

Loyola University Retreat & Ecology Center (LUREC)

Project Highlights and Results

- Energy Star rating of 95 out of 100 (average building is rating of 50)
- 60% annual utility savings (building only)
- 98.8% annual utility savings (campus)

Project Background

Owner:	Loyola University Chicago (LUC)
Location:	Woodstock, IL
Team/Team Lead:	Don McLauchlan, Dustin Langille
Elara Role:	MEP Engineering Design
Type:	Phased Energy Retrofit
Construction Cost:	\$1,400,000

Project Overview

Building Type:	Retreat Center (Residential, Conference)
Building Attributes:	2-Stories; 82,109 SF
Initial Construction:	1959, 2003 Addition
MEPPFIT Systems:	Geothermal heating and cooling, VRE, DOAS, Variable Exhaust, DDC

Innovation

- Entire project driven by University's long-term desire to create a fully sustainable campus that would be either off-grid or net zero energy usage.
- Through a comprehensive energy audit and master plan, a five-phase plan was developed.
- Phases One through Four lowered energy consumption of the existing campus to minimize investments needed for renewable energy sources.
 - Strategies include wall and attic insulation, window replacements, vertical closed loop geothermal system with heat pumps, variable refrigerant flow systems, variable exhaust, a dedicated outside air system and upgraded controls.
- Phase Five added renewable energy sources including solar photovoltaic, solar thermal, and wind turbine.

