

Gideon Putnam Hotel

Comfortable Energy-Efficient Lighting Provides Round-the-Clock Flexibility

SMALL COMMERCIAL LIGHTING PROGRAM — CASE STUDY

Project Profile

Type of Space

Hotel veranda and banquet room

Square Footage

7,785

Project Objective

Uniform, high-quality, dimmable lighting with a good return on investment

Project Benefits

Adjustable light levels
Longer lamp life with less burn outs
Lower utility bills

Saratoga’s historic Gideon Putnam Hotel, managed by Xanterra Parks and Resorts, has an environmental mission to conserve fuel, water, and electricity. Hotel staff must also provide the quality atmosphere that their guests have come to expect. When the decision was made to upgrade the lighting in the Hotel’s veranda and banquet room, John Plekan of Warren Electric, an Ally Distributor in the New York Energy SmartSM Small Commercial Lighting Program, designed a lighting system that offered energy savings, multiple light levels for different tasks, and a high quality, pleasing atmosphere.

The Hotel’s veranda contained several areas where lighting improvements could be made. All of the incandescent and halogen fixtures were left on day and night, even though different light levels are required throughout the day. Since the area was often used for trade shows maintenance staff frequently had to replace burned out lamps while display tables were in the way.

To address these problems, the new design included 42-watt long life compact fluorescent recessed fixtures with dimming ballasts, replacing the existing short life 250-watt recessed halogen fixtures. Large windows in the space offered an opportunity to reduce energy consumption by dimming the lamps during daytime hours while still maintaining the desired light level. The dimming system also includes a photocell sensor that automatically adjusts the light level to a specified level based on the amount of natural sunlight entering the room. The new design incorporated three existing incandescent chandeliers, which provide a focal point and enhanced aesthetics for the space.



Dimmable fixtures with a photo sensor provide even lighting both day and night in the veranda.

Moveable walls allow the 5,800 square foot banquet room to be divided into two, three, or four smaller rooms. Depending on the activity in each room, different light levels could be required. Higher levels are needed for meetings, while lower levels are needed for dining or audio visual presentations. New manual dimmers now allow the hotel staff or occupants to set the light level needed in each room based on how the room is being used. The dimming system saves energy and cuts utility bills by reducing the power needed to operate the lights when the system is dimmed.

“Overall this project was a win-win-win situation for everyone: guests, the company, and maintenance.”

— Howard Schoonmaker
Buildings and Grounds



Banquet room with fixtures dimmed allows viewers to see the audio visual presentation.

All of the fixtures are recessed so the occupant's attention remains focused on the activities in the room. Uniformity was maintained by selecting recessed fixtures designed to be installed within the existing ten foot center to center spacing. Since glare is an important issue in meeting rooms the new fixtures were specified with no glare at critical angles. The 84 existing 250-watt recessed halogen fixtures were replaced on a one-to-one basis with 42-watt dimmable compact fluorescent recessed fixtures. The reduction in wattage reduced energy costs for the space by 80 percent.

All lighting upgrades were completed quickly and efficiently. The installation of recessed fixtures and wiring for the dimming system in the veranda was very simple and accomplished in just one and a half days with an in-house maintenance staff of three. No additional wiring was needed in the banquet room. Quick turn-around meant no disruptions for guests or staff.

The improved lighting system will also reduce other Gideon Putnam Hotel operating and maintenance costs. Replacing 2,000-hour average rated life halogen lamps with 10,000-hour compact fluorescents will significantly cut

lamp replacement costs. It will also eliminate the inconvenience of having to constantly replace lamps, especially during trade shows.

Howard Schoonmaker, the Hotel's Director of Buildings and Grounds, explained, "Efficiency projects must not only have an attractive return on investment, they must also meet the demands of guests. With the new system guest satisfaction is higher than ever. There are no unsightly hot spots directly under the fixtures like there used to be, and scalloping on the walls has been softened to create a more pleasing aesthetic appearance. The new lamps bring out the color in the carpets, chairs, and table cloths much better than the previous lighting system."

The Bottom Line

John Plekan selected fixtures qualifying for an additional \$1,280 in cash incentives from the **New York Energy SmartSM** Smart Equipment Choices Program. Taking this incentive into account, the cost of materials was reduced to under \$3 per square foot. In addition to the maintenance savings, the Gideon Putnam Hotel has reduced their wattage load from 28,100 to 6,874 watts, while enhancing lighting levels, color rendition, and illumination uniformity. Additional energy cost savings will be realized from the manual dimming controls and daylight sensing.

For More Information

The New York State Energy Research and Development Authority (NYSERDA) offers businesses energy-saving opportunities through the **New York Energy SmartSM** Small Commercial Lighting Program. Additional programs can help businesses reduce utility costs, including the **New York Energy SmartSM** Smart Equipment Choices Program, which offers financial incentives to businesses for energy-efficient lighting equipment and a variety of other electric-efficiency measures.

To learn more about these incentives and to make your lighting more effective and efficient, visit www.nyserda.org/scslp or call toll-free 1-866-NYSERDA (1-866-697-3732).

Tech Specs

- Low-glare, dimmable compact fluorescent fixtures
- High color rendering 42-watt compact fluorescent lamps
- Daylight dimming in the veranda
- Manual dimming controls in the banquet room
- 0.88 installed watts per square foot
- Estimated annual energy savings: more than \$10,000 per year
- Payback period after incentives: 2.2 years

"This lighting job was an example of a cost cutting project you can undertake without adversely affecting the customer."

— Gregg Balton
General Manager