

Spring 2009

# Plastics Business

Strategies for Today's Plastics Processors



## ATEK Plastics Brings Its A-Team

Plus:

Streamline for Operating Efficiency

- Modular Molds
- Purging Compounds
- Energy Audits

# Investing in Energy-Saving Improvements

By Ryan Thompson, Murphy Company

As more corporations respond to an anemic world economy by putting capital improvement programs on a starvation diet, the age-old question asked in every cyclical downturn surfaces anew – “*Is cutting capital improvements now the right decision?*”

In some industries, it is. In others, like the plastics industry, it isn't. Right now, there is a strong case for making 2009 an optimal year for plastics producers to invest in energy-saving improvements.

The reasons? One is the certainty that the investment will cut a major operating expense – the cost of energy – immediately and long-term. And, cutting operating cost is one sure way to offset slowing sales. Second, the pay-back period for energy-saving initiatives is typically very short. In fact, many are cash-flow positive in the first month. Third, today's business landscape is flush with federal-, state-, municipal-, and utility-sponsored incentive programs that make it even better for your bottom line to invest in energy-saving improvements now.

## Energy Use Is an Increasingly Significant Subject

Historically, utility costs (natural gas, water, and electricity) have been viewed simply as a “cost” of doing business. Little significance was attached to them.

That's no longer the case. In today's era of lean manufacturing, the drive to be competitive makes it imperative to find savings wherever possible. In the same vein, energy projects are now seen as a worthy pursuit of companies trying to attain “best practice” status. Finally, major plastics customers (Wal-Mart among them) are requiring vendors to demonstrate their commitment to being responsible global citizens by becoming more “green.”

## No Hiding From Oil Prices

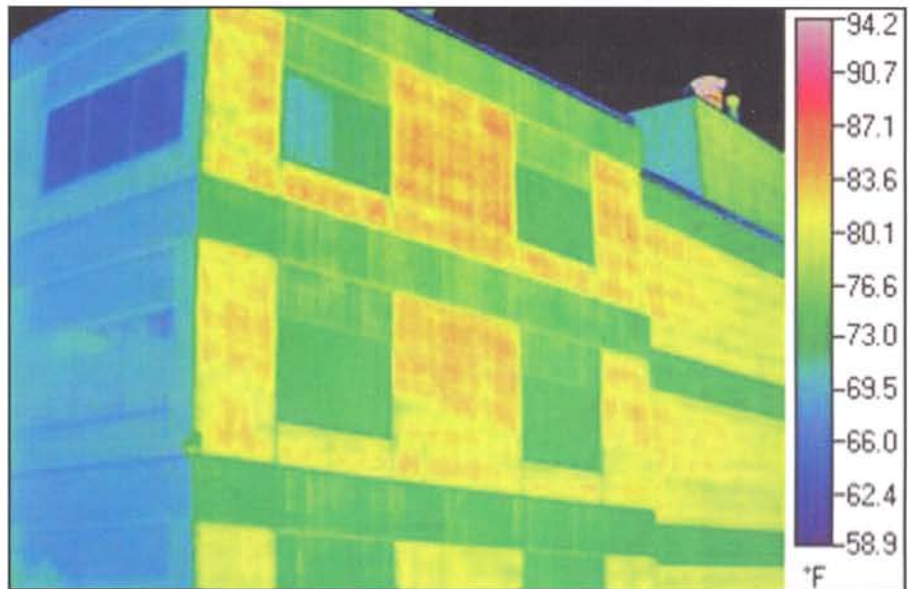
While every industry suffered from the skyrocketing price of oil in 2008, the plastics

business was particularly hard hit due to the direct correlation between the price of oil and the cost of oil-derived resin materials. The surge in feedstock cost made it difficult for U.S. producers to vie with overseas competitors. While oil prices tailed off at the end of the year, plastics producers continue to feel the aftereffects. Many in the industry also believe the decline in oil prices is temporary and anticipate the days of \$147/barrel oil will return.

Ironically, the hiatus in high oil prices – which with all else being equal should free up cash flow – makes 2009 an opportune time for plastics producers to invest in initiatives that lessen energy demand. Doing so will better position them to handle hikes in the cost of raw materials and other expenses outside their control. The ability to cut annual utility- and maintenance-related expenses by 10 to 20 percent also provides a solid foundation for future pricing flexibility and profit margin defense. The true beauty of investing in an energy-saving project is that once it is complete, the return on investment compounds automatically year after year.

## Best Practices for Energy Savings

Energy-saving opportunities are found in every faction of a production facility:



Building Infrared

### Lighting

Upgrading lighting systems is a popular energy investment right now. While the concept is admirable, there is more to it than simply installing new fixtures or bulbs. Does the lighting design supply enough foot candles to maintain quality and safety? Does the design meet the criteria required for incentive programs? How is the new system to be controlled – with motion sensors? bi-level switching? Will the new setup negatively impact heating and cooling loads?

### Compressors

Is your compressed air system properly maintained? Are there leaks? Has your compressor exceeded its life expectancy? Does your system have isolation valves to shut off zones when not in use? Would adding a staging compressor actually be a money-saving solution?

### Motors

Are your motors designed to properly control power factor and avoid costly correction charges from your utility provider? Are you aware of your VFDs, VSDs, or capacitors?

### Molding Machines

Are your molding machines properly insulated? Have you looked into ways of reclaiming the heat?

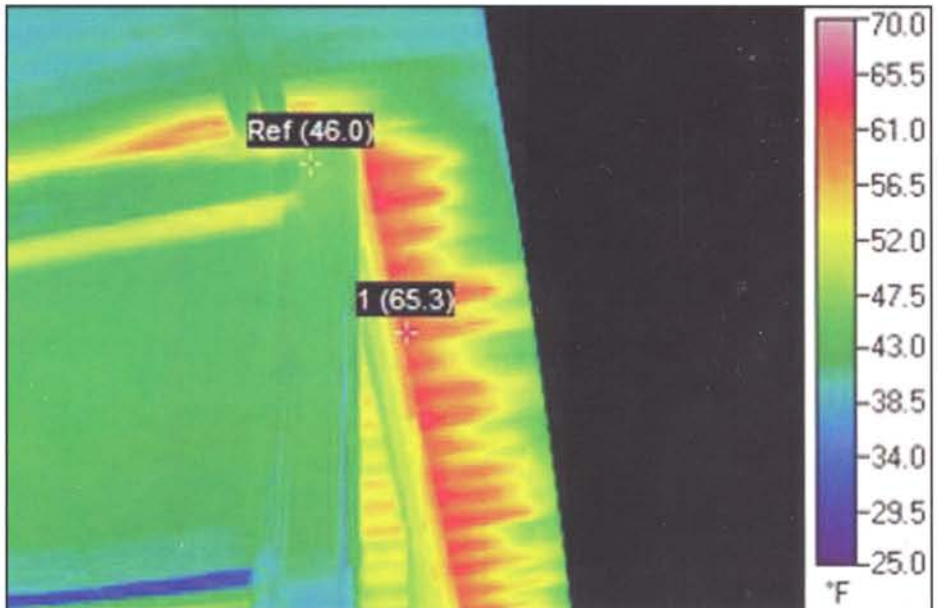
### HVAC

Since many plastics producers operate HVAC equipment year-round to control humidity in production areas, big savings could result when the system is properly commissioned. Are you controlling humidity most efficiently? Are you over- or under-cooling? (Not only is over- and under-cooling costly, it can be detrimental to product quality.)

## Questions to Ask an Energy Consultant

While some companies offer energy audits and energy upgrade services, their experience, capabilities, and scope of service vary greatly. Before you choose an energy consultant, ask the following questions:

1. Are they charging for a stand-alone audit? Even though that sounds like a logical first step, audits can be costly and not always focused on opportunities that are feasible or make financial sense to the owner. Select a



Roof Infrared

partner who will help you think through your financial and operational goals prior to purchasing an audit.

2. Do they have the expertise to analyze all systems within a facility, including mechanical, electrical, process, controls, and building envelope? A consultant that is only focused on one system may miss some of the best opportunities in your facility. It would be unfortunate to undertake a lighting project only to find out afterwards that a controls project could have cost less money and resulted in greater savings.
3. Can the consultant help you implement the savings strategies identified? Your partner should either be able to self-perform the project or be capable of serving as your construction manager. In the case of the former, his ability to do the work should be supported by an experienced and diverse group of in-house engineers and construction specialists. If you choose to use your partner as construction manager, he should provide you with single-source accountability as he specifies and procures bids from qualified service providers, selects the project team, and manages the project to successful completion. These projects should unfold with minimal disruption to operations.
4. Is the consultant experienced in the plastics industry? An expert who knows your specific industry can help reduce the time and cost of the audit by quickly identifying the most promising opportunities based on

next page ►

◀ previous page

past experience. Make sure your partner is cognizant of the special requirements for your process and facility. Energy savings should never compromise safety or quality of the product.

5. Is your advisor affiliated with a specific manufacturer or product line? Will the equipment recommendations be unbiased? More and more companies are positioning themselves as “energy consultants” as a way of selling their product. An independent energy consultant will evaluate multiple products to determine the most cost- and energy-effective solution.
6. Is the consultant knowledgeable of and able to qualify your project for all applicable federal-, state-, and utility-sponsored incentive programs? These programs can be very complex and cumbersome, with stringent requirements. Your partner should have in-depth knowledge of the specific standards, calculations, and paperwork required for each of the various existing energy efficiency incentive programs. A misinterpretation of the program could result in loss of incentives.

With “green” and “energy” the buzz words of the day, many consultants that claim to have specialized, comprehensive expertise, in reality do not. Do your homework to ensure your trusted advisor brings value to your unique energy project.

### Incentives Can Cover Costs of an Energy Improvement Program

As noted, federal-, state-, municipal-, and utility-sponsored incentive programs are abundant and can offset a portion of the cost of an energy improvement project. At the federal level, the rapid depreciation schedule in force in 2008 is expected to be renewed in 2009. Additionally, many projects qualify for a federal tax deduction of up to \$1.80/SF for boosting the energy efficiency of an existing commercial facility or building a highly efficient new one. Many states and utilities offer separate incentive plans, ranging from low-interest loans to cash rebates that reward companies that invest in energy-wise equipment. ■

*Founded in 1907, Murphy Company is an integrated mechanical contracting firm with an in-house staff of more than 40 engineers that serves a national clientele from offices in St. Louis, Mo., Southern Illinois, and Denver, Colo. Its Energy Solutions Division, staffed by Certified Energy Managers (CEM) and Leadership in Energy and Environmental Design – Existing Building (LEED EB)-certified energy engineers, delivers turnkey solutions from design and engineering through installation and maintenance. As an ENERGY STAR partner, Murphy Energy Solutions can help plastics processors optimize energy savings and significantly reduce maintenance-related expenses. To find out more, contact Ryan Thompson at [rthompson@murphy-stl.com](mailto:rthompson@murphy-stl.com) or (314) 692-1555.*



[www.murphynet.com](http://www.murphynet.com)

#### ST. LOUIS

1233 North Price Road  
St. Louis, MO 63132  
Ph. 314.997.6600  
Fx. 314.997.4536

#### FAIRVIEW HEIGHTS

13 Executive Drive, STE 7  
Fairview Heights, IL 62208  
Ph. 618.622.9820  
Fx. 618.622.9827

#### DENVER

3790 Wheeling Street  
Denver, CO 80239  
Ph. 303.371.6600  
Fx. 303.371.6616

#### COLORADO SPRINGS

422 E. Vermijo, STE 312  
Colorado Springs, CO 80903  
Ph. 719.219.6315 Ext. 2215  
Fx. 719.219.6200