



MAKING DOLLARS & SENSE OF ENERGY EFFICIENCY

Wisconsin companies are saving money, polluting less and are finding help along the way.

By Jamie Welch

In April 1970, Wisconsin Governor Gaylord Nelson created Earth Day, bringing the need for energy conservation to the forefront, yet 38 years later we're still powered by fossil fuels. With skyrocketing oil and natural gas prices, Wisconsin businesses big and small are ready to get serious about energy savings. Forget the environmentalism clichés, they say, this is about dollars and cents, and organizations in the State are ready to help with the financial burden.

The days of cheap gas and electricity

appear to be vanishing, and according to Milwaukee's Johnson Controls' second Energy Efficiency Indicator survey, businesses are feeling the pressure. Roughly 1,500 North American companies were polled in the survey that focused on the impact of rising energy prices on organizations, what companies were doing in response to rising energy costs, what sort of payback they expected and to what extent they were motivated by concerns about the environment vs. pure economics.

Results showed that about 80% of the respondents, who ranged from facility managers to CEOs of businesses with less than 100 employees to more than 50,000 employees, say they expect energy costs to rise. Energy management is regarded as extremely important to 20% of the respondents, and 72% said they're paying more attention to costs than they were a year ago.

Not surprisingly, saving money continues to be the primary motivation for improving energy efficiency, although in most cases the environment is a factor to some degree. On average, companies want a payback on their energy efficiency investments in less than 3.5 years, and relatively few believe their company's tolerance for payback has increased over the past five years.

Data released by the Energy Information Administration show crude oil prices jumped about 30% from the first and fourth quarters of 2007, while commercial natural gas and electricity prices were flat. But those surveyed see a rise of 14% coming, and they're ready to capitulate with an energy saving, cost-cutting plan.

According to Johnson Controls data, significant energy efficiency growth has already begun. Basic measures such as replacing inefficient equipment before the end of its useful life (41%, up 13% from the previous year) and switching to energy efficient lighting (78%, up 11% from 2007) are on the rise.

Clay Nesler, vice president of global energy at Johnson Controls, says that businesses are well aware that energy costs are rising, and executives and plant managers have already begun taking the first steps to solve the problem. As energy costs rise, Nesler believes the combination of economic pressure and environmental awareness will motivate people to make smart investments that have a bigger payoff in the long run.

"It makes sense to do the low-cost, simple maintenance tune-ups first, but after picking all the available low-hanging fruit, soon you have to find a ladder," Nesler says. "With our study we've seen evidence of organizations picking up ladders. It appears that, with more energy efficient design in future development, we'll see a broader, farther reaching approach to the way in which companies react."

Nesler doesn't have far to go for examples. JohnsonDiversy, an affiliate of the S.C. Johnson Co., recently completed an energy-efficient distribution plant in Racine that utilizes sophisticated, integrated automation measurements that precisely read and control heating and cooling systems. The automation system, which is made by Johnson Controls, is completely customized to each building and has a payback of 3-7 years.

Many CEOs in the state are now looking at their companies' bottom lines and making substantial investments in sustainable futures. For example, Kalahari Resort in the Wisconsin Dells plans to conserve 13 million gallons of water annually with its Aqua Recycle system, which will recycle 70% of the resort's laundry water. Todd Nelson, president



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Sophisticated automation is used to measure and control the interior environment in Johnson Diversity's new distribution center in Racine.

and owner of Kalahari Resorts, said he's constantly researching a wide array of state-of-the-art green initiatives to implement in order to cut costs.

HELP IS AVAILABLE

All businesses in Wisconsin have help available. Focus on Energy, a non-profit agency that collects 1.2% from energy company profits and uses the money to fund renewable energy projects, helps companies of all sizes achieve all levels of energy savings. Focus on Energy helped save state businesses \$164 million from 2001 to 2007.

Tom Quasius, a Focus on Energy commercial sector manager who identifies low- and no-cost energy savings plans and offers incentives for capital projects, notes some businesses can reap huge rewards from simple things such as using efficient lighting and insulation, cleaning AC coils and regulating refrigeration temperatures. Quasius has helped small hotel and grocery store owners see immediate, dramatic results on their energy bills in a short time.

"For hotels, a guest room energy management system, which comprises a key-card entry so lights are off when a room is unoccupied, has a payback as fast as six months," Quasius said. "It's already used by nearly 4,000 hotels in Wisconsin. Additionally, grocery stores, which have margins as close as 2.5%, can actually save as much as \$10,000

per week — when you factor in food preservation — by using more efficient lighting."

