AUDIT LEVELS

A specialized version of a level 1 energy audit is called retrocommissioning. This type of study focuses on the building's HVAC systems, controls, and operation and maintenance issues. Retrocommissioning also examines the way the building was designed to operate and compares it with the way the building is actually running. It also reviews whether the HVAC system is working properly. Retrocommissioning can appear to be expensive but it usually generates energy cost savings that pay for related repairs in one or two years (50 to 100 percent ROI).

A level 2 energy audit focuses on specific energy efficiency measures that require some capital investments but yield an attractive ROI. This type of audit is for sophisticated organizations that understand the basics of energy efficiency measures and have capital available for energy-related investments. These types of organizations will always want to know the investment performance that can be expected from specific efficiency steps in the building being studied. A level 2 audit can logically follow a level 1 audit.

A level 3 energy audit is an investment-grade engineering study conducted after capital investment dollars are budgeted and the organization can justify a comprehensive study of all major energy savings opportunities in a building. This audit is for buildings that can economically justify such a detailed engineering study. A level 3 energy audit is performed for major capital investments, like those involved with an energy savings performance contract. The level 3 energy audit examines the who, what, where, when and why of each energy efficiency measure.

The cost of each type of energy audit varies and can increase from one level to the next by a factor of ten or more depending on what is included in the scope of work.

For all energy efficiency measures, check prior performance, actual savings and references. Avoid experimental devices and services. After the technology is proven and debugged it is generally a safer investment because the price drops as efficiency steps become more mainstream.

How much should be invested in efficiency? That depends on the organization's ROI criteria and a common sense evaluation of the potential financial outcome. A simple budgeting tool is to calculate some "what ifs." What if 20 percent of the present utility cost (yielding a specific amount annual savings) could be saved by measures producing a simple payback of a given number of years or less? If that is the case, then a specific range of investment is possible. By changing the "what if" numbers, facility executives can get a sense of what options will be possible.

Facility executives may also be surprised by other bonus benefits, like better comfort, better lighting, improved productivity and less impact on the environment. A slight improvement in worker productivity can pay for major investments in buildings. But these intangible benefits should not be included in the financial calculations because they're difficult to measure.