

“Energy”

by Phil Sprague

A six step method to a successful energy management program

After performing full service energy audits in all types of hotels, from limited-service to full-service convention style properties, PSA Consultants has developed a solid strategy for implementing a cost effective energy management program in individual hotels and for hotel corporations. The following information will chronicle each individual step, the purpose for it and what a hotel manager or chief engineer can expect to gain from implementing it.

Step One – Energy Accounting

Create a baseline and track the hotel’s progress. Energy accounting requires that technical expertise and understanding of utility terms, which are not all that difficult to learn. This action can be implemented in a rudimentary form by in-house accounting staff, or obtained from an outside professional source. This action requires monitoring the use and cost of energy for the current month compared to that same month the previous year. This information has multiple uses, such as preparing budgets each year, identifying billing errors, and assisting in the purchase of deregulation as it comes into effect in one’s geographic locale. This action can also help the prudent manager identify potential utility billing errors and verify that the hotel is receiving the correct rate. This step is the cornerstone of an energy conservation program.

Step Two – Full service Energy Audit

Prioritize one’s opportunities. The key component of an energy audit is to inventory every conceivable piece of energy consuming equipment in the hotel or resort. This will help management and staff become familiar with all the systems on property and how they may be a good candidate for some type of energy saving retrofit. The audit can be performed by in-house engineering staff or experienced out-source engineering firms that can help a manager prioritize these projects. After the audit is completed, it can be used to set specific goals and a time line to complete them. This should be an ongoing document used by all departments within a hotel. A professional energy audit will provide management with a road map to achieve the goals set forth in the program.

Step Three – Implementation

Low Cost/No Cost. This step includes ongoing training of employees particularly in housekeeping and engineering, on procedures which will improve guest comfort and save energy. Indeed, an energy audit will also contain inexpensive immediate payback projects that cost very little and can pay for themselves in less than six months. A formal preventive maintenance program for all mechanical equipment can also provide a very good return. *The Rooms Chronicle* has discussed many of these low cost/no cost projects in previous articles. For example, one article discusses the use of the weatherboard to train housekeepers how to correctly set thermostats in guest rooms after they are cleaned (Vol. 2, No. 3).

Step Four – High Payback Capital Retrofit Projects

This is the category of standard items that require investment capital, but have proven to be cost effective and improve the quality of the hotel's product. The audit will also help management prioritize these projects. Typical examples are lighting retrofits, lighting controls, energy efficient motors, time clocks and adjustable speed drive. Remember that most of these standard capital retrofit type projects are usually eligible for a utility rebate, which improves the economics of the project. Typically, the audit will provide management with the specific instructions on how to implement these projects.

Step Five – Capital Projects Specific to Hotel

These are normally projects that require the input of a consulting energy professional that has experience in the hotel industry. Sometime these projects have a longer than acceptable return on investment, but they must be examined early on because the cost may drop for any specific item and, therefore, make it cost effective in the future. Typical opportunities in this area are co-generation, free cooling, mechanical system upgrades and computerized controls for all the equipment in the hotel. Be cautious and use careful thought when examining these opportunities because the fluctuating cost of energy can have a dramatic effect on their cost effectiveness. For example, currently gas is typically one-third the cost of electricity based on BTU content, but this could change in the future. Therefore, converting electric appliances, for example, may not be cost effective in the future if gas prices were to increase dramatically.

Step Six – The Security Program Ongoing

Just as a banker would not terminate the security guard after one bank robber was caught, a chief engineer should not consider implementing these steps as the end of his energy program. The wise manager must first use the energy accounting system to verify the savings of investments that may have already been made. Second, he must continually upgrade the ideas in the full service energy audit as technology improves. Finally, he should continuously train employees on new improves strategies for controlling energy in the hotel without affecting guest comfort.

By carefully following these steps and a hotel manager can be confident that he or she is obtaining the majority of savings available at the most competitive price. It is safe to assume that the cost of energy in hotels will likely rise considerably in the future. This can only enhance the cost effectiveness of every saving strategy the forward looking hotel manager can implement.

(Phil Sprague is a member of the AH&LA Executive Engineers Committee and president of PSA consultants, Minneapolis, Minn. (952) 742-6900).