

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, MassIPL 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. MassIPL identified several opportunities for St. Brigid's to decrease their carbon footprint and substantially reduce their annual energy costs. The MASSIPL report confirmed the benefit of existing plans to convert from an outdated oil-fired heating system to a natural gas-fired system.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.

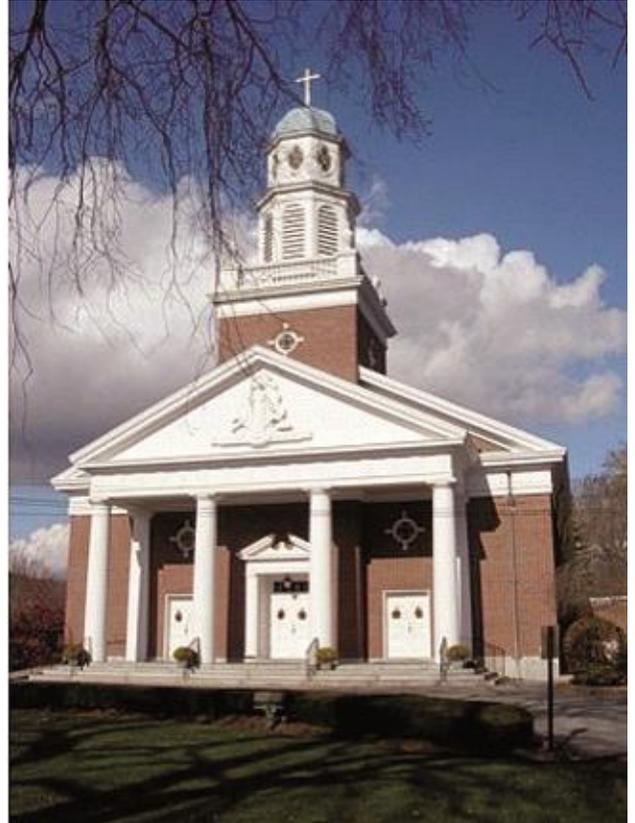
The Response:

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 MASSIPL'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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