



Good and bad energy-related investments for green hotels

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There are numerous ways of investing money these days, with risk levels ranging from conservative to risky. Some of the most common ways are savings accounts, money market accounts, certificates of deposit, the stock market, and bonds. For some of the riskier investments, a twenty percent return on investment is considered fairly good. For the more conservative investments, the return is in the range of 3% to 5% APR.

Energy conservation projects for hotels which are analyzed properly can provide a return three, four or even five times greater than traditional investments. The result of these projects also returns to the owner in the form of improved assets and human comfort within the hotel facility. This article will review both the good and bad forms of green-oriented energy-related investments that a hotelier can spend his money on.

Bad investments

Sometimes investments that do not provide good economic benefit can be justified for other practical reasons. For example, assume you have an older hotel with single pane windows. Single pane windows are tremendously energy inefficient and very expensive to replace. The return on investment for windows is likely in the twelve to fifteen year return range. The intangible value of this investment, however, is significantly improved aesthetics of the hotel and human comfort inside the hotel. Like so many of these projects, it also comes down to a lot of common sense.

Another energy saving capital investment which may not look attractive on paper, is replacing a boiler or a cooling system. In this case, you may see a return on investment in the range of ten to twelve years, which is fairly long. Here, again, other issues come into effect, such as environmental contamination and the simple fact of providing reliable space heat and hot water to guests in the hotel.

Another issue to consider when looking at what are considered to be bad investments are the labor and maintenance influences this type of investment may impact. For example, a centralized energy control system in a hotel does not save any money by reporting temperatures and recording alarms. This can, however, provide intangible savings consumed by engineers traveling around the hotel constantly resetting space temperatures. These energy saving computers also track the condition of equipment and how long it may have run and produce work orders for proactive repair and maintenance. By today's standards, central automation is also an integral part of the overall hotel global control system. Front desk systems, point of sale systems, key card systems and energy management systems will ultimately all be integrated into one centralized computer, thereby improving the entire quality of the hotel product every minute of the day.

Good investments

The list of good investments for energy savings in a hotel is extremely long, and we will use a few of the fairly simple ones to dramatize our point on the economics of investing in a green hotel.

For simplicity sake and to make an example, we will assume that a vendor comes to your hotel with a proposal for \$75,000 to completely update all the lighting systems within your property. I know how management feels when they see a bill for \$50,000, and they do not understand the economics of what is happening. Typically, lighting projects included in a proposal



of this nature would include guestroom compact fluorescents, energy efficient “T-8” four-foot fluorescent fixtures, compact fluorescent reflector down lights, LED exit lights and, perhaps, high intensity discharge lighting on the outside of the hotel.

For guestroom lighting, you are reducing a 100-watt light bulb to about a 30-watt compact fluorescent, with a savings of 70 watts of energy. This light bulb will cost in the range of \$3, and will provide \$20 to \$30 per year savings, in most cases. As you can see, the return on investment for this project is within about three months and those savings will continue on through the life of the lamp.

Some lighting investments such as “T-8” four-foot fluorescent retrofits provide a two to three year return on investment. This is still a 33% return on investment, and as much as three times greater than most traditional forms of investments. Here, again, there are also additional intangible benefits to the property such as a brighter, cleaner lighting system, better color rendering qualities throughout the property, and reduced maintenance.

Another exceptional example of a good energy investment to develop a green hotel is a guestroom energy management system. TRC energy columns have frequently discussed and recommended these systems, and most hotel owners and operators are still reluctant to invest in this energy saving opportunity because they just do not clearly understand the economics and good opportunity available to them. A typical guestroom energy control system will cost in the range of \$200 to \$300 per room, depending on the vendor. At first, this seems like a considerable amount of money up front; but when you do the math you learn very quickly that it is a very good investment. A typical guestroom costs about \$600 to \$800 per year just for heating and cooling; these devices will reduce that cost by as much as 30%. Overall, this indicates these systems have a payback in the range of one to one and a half years, or a 150% ROI; and they have a twenty year expected life!

If you are still suspicious of these energy conservation investments, take this into consideration. There are companies across the United States referred to as energy investment companies that are prepared to invest in these projects for you at any time for almost any amount of money, assuming they can obtain only half of the savings to pay off their debt. I do not recommend this route because you would be better off borrowing money from a bank than going in this direction. But it does amplify the fact that energy investments are a bona fide cost effective way of investing your money in a green hotel.

Finally, I predict gasoline for automobiles will be as high as \$5 a gallon by the end of next summer. This means the aforementioned projects will have an even better savings opportunity. ✧

(TRC's resident energy expert, Phil Sprague is a member of the AHLA Executive Engineers Committee and president of PSA Hotel Energy Consultants. Based in Minneapolis, PSA Hotel Energy Consultants assists lodging companies and individual properties to develop effective, cost-saving energy strategies by auditing and assessing all energy consuming devices and appliances, and delivering comprehensive, customized recommendations in an actionable format. They can be reached at 952-472-6900.)