



## ENERGY SOFTWARE CUTS COSTS

April 1, 2006 -- With prices for natural gas and electric power soaring, it's no surprise that many manufacturers are turning to energy management software to help them cope.

Software packages can help companies manage processes more efficiently, curtailing power usage when prices are highest and shifting some energy-intensive processes to times when energy is cheaper. These systems also can be used to forecast weather changes so that large gas consumers such as chemical companies can time energy purchases to take advantage of price movements.

Unfortunately, not many manufacturers enjoy the flexibility of production processes to be able to change what they produce and when to reduce energy use. "Relatively few manufacturers have the luxury to choose a different product mix based on energy prices," observes Colin Masson, research director for manufacturing operations at AMR Research in Boston.

More often, Masson says, manufacturers are able to "pinch" manage their energy, by reusing heat or steam generated in one process for use in another. "You can exchange the energy used in, say a cracking device, to heat up material in another process," he says. "As energy costs have gone up, we've seen more adoption of pinch technologies."

A number of vendors offer energy management systems. One of the more popular software companies in this market is Aspentech, which last December released a new package called Energy Cost Manager. The package from the Cambridge, Mass., software firm, which includes a set of tools that companies can use to manage energy consumption, features a dashboard for on-site energy management of a production facility. Other leading vendors include Honeywell Process Solutions and Building Solutions, and WebGen Systems.

In general, the greater the energy usage, the more likely a manufacturer will be interested in using an energy-management system. "Our customers generally have large commercial loads," says Bob Trask, vice president of business development at WebGen, also based in Cambridge, Mass. "Our software is Web-based, and companies connect to their buildings over the Internet."

A key trend among manufacturers using energy management software, Trask says, is simply "getting a handle on where the consumption is coming from, as well as benchmarking against industry trends and their own past company usage data. Manufacturers also want to analyze their usage on an ongoing basis and in realtime, to see how much energy they are consuming today, and learn whether it's more or less than expected," Trask adds. Agrees Masson, "We see a lot more use of energy-management programs for realtime monitoring of energy consumption."

Honeywell, a manufacturer that also offers process-oriented systems through its Process Solutions unit, has software designed for both continuous-process companies as well as mixed process-and-discrete manufacturers. "Processes typically are the larger energy consumers in a company," says Peter Zornio, director of systems research at Honeywell Process Solutions. "The pulp and paper industry is very hard hit right now, and their energy costs as a percent of raw materials costs is way up."

So high, in fact, that some pulp and paper companies are investigating other, more energy-efficient ways to make their products. "Instead of relying on high pressure or high temperature, paper companies are starting to look at the use of a biochemical reaction as a catalyst that can actually lower the pressure or temperatures required in their processes," Masson says.

Honeywell's energy-management system can be set to automatically trim the amount of energy used in a process to avoid tripping the next hurdle in energy rates, Zornio says. "The system enables a paper producer to apply just the right amount of steam needed for drying out the paper. Anything over that amount of steam is wasted."