

ENERGY EFFICIENCY

Church saves over \$12K per year in costs, also improves quality of lighting.

Savings Payback

Approximate Size (3 Buildings Total): 27,000 sq. ft.

Prior Watts Used:	66,767	Current Watts Used:	10,890
Hours of Operation:	1,325	Yearly Energy Savings:	74,037 kwh
Project Cost:	\$66,021	Utility Incentive:	\$47,716
Monthly Savings:	\$1,053	Payback:	1.5 yrs.

Client

St. Charles Church, located in the city of Pittsfield, Massachusetts, is the second largest congregation in the area.

Opportunity

With low operating hours, how did St. Charles Church gain significant savings by completing an energy upgrade? After an energy audit was conducted, findings showed the property's 3 buildings: the church, rectory, and convent, were filled with many outdated, high wattage bulbs, attributing to unnecessary and high energy costs. The church used high watt, quartz lighting for visual effects and to highlight the alter. The rectory, used as church offices and living/dining areas, contained inefficient, incandescent lighting. The audit also found that the convent, which houses offices and classrooms, used outdated 200 watt incandescent bulbs and old, t-12 technology.

Solution

1.) Church

- (12) chandeliers containing (5), 250 watt quartz halogen bulbs consumed 15,000 watts of energy when turned on; replaced with custom LEDs that consume only 880 watts when turned on
- (42) 250 watt quartz halogen bulbs in the alter consumed 10,500 watts; converted to (3) LED16.5 watt spot lights consuming only 2,079 watts

2.) Rectory

- Replaced all incandescent bulbs with LED equivalent bulbs; less power used for same brightness

3.) Convent

- Replaced 200 watt incandescent bulbs with 16.5 watt LED bulbs
- Replaced 40 watt t-12 technology with 16 watt LED 4-foot tubes

Benefit

Even with low operating hours, upgrading to high-efficient, LED lighting yielded significant savings in energy costs.

“ We have had so many people comment on the new quality of light. We have a volunteer that comes in at 4:00 AM to clean, and they said they feel much safer now with the exterior lighting.

— Rev. Peter Gregory, Pastor