



The Resort & Conference Center

Hyannis, MA

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When assisting its owners with remodeling the Resort and Conference Center in Hyannis, MA, lighting designer John Vaughn suggested investing in energy-saving LED technologies for the exterior entryway of the building. The covered area where guests can park their cars temporarily before heading into the lobby was previously illuminated using standard incandescent fixtures. By replacing these 75-watt canister lights with 12-watt LEDs, the energy consumption of the lobby can be reduced by 84% while retaining the same luminosity as before. The Cape Light Compact offers an incentive for the purchase of new LED light fixtures, and the Resort and Conference Center was eager to take advantage of these opportunities both to save money on the purchase of their new lighting, and to reduce their overall energy cost and consumption.

Incandescent bulbs function by passing current through a metal filament, which is heated until it glows, thereby emitting about 90% infrared radiation (heat) and about 10% visible light. LEDs, by contrast, pass current through a semiconductor, and are able to achieve identical luminosities to their incandescent counterparts with a much smaller amount of electricity. Their heat output is also a fraction of that of an incandescent bulb because the process of light generation employed is substantially more efficient. These new bulbs help light up the walkways for guests at the Center at 16% of the previous cost, all while helping to conserve electricity, and thereby reduce carbon and nitrogen emissions from power generation.

The original lights that hung above the building's awning were 75-watt flood lights, which were replaced by 12-watt LED lights manufactured by LED Lighting Fixtures (LLF), Inc. Older parabolic fluorescent fixtures that



were used in the hallways and other corridors were replaced with more efficient, newer models as well. The older 2x2 parabolic tubes consumed about 85 watts each. 8 of these old fixtures were replaced by 15 new 2x2 fixtures that consume only 12 watts each, thereby netting a savings of 500 watts. The project also included the installation of other LED lights and efficient fluorescent fixtures throughout the hotel to help save energy and money. Total savings for the project, using comparisons between previous electricity consumption and predicted new electricity consumption, can be found in the table to the left.

By installing all of these new lights, The Resort and Conference Center successfully integrated new technologies into its overall renovation, and took advantage of savings from the Cape Light Compact to help create a more energy-efficient and cost-effective building for its future guests.

AT-A-GLANCE PROJECT SUMMARY

PREVIOUS ANNUAL USAGE: 6920 KWH

PROJECTED ANNUAL USAGE: 1419 KWH

ANNUAL SAVINGS: 5501 KWH

ANNUAL MONETARY SAVINGS
AT \$0.20 PER KWH \$1100.20

TOTAL PROJECT COSTS:

YEARS FOR RECOVERY OF COSTS:

