

Controlling energy costs and usage online

With the dawn of the Internet, product options and vendor outlets have expanded exponentially, giving consumers a vast array of choices and enabling them to take more control over how purchases are made.

This, in turn, has forced suppliers to continuously innovate and provide enhanced value to customers. The most successful vendors have been the quickest to adapt to meet consumers' needs, and in today's world this means up-to-date, relevant information available at the click of the mouse. Online capabilities have created revolutionary developments in all industries; within the energy industry, these features are making measurable differences in the way customers buy and consume electricity.

The evolution of energy markets

As the restructuring of electricity markets continues throughout North America, millions of consumers now have the power to choose an energy supplier that best meets their needs. But the complexities in today's energy markets have made the process of determining "what's right for you" slightly intimidating. Fortunately, suppliers have responded with a

range of energy management tools to make the process of energy cost management less complicated and more transparent.

For example, NewEnergy Online is Constellation NewEnergy's answer to a Web-based energy management solution, available free of charge to all existing customers. Customers can track their energy consumption, view current and past invoices, monitor energy market prices and industry news, adjust consumption, and forecast energy usage and costs with greater accuracy.

Impact on the manufacturing sector

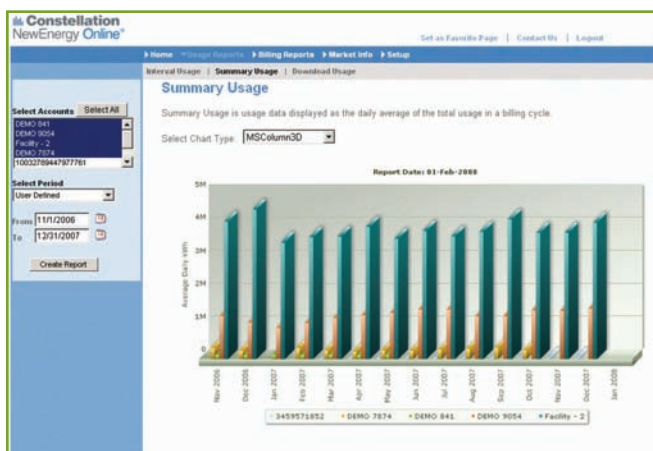
Let's take a look at how NewEnergy Online is helping manufacturing customers and members of the Illinois Manufacturers' Association.

There is no question the manufacturing industry makes up some of our nation's most sophisticated energy consumers. Consumption patterns and market prices have traditionally remained a closely monitored expense, especially for those manufacturers whose energy costs represent a significant portion of their total operating expenditures. The framework of our online management tool makes proactive monitoring of these factors possible.

Manufacturers can easily navigate a facility's energy usage over the course of a day, week, month or year through a private online account. When comprehensive energy consumption and billing history is available on demand, manufacturers not only assume the ability but also the responsibility to detect patterns, price spikes and monitor their overall energy usage.

These features can be taken a step further by personalizing reports and organizing information to track and highlight specific areas of concern. When tracking is performed on a daily basis, manufacturers can closely monitor the efficiency of a facility's consumption. This specific feature is helping identify problems in the manufacturing process, quickly narrowing in on equipment malfunctions or assembly line interruptions. For instance, manufacturing customers have found they can dramatically lower their electricity costs just by starting up their machines and equipment at different times. This helps mitigate a facility's peak demand — the highest amount of electricity consumed in a billing interval — which can change the billing structure of an account. This

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Constellation NewEnergy Online helps summarize your facility's usage data and create customized reports based upon your categories and timetable of choice.



Constellation NewEnergy Online lets you view real-time energy market prices so you can adjust your facility's consumption accordingly.

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is critical as some capacity charges are determined by a customer's peak demand. Unnecessarily high charges can be avoided by examining billing patterns to check for peak demand spikes caused by simultaneous equipment start ups.

Also, NewEnergy Online makes it possible for manufacturers to aggregate costs by grouping meter accounts to take a more holistic view of their total energy consumption. The ability to group meter locations in unlimited combinations allows for sub-account and/or cross-account analysis, thereby helping to identify the most efficient and inefficient operations.

