

LUC Baumhart Residence Hall

ENERGY STAR AWARD

Project Highlights and Results

- 92% natural gas heating efficiency achieved through unique design of variable flow condensing boiler operation.
- Floating mechanical room floor eliminated as majority of building is cooled by variable flow water cooled chillers mounted on isolating bases with pneumatic isolators.
- Stack effect typical of high-rise buildings minimized to enhance comfort levels for building occupants.

Project Background

Owner:	Loyola University Chicago (LUC)
Location:	Chicago, IL (Water Tower Campus)
Team/Team Lead:	Don McLauchlan, Steve Maze, Adam Sanders
Elara Role:	MEFPFIT Engineering Design
Type:	New Construction
Construction Cost:	\$48,000,000

Project Overview

Building Type:	Higher Education, Residential
Building Attributes:	25-Stories; 249,650 SF
Initial Construction:	2006
MEFPFIT Systems:	Condensing Boilers, High efficiency chillers, FCUs, Natural Ventilation, DOAS, Heat Recovery, DCV, DDC

Innovation

- Provided unique variable primary hydronic system that integrated hot water, chilled water and dual temperature water.
- System design allowed for two-pipe residential fan coil units to either heat or cool independent of the heating and cooling required for lower floors while still utilizing the building's common heating and cooling plants.
- Additional energy efficiency strategies include variable flow hydronic boilers, variable flow water cooled chillers, naturally ventilated kitchens, diversified variable toilet exhaust, and makeup air heat recovery.

