



St. Brigid's Parish Lexington, MA

About St. Brigid's:

St. Brigid's of Lexington, MA holds an important place in the history of Catholicism in Massachusetts, having become an independent parish in 1886. The current church building was constructed in the late 1950's and has since been home to an active and dedicated parish.

The mission statement of the community of St. Brigid's and its sister Lexington parish, Sacred Heart, includes a pledge to respect creation. With support from staff and the lay-led Faith and Environment Group, St. Brigid's and Sacred Heart have a history of putting their faith into action.

The Challenge:

In 2011, MIP&L conducted an Environmental Stewardship Assessment (ESA) of St. Brigid's Church and Parish Center. The parish staff and volunteers collected historical energy usage data in advance of a site visit. MIP&L identified several opportunities for St. Brigid's to decrease their carbon footprint and substantially reduce their annual energy costs. The MIP&L report confirmed the benefit of existing plans to convert from an outdated oil-fired heating system to a natural gas-fired system. Also high on the list of energy-saving recommendations were: installing roof insulation; weather stripping, and replacing existing lights with energy-efficient LED bulbs.

The Response:

Parish staff obtained cost estimates, and developed strategic plans to implement the most cost effective and energy efficient opportunities. They converted expensive and aging oil-fueled heating systems to efficient, gas-powered systems; installed energy-efficient lighting; and insulated the church roof with icynene spray foam insulation, the current state of the art material used in new commercial and some residential construction.

The Results:

St. Brigid's conducted its first before and after comparison in 2013 after one full year of operation. The results are impressive!

Money saved:

- In sum, St. Brigid's **lowered its annual heating costs by \$32,942** by insulating the church with icynene, and converting to gas heating systems in both the Church and Parish Center. **Heating costs in 2013 dropped 53%** - from a total of \$62,364 in 2011, to \$29,422 in 2013. That huge decrease occurred even though there were 21% more heating degree days in 2013, which means that it was a much colder winter!



Carbon emissions reduced:

- St. Brigid's Church and parish center reduced their annual emissions by a total of **52.99 metric tons of carbon dioxide**.

These results are great news for St. Brigid's, both in terms of a substantial reduction in operating costs and a giant step forward in caring for creation!

A detailed breakdown of costs and carbon dioxide emissions for heating & electricity follows:

			ELECTRICITY		Cooling Degree days	GAS		Heating Degree Days	OIL	
YEAR	TOTAL	\$s	KWH	\$s		Therms	\$s		Gallons	
Parish Ctr. 2011										
2011	\$43,165	\$7,634	48,360	1,246			4,714	35,531	9,670	
CO ₂ lbs.	274,640		58,032						216,608	
per SF	\$2.27	\$0.40	2.55					2	0.51	
Church 2011										
2011	\$39,202	\$12,368	75,342	1,246			4,714	26,834	8,546	
CO ₂ lbs.	281,836		90,410						191,426	
per SF	\$1.81	\$0.57	3.49					1	0.40	
Parish Ctr. & Church 2011										
cost	\$82,367	\$20,002		1,246			4,714	62,364	18,216	
CO ₂ lbs.	556,476		148,442						408,034	
Parish Ctr. 2013										
2013	\$18,192	0	39,520	1,176	\$18,192	16,524	5,150			
CO ₂ lbs.	240,755		47,424			193,331				
per SF	\$0.96	0	2.08		\$0.96	0.87				
Church 2013										
2013	\$22,042	\$10,812	68,740	1,176	\$11,230	9,949	5,150			
CO ₂ lbs.	198,891		82,488			116,403				
per SF	\$1.02	\$0.50	3.18		\$0.52	0.46				
Parish Ctr. & Church 2013										
Cost	\$40,234	\$10,812		1,176	\$29,422		5,150			
CO ₂ lbs.	439,646		129,912			309,734				

Church & Parish Ctr. Combined		\$s	CO ₂	lbs.	Metric tons/year
2011 Parish Ctr. & Church	Total Energy Cost	\$82,367	CO ₂	556,476	252.41
2013 Parish Ctr. & Church	Total Energy Cost	\$40,234	CO ₂	439,646	199.42
Reduction		\$42,133		116,830	52.99

Continuing the Cause:

St. Brigid's did not stop there! Their active and diverse adult education programming shared with their sister parish includes activities planned by the Faith and Environment Group. This committee "provides a faith-based response to the moral challenge of climate change by leading prayer services, and offering films, speakers, and bulletin articles on caring for creation. In addition, it works with the staff and parishioners to reduce energy use in the parishes and at home."

Continuing education is a critical part of MIP&L's mission. Energy-saving strategies must go hand-in-hand with life-style changes and an increased understanding of the connection between faith and the responsibility to care for creation.

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