Units	Phase 1	Phase 2	Phase 3
Electric Consumption	kWh	1,513,995	151,548	2,565,835
Electric Demand	kW	4,848	208	4,378
Natural Gas	Therms	---	236,708	157,767
Water	kgal	---	---	16,122
	Dollars	\$140,604	\$127,289	\$336,840

Project Highlights

Custom Energy worked with the client to complete this project using a phased approach – allowing capital funds to be blended with energy savings as they became available.

Phase 1: Improved lighting conditions and installed utility sub-metering system in each building to measure actual electricity and steam usage. That information helped the university determine savings opportunities for future phases of work and establish a load profile for individual buildings.

Phase 2: Renovated the university's central steam plant—greatly improving the efficiency of facility heating systems and significantly reducing emission levels of CO₂ and NO₂.

Phase 3: Improved mechanical operation in specific campus buildings reduced both energy costs and prolonged the life of associated equipment. Centralized energy management system so all buildings could be controlled by one system.