Focus on Energy gives incentives only for expensive projects that businesses wouldn't normally undertake, such as an investment in occupancy sensors for lighting systems, solar panels or turbines. But an incredibly important first step in energy efficiency is simply controlling usage and changing to efficient light bulbs, Quasius says.

"Even before a company looks into solar panels they should make sure that their current technology is as efficient as possible in order to help renewable energy systems work properly," Quasius says.

Another group, E4, is a non-profit organization dedicated to the environmental and economic benefits of energy efficiency for Wisconsin businesses. Its mission is to "advance economic growth and environmental stewardship through the implementation of sustainable, practical, profitable and innovative energy solutions."

E4 chalked up a victory when it helped secure a decision from the state's Public Service Commission to let Wisconsin ratepayers and We Energies get 100% of the "green credits," that are currently traded voluntarily in the U.S. on the Chicago Climate Exchange, earned from the zero emissions Point Beach nuclear plant before it was bought by Florida Power and Light. E4 had brought to light the issue of the way green

credits were being handled in the sale agreement. The decision didn't make any prime-time teaser ads for the local evening news stations but, E4 saw it as a huge win. E4's post-hearing briefs provided the first glimpse of what annual revenues of green credits associated with the plant could be: annual values ranged from \$24 million to \$240 million.

"E4 is pleased that, thanks to this decision, ratepayers will reap the very substantial economic benefit that the green credits represent," said E4 Executive Director Kathryn Sachs, who noted that energy efficiency is the cleanest and least expensive form of energy available, and should be viewed as a supply-side option in a utility's generating profile. Sachs works tirelessly on energy efficiency matters of all kinds from her office in Madison.

Although she is proud to live in a city where thousands of people commute to work by bicycle, she acknowledges that for most, the costs of driving to work, not to mention the frustrating congestion that grips every metropolitan district in the country, is making such commutes economically necessary.

HIGH TECH CARPOOLING

Sachs recently met with Madison Mayor Dave Cieslewicz, who showed renewed enthusiasm for a carpooling plan for Madison that incorporates social networking through Facebook profiles and other avenues that familiarize and acquaint commuters with each

other before they get into a stranger's car. Sachs found that, especially with women, one of the main barriers of carpooling is that there is a perceived safety threat, and that through social networking, "that threat is minimized, and people are more than willing to give up the freedom of driving alone."

Help with energy efficiency, Sachs said, can be as easy as clicking on bsdglobal.com, a Web site for the business community that prompts executives to adopt sustainable practices that can help companies gain a competitive edge and increase their market share. The Web site lists the Business Environmental Handbook's priority list for improving energy efficiency.

According to the handbook, the first of four steps is getting a commitment from senior management. The second is to immediately implement low-cost efficiency measures that are easy to do, provide an immediate sense of accomplishment, and help realize big dividends. The third step is to conduct an energy audit to highlight where a business wastes energy, what it costs, and where

improvements can be made. Finally, businesses can create an energy management plan based on the audit.

Focus on Energy and E4 are programs Wisconsin can be proud of, but others say the State can do even more by instituting simple policy changes that will immediately and dramatically make a difference.

Stephen Heins, communications officer for Orion Energy Systems in Plymouth, a maker of energy efficient lighting systems, says that Wisconsin is lagging behind states like California, Idaho, New York, Delaware and Maryland, which have removed disincentives for energy companies to save energy. According to Heins, a recent report by the International Energy Agency found that the states that have incentives, or rewards, for energy companies to save their customers money, have achieved 31% overall energy savings as a state. That energy savings helps reduce the need to build more electricity plants, which burn coal and dramatically pollute the environment.

"Utilities should be able to receive a performance award for their measured or verified clean energy successes," he says. This summer Wisconsin will have to come to terms with a report by the Governor's Task Force on Global Warming, which Heins expects will inevitably push the state into an energy-efficiency, performance-award situation that he believes will start a cycle of energy efficiency for Wisconsin.

Indeed, today's energy efficiency measures don't seem to have the drama found on Earth Day 1970, when, empowered with the incited passions of the anti-war protesters in Vietnam, Gov. Nelson's nationwide environmental "teach-in" comprised 20 million demonstrators and thousands of schools and local communities across the nation. Even before the Governor's Task Force predicts the consequences of our energy consumption and recommends climate change initiatives, businesses need to conserve energy for economic reasons and many have already taken steps to do so. **CRW**

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