

The Cold Facts

Summer 2003

Energy Management

How To Lower Demand And Consumption With An Energy Management Controls Program

In our Winter '03 newsletter, we featured the first of a two part article in which we discussed what is energy management and how your electric bill is calculated. We now conclude the series. If you missed part one, just give our office a call and we'll see that you receive a copy.

In part one of this article we learned how you are charged by the utility for the electricity you use. As a reminder, there is demand (the charge for the highest KW usage in a 15-or 30-minute period, which depends on the utility), and KWH (the amount of total energy you consume for the month).



Another successful renovation! Before and after...

A good energy management program will strive to lower the utility bill with respect to both demand and consumption. This is very realistic in the case of a refrigeration system since it's designed to provide the necessary cooling on the worst days of the year. Other than these few days each year, the system can be managed.

Lowering demand is accomplished by managing refrigeration systems so that everything is not running at the same time. Many utilities make this easier for you with a rate that lowers the charge for demand during off-peak hours (i.e., 6 pm to 6 am).

In facilities that have freezer areas, the program may use maximum horsepower during the off-peak hours to overcool the freezers and then shut off all mechanical cooling to the freezers during the high demand charge times of the day. There is normally an override that will restart the cooling system if the temperatures rise above a predetermined value. This is set by the operator. RSC has systems operating in this mode. Some never hit that predetermined set point.

Another opportunity to lower demand is battery recharging during the off-peak hours. As an example: a *small* facility with a monthly demand of 664 KW that could lower the demand figure by 30% would save about \$58,000 a year (based on Ohio Edison rates for the Cleveland, Ohio, area).

As for lowering consumption (KWH), this can be accomplished in many ways. One of the obvious means is to turn off devices that consume electricity when they are not needed. Lighting is a prime candidate.

Demand defrost is also a viable method to substantially lower energy costs. This requires the addition of the defrost sensors. The other methods described above require only software changes,

providing the system is capable, and all RSC-supplied systems are so equipped.

Each facility must be examined to determine the best control strategy commensurate with the plant's operating needs. In any case, however, energy savings strategies can be applied to most computer-controlled refrigeration systems. Every improvement is worth evaluating, and may produce an attractive return on the investment.

CEO Wisdom

- Focus on substance, not flash. Marie Toulantis, the CEO of the Internet subsidiary of Barnes & Noble, says it's more important to gather facts and solve problems than design slides and invent buzzwords.
- Encourage responsibility. Everyone in the company—from the CEO down to the lowest-level employees—should be instilled with a sense of personal accountability for their jobs.
- Trust your instincts. Dane Madsen, CEO of Yellowpages.com, says you should consider all the information available when solving a problem. But don't be afraid to listen to your gut.



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Recent EPA & OSHA Incidents: How Shall We React?

We have recently seen several incidents of OSHA and EPA fines due to non-compliance with government regulations. We confess that at times we find them difficult to understand. Some of the regulations are somewhat ambiguous, left to the interpretation of the inspector. Unfortunately, we must face the fact that they are the law and, one way or another, we must comply.

Take for example the recent case where there was a refrigerant leak of unknown quantity. The plant reacted very well. In fact, there was not a significant loss of refrigerant, no product was lost, and best of all, no one was injured! The only problem was that the EPA determined that the company failed to notify them "immediately" to advise of the leak. The call was made within six hours. This EPA interpretation cost the plant a large sum of money.

In another case, the EPA determined that the owner did have a reasonable plan after their inspection. But...they failed to follow the plan. You can imagine the ramifications of not following your own plan.

Or, take the case of the plant that had a review and the OSHA inspector found a problem in the plant. Then, because the company had several plants, OSHA pursued each one to determine if each had the same problem.

In a recent discussion, someone mentioned that they understood that funding for some of these government agencies has been cut as a result of a tight federal budget. Let's hope these same agencies are not using their enforcement powers and fine pool to finance operations.

Please ensure that your plan is appropriate, in place and being followed. If you need assistance in this area, please contact us. Your hard earned dollars can be used for much better things.

Quotables...

*"The factory of the future will have only two employees, a man and a dog.
The man will be there to feed the dog. The dog will be there to keep the man
from touching the equipment."*

—Warren G. Bennis

"If all economists were laid end to end, they would not reach a conclusion."

—George Bernard Shaw

The RSC Family Tree

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