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Energy Management—More Than Just the Best Price

Everyone is talking about energy these days: its cost, its volatility, its scarcity, its strategic implications, how to reduce its use, how to use it more responsibly, how to reduce the impact that its use has on our environment, and so on.

Natural Gas prices go up, and everyone panics; they go down, and everyone relaxes. We're in one of those low points right now.

The glass industry has made enormous strides in the last 100 years in reducing the energy requirements to melt glass. In 1920, it took 34.4 MMBtu/short ton to melt container glass. In 1994 the process had been improved to the point where it took 6.9–7.7 MMBtu/short ton to accomplish the same task.¹

Today, some furnaces are operating at 3.3 MMBtu/short ton, and yet there is so much more that could be done. The the-

oretical minimum energy requirement to melt a ton of container glass is 2.2 MMBtu/ton, another 33% possible reduction.²

Granted, this level cannot be reached in practical applications, but there is a long way to go. There are, of course, other inefficiencies in the total system that can be corrected as well.

We have energy training programs, energy-saving technologies, energy assessments, technology financing programs, energy professionals, energy workshops and energy departments. DOE has an active Save Energy Now program that currently is accepting applications for no-cost energy assessments at www1.eere.energy.gov/industry/saveenergynow.

What More Can We Do?

The primary challenge many companies in our industries still face is that of breaking the habit of considering energy costs to be part of the overhead, the necessary and relatively inflexible cost of doing business. Companies focus their energy attention and strategic vision only on the supply side—looking for and contracting for the lowest prices they can obtain for their natural gas, electricity and other energy requirements.

Purchasing departments have specialists to ensure they are optimizing their situation. Clearly, this is useful, but it addresses only part of the challenge. The activities and assets mentioned above address the demand side, but where is the company goal of continually reducing demand?

Frequently, the pattern is illustrated as a sine curve—energy costs rise; specialists are called in; they identify problem areas; the costs fall; operations go back to normal ... until the next time.

Several major global companies (e.g., DuPont, Owens Corning) have adopted top-level strategic policies of continuous energy reduction. Executive-level responsibility is assigned and tracked;

branch teams are appointed and given management and corporate support; energy-use statistics and trends are reported at corporate meetings; continuous improvements are made.

One large company achieved a 25% energy reduction in the course of one cycle and immediately set an objective for another 25% cut the next cycle. They expect to achieve it.

Why is this important? Energy you don't buy sends dollars right to your bottom line. We all know it, but do we pay the attention to it we could? If you don't—and would like to learn how others do it—let's talk.

References

¹*Glass Melting Technology: A Technical and Economic Assessment*, Oct. 2004, GMIC, pp 13–15; ISBN 0-9761283-0-6.

²*Industrial Glass Bandwidth Analysis*; David Rue, James Servaites, Warren Wolf; Gas Technology Institute, March 2006, p 14.

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DON'T MISS THESE MEETINGS:

May 20–23, 2007
Glass & Optical Materials Division Meeting and 18th University Conference on Glass, Rochester, N.Y., www.ceramics.org/glass2007

July 1–6, 2007
21st International Congress on Glass, Strasbourg, France, www.icg2007.org

Oct. 22–25, 2007
68th Conference on Glass Problems, Columbus, Ohio, www.glassproblems.com