Benefits to the bottom line

Understanding how fluctuations in the energy market can impact a business is becoming increasingly

more important, especially for large consumers. Online management gives customers access to the latest developments in the energy industry with market price postings, regulatory updates and industry news. This information, coupled with a facility's usage patterns comprises all the factors needed to manage energy strategies and consumption. To better assist customers in their monitoring efforts, NewEnergy Online users have the option to set alerts when energy prices reach a designated threshold, making it possible to adjust usage accordingly.

When it comes to billing, customers need not rely solely on local utilities for distribution costs and meter reads. More interactive features mean more control over monthly billing, allowing customers to estimate monthly bills based on raw usage data and monthly market prices, and to compare raw meter data with billed energy usage.

With a deeper understanding of energy consumption needs, customers can take advantage of additional tools to reduce or adjust energy consumption and the bottom line. Efficiency practices such as demand response, and other conservation efforts can be implemented in a more frequent and timely manner as customers are able to better predict and maximize these contributions based upon the online analysis of facility demands and market price spikes. Progressive customers are taking advantage of all the tools available to them to better understand their own energy consumption and make informed choices about their company's energy costs. Online energy management tools are not simply an important value added service: they represent a way for manufacturers to better manage energy usage and reduce costs. ■

Mitigating risk in a volatile market

THE MERITS OF NATURAL GAS HEDGING

Energy prices have more than tripled in the past decade, and daily volatility has increased dramatically, making it difficult to manage costs. This increase has been significant enough to affect the bottom line of many businesses, and some have shut down or moved overseas due to the inability to remain profitable in a high-priced environment. Natural gas remains one of the most volatile commodities traded. For large users of natural gas, hedging mitigates risk and helps to protect profitability.

What is hedging?

Hedging is a means of transferring risk, especially price risk, to another party in exchange for price certainty. Similar to an insurance policy, there are costs associated with hedging, though these costs are often intangible, such as foregone opportunity.

Unfortunately, hedge funds have given hedging a bad name, as they only seem to hit the headlines when they fail. Hedge funds came under heightened scrutiny as a result of the failure of Long Term Capital

Management in 1998, which necessitated a bailout coordinated by the U.S. Federal Reserve. More recently, Amaranth Advisors lost over \$6 billion dollars in 2006 and two Bear Stearns hedge funds nearly collapsed in June 2007. However, the term "hedge fund" is a misnomer, as these funds typically engage in speculation rather than hedging.

Hedging is the opposite of speculating. A speculator assumes risk in exchange for the opportunity to profit from movements in the market. A market participant whose goal is "beating the market" or picking the bottom of the market is a speculator by definition. Hedging is a form of risk management; speculating is a form of gambling.

All businesses take risks, and the successful ones are rewarded for it. Smart businesses understand that the risks they are rewarded for are risks associated with their primary business activity. Unnecessary exposure to risk, however, is not prudent business practice. Companies must determine which risks they are willing to accept, and which risks they wish to transfer to others. An auto manufac-

turer takes a risk on the design of a new model. This is a risk that the auto maker is willing and able to accept as its experience and expertise afford a high likelihood of success, and rewards for performing well can be high (profit growth, increased stock price). In contrast, natural gas price risk is not related to the core business activities of an auto maker, and the company is not likely to see its stock price increase as a reward for betting correctly on the direction of natural gas prices.

Hedging goals and benefits

There are many reasons a company might consider hedging natural gas. The volatility of the market is enough to cause concern from a budget and cash flow standpoint, both of which can affect profitability, financial position, and ultimately shareholder value. Even companies for which energy is not a large part of the budget can see profitability threatened if natural gas spikes to \$15 or \$16 per MMBtu, as it did in 2005 following Hurricanes Katrina and Rita.

The goals of a hedging program see **MITIGATING RISK** page 11

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include:

- Protecting profits
- Mitigating risk/volatility
- Stabilizing cash flow
- Improving budget/cost forecasting
- Removing uncertainty

Notice that “outperform the market” is absent from the list above. While it can be a byproduct of a disciplined hedging program, it should not be the objective.

