



Energy Efficiency Case Study

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Sacred Heart Church Lawrence, MA

Background

A pillar of the community in Lawrence, Massachusetts, Sacred Heart Church offers a traditional Latin Mass and local support to its parishioners. Maintaining its impressive 26,000-square-foot building is a central part of Sacred Heart's ability to uphold its mission, which includes providing religious education. As this maintenance is no easy feat, the Dominican Brothers at Sacred Heart sought new ways of decreasing energy costs and improving the environmental impact of their structure.

Challenge

The current Dominican Order of Preachers arrived at Sacred Heart nearly 16 years ago to reclaim the building and to restore the unchanged, traditional teachings of the faith to the community in the greater Boston area. Built in the shape of a cross, the building's structure is 50 feet high in the center with an attic above that adds an additional 12 feet of height. As is the case with many large, older facilities, heating the church has always been a challenge. The Brothers knew there was no insulation and sought ways to heat their building better, make it more energy efficient, and importantly, keep their parishioners both warm and attentive during the Holy Sacrifice of the Mass.

Highlights

- Annual energy savings: **3,900 therms**
- Annual savings: **\$4,300**
- Incentive secured: **\$107,000 (90% of cost)**

“Choosing to weatherize our beautiful gothic church allows us to **reduce heating costs so we have more funds available to dedicate to other improvement projects. Serving our parish and upholding our sacred traditions is central to our mission, and **Eversource played a key role in ensuring we can keep doing this**, by the grace of God, for years to come.”**

— Brother Gerard, Sacred Heart Church

About Mass Save:

Together, we make good happen for Massachusetts: Berkshire Gas, Blackstone Gas Company, Cape Light Compact, Columbia Gas, Eversource, Liberty Utilities, National Grid and Unitil. As one, we form Mass Save®, with the common goal of helping residents and businesses across Massachusetts save money and energy, leading our state to a clean and energy efficient future.

WE ARE MASS SAVE®:

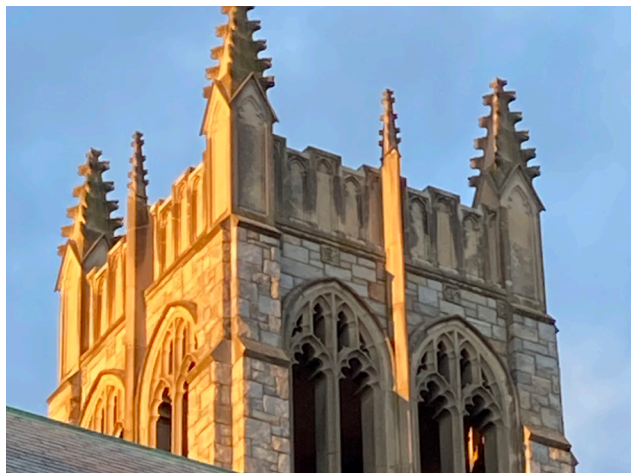


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Solutions

In partnership with Energy Source, a comprehensive energy solutions provider, Sacred Heart chose to enhance weatherization strategies for their space. This project included adding building envelope insulation in two primary areas.

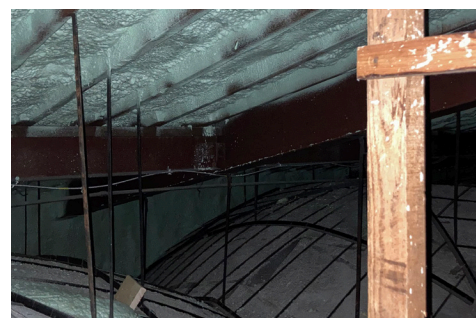
- **Upper Attic Sanctuary:** With no insulation in the upper attic of the sanctuary, there were several large voids and the steel lath and plaster structure acted as a conductor to the exterior. The added insulation significantly slowed the conductive properties of the surface, making it far easier for the building to retain heat.
- **Lower Attic Sanctuary:** A lack of insulation in both lower attics of the sanctuary and similar construction to the upper attic meant the same issues in the spaces below. In consultation with the Dominican Brothers, the Energy Source team learned they may eventually add an air conditioning solution or air handler to both spaces. As a result, the project team chose to make the roofline of the two attics and the exterior knee walls the new thermal boundary when installing the insulation. This adjustment will maximize the standby energy loss of the future cooling system and allow access for servicing the equipment down the road.

In order to make time for the work to be completed, Sacred Heart simply adjusted their summer Mass schedule. Instead of holding daily Mass at 8:00 A.M., they were able to shift back to 7:00 A.M., opening up the sanctuary for workers once finished.

Results

By weatherizing their structure, the Dominican Brothers at Sacred Heart are immediately saving energy and decreasing associated costs. Perhaps as importantly, the Brothers reported immediately feeling a difference in their building. The original draft felt throughout the sanctuary is gone. The building holds its own heat much better, and in mid-November, the Brothers still hadn't turned the heat on.

One of the significant outcomes from this project was the \$100,000+ incentive Eversource provided for the work. Covering 90% of the project cost, this incentive made the insulation measures possible and resulted in just a 2.8 year project payback for Sacred Heart Church. Between the return on investment and annual savings, this project will allow the church to invest more of its dollars in the community, its parishioners and future restoration projects.



The information in this case study is an accurate representation of this customer's experience at the time of publication. Results, including cost savings, from heat pump installation and/or other energy efficiency measures can vary based on each individual customer's situation.

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