

Utilities Manager: Energy Cost Control: How Much Will You Save?

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The question that industrial decision-makers will most frequently ask about energy cost control is "How much can I save?" The question that really should be asked is, "How much am I likely to save?"

How much can I save?

The average industrial facility can expect to reduce its energy consumption somewhere within a range of 10% to 20%. Keep in mind that this describes an average range of expectations. Some facilities can capture more savings, some less. If you want a more precise number, you will need to conduct an energy audit—a *facilitywide study of energy inputs, uses and losses*.

Keep in mind that energy audits are a very human process, reflecting the skills and experience of the team that conducts them. Ten different audit teams can examine the same facility—and develop 10 different sets of recommendations. Their findings may generally overlap, but each report will present different cost-benefit evaluations, suggested priorities or even unique findings. I say "10% to 20%" because of the following sources:

1. Refer to the U.S Department of Energy fact sheet entitled "Save Energy Now in Your Motor Systems." It includes comments about all potential sources of industrial energy savings, not just motors. According to this document, plants with an energy management program already in place can save an additional 10% to 15% by using best practices, as recommended by the U.S. Department of Energy. Remember, that's in addition to an existing energy management program.

2. Refer to "Energy Loss Reduction and Recovery in Industrial Energy Systems." This U.S. DOE document claims, on page 22, that industry's overall energy consumption can be reduced by 24% through efficient technologies and practices. Several appendices in this report share industry-specific claims for energy savings potential. This cannot be overemphasized: no single industrial facility is "average." Each facility features a unique design, purpose, product mix, operating schedule, maintenance history and work habits. Savings potential varies accordingly.

How much am I likely to save?

I wish more people would ask this question. My answer involves the following checklist. The more times you can answer with a "yes" to these questions, the more likely you are to achieve savings (or the higher you will be on that range of potential savings).

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Will you conduct an energy audit?

Will your staff know the purpose of the audit and not be intimidated by it?

Will your facility support energy cost control as an ongoing process rather than as a one-time

Will your management establish the energy goals passed on to the employees and hold them accountable?

Will your staff be responsive to energy awareness training?

Will the site manager be able to identify areas for improvement and be willing to take the necessary actions to