For large users, the commodity cost of natural gas typically represents the largest share of the total cost — approximately 70 percent. Transportation and utility costs make up the remaining 30 percent. Pricing for the natural gas commodity is also the most volatile of the three components.

Adhering to a disciplined hedging program takes the emotion out of purchasing decisions and is much simpler from an administrative standpoint since processes and procedures will be planned in advance.

Effective hedging strategies can yield the following benefits:

- A diversified, multiple-transactional approach minimizes risk associated with a single transaction.
- Dollar cost averaging eliminates the issue of “market timing.” The final hedged price will be determined more by the overall trend in the market instead of a “point-in-time” purchase.
- Some forms of hedging allow more risk-tolerant gas buyers to hedge a portion of their volume requirements and leave the remainder exposed to market pricing.
- A fixed price protects against spikes in the market.
- Volumes from multiple accounts or locations can be aggregated for more favorable pricing and protection against execution risk.
- Hedging frees up resources by minimizing risks that are not central to a company’s core business.

Given the uncertainty and volatility in the energy markets over the past several years, exposure to market pricing is often much riskier than hedging.

Implementing a hedging program

A successful natural gas hedging program should begin first with the company’s risk policy. The risk policy defines overall corporate goals and objectives, delegates financial authority, identifies key employees, establishes a system of controls, and places limits on exposure, transaction volumes, and transaction amounts.

Using the corporate risk policy as a foundation, the company’s exposure to natural gas price risk can be quantified to determine whether the exposure is sufficiently material to impact the company’s earnings. These questions should be considered:

- How do energy costs affect profitability?
- Can costs be passed on to customers?
- Can the company remain competitive at higher sale prices?
- How will volatility impact cash flow?

Additionally, although hedging should be viewed as an insurance policy, management should be prepared for the possibility that the market will move in an adverse direction, causing the hedge position(s) to be “out of the money.” One of the most common misconceptions about hedging is that it should always result in a price that is lower than the prevailing market. Hedging creates a fixed price, not necessarily a lower price. Once the company’s risk exposure has been established, a hedging strategy can be developed and implemented in accordance with the corporate risk policy. Tools available for natural gas hedging include:

- Futures
- Swaps
- Options (puts, calls, collars, floors, caps)
- Physical fixed-priced supply contracts
- Storage

These tools can be used alone or in combination. A hedging program should be developed with input from energy and financial professionals to ensure effectiveness.

The most common hedging mistakes are:

- **Allowing emotions to rule purchasing decisions** — The best hedging decisions are made when risk managers acknowledge that market movements are unpredictable. Do not make hedging decisions based on your market

view. Decide on strategic goals and/or price targets and stick to them.

- **Chasing the market or setting future targets based on recent market dips/spikes** — Make decisions based on hedging goals, not recent events. Be proactive, not reactive.
 - **Not knowing the difference between adjusting and scrapping** — Allow for adjustments as necessary. Fully scrapping the program is only necessary if goals are redefined in a way that does not include hedging and price risk management.
 - **Not looking far enough into the future** — Plan early to allow maximum time to achieve hedging goals (i.e., instead of 12 months give yourself 36 months).
 - **Not considering the amount of time that will be spent on a hedging plan** — Determine how much time and effort is appropriate to achieve your goals and optimize your risk/reward. Set a strategy that fits with the appropriate time you should spend on your energy goals.
 - **Keeping the strategy to yourself** — Keep appropriate personnel informed as to the hedging goals/strategies and expected results.
 - **Not understanding the program** — Take time to understand the hedging program and evaluate alternatives. Ask questions.
 - **Measuring success against something other than the established goals of the program** — Establish clear, realistic goals early in the process, retain them in writing, and don’t confuse satisfaction with luck.
- Ultimately, hedging natural gas can increase shareholder value by stabilizing cash flow, mitigating risk, protecting profits, and allocating resources more efficiently. The best hedging programs are tailored to suit the individual needs and policies of the company, and are developed with input from various experts and stakeholders. Understanding the goals of hedging will help management decide whether to pursue a program and can help guide the process from design through implementation. ■



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The Illinois
Manufacturer

Spring, 2008 issue

The Illinois Manufacturer is the official publication of the Illinois Manufacturers’ Association (IMA)

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