

LIGHTING CONTROL PAYS OFF

In 1986, many lights were left burning all night in the computer service center of a large Cleveland bank holding company, Society Corp.

The facilities manager realized that they could save money by automatically controlling lights, which comprised more than 2,400 fluorescent fixtures consuming about 298,000 watts of power.

The bank needed a controller that was rigid enough to save energy, but flexible enough to allow individual employees to override zones when they planned to work late.

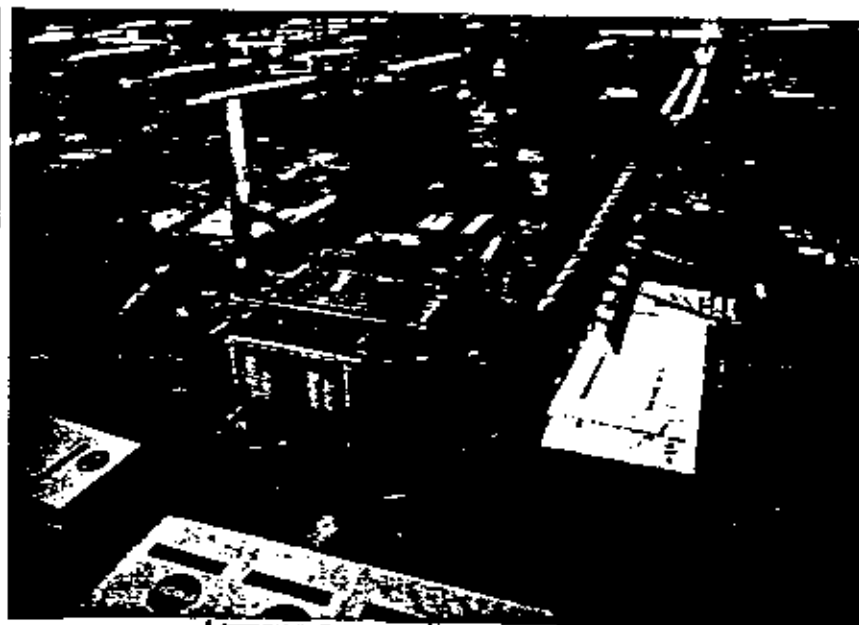
The bank turned to COMSE Energy Managers, Twinsburg, Ohio, for help. COMSE is an energy management consultant, offering services that range from energy audits to design/build energy-management system installations.

After examining the building, COMSE recommended installation of a building automation system that would run on an IBM personal computer using off-the-shelf software. To save on installation costs, COMSE suggested use of a power-line carrier rather than hard wiring.

Individual employees could override their lighting zone by using their telephone. To extend lighting in a particular office, the occupant enters a series of instructions on a touch-tone telephone key pad.

The bank approved the proposal. The result: Savings analysis during the 12 months following installation showed that Society Corp. saved \$42,000 in energy costs. (That was in addition to \$48,000 saved through installation of energy controls on the building's HVAC system.)

The story shows that the energy management market is alive and well in the late 1980s. In fact, Richard G. Lubinski, COMSE general manager, estimates that only about 10% of the commercial/industrial buildings that could make use of a properly designed energy manage-



Lance Yukoder, mechanical systems designer for COMSE, near control panels for lighting and HVAC at the Forest Manufacturing facility.

COMSE installed an energy-management system for Forest Manufacturing, a Twinsburg, Ohio manufacturer of silk-screen banners for commercial customers.

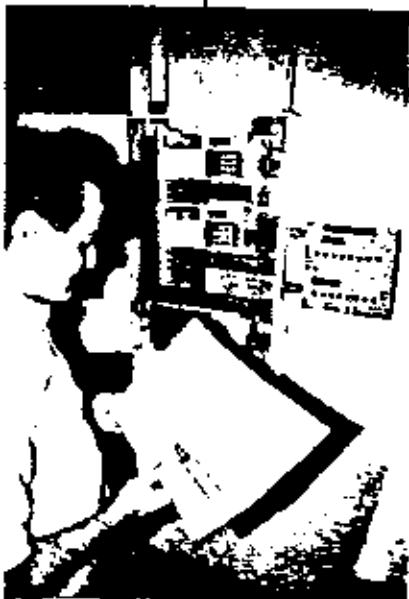
ment system have done so to date.

Many potential customers don't know how to read their monthly utility bills and aren't even aware that they could save money through energy management. "Customer ignorance is probably the biggest impediment to market expansion," he says.

CUSTOMIZED SOLUTIONS

COMSE was formed in 1981 as an engineering joint venture between two Ohio electrical contractors, Community Electric Inc., Akron, and S&E Electric Inc., Twinsburg (the name "COMSE" is composed of the first letters from both Community and S&E).

The two electrical contractors were willing to make the investment in money and manpower to establish a credible energy management business. At the time the new company was formed, the two founding contractors realized that the energy-management business was becoming larger and more sophisticated and could no longer be handled on a strictly part-time basis. More so than electrical contractors, energy management companies need a



INDUSTRY CURRENTS

record of flawless success to survive. "Reputation and credibility are paramount," Lubinski says. "You get one black eye and you're out of business."

Today, after eight years, COMSE is practically a "grandfather" in an industry where many start-ups last only two years. The company's specialties are hotels, banks and restaurants, but it has also done office buildings, supermarkets, factories and computer centers.

As of early 1989, the firm had completed more than 100 installations, with documented total annual savings of about \$1.3 million.

COMSE's strategy is to market itself as an independent consultant. The company doesn't attempt to push a particular product line, but, rather, it examines the customer's unique needs and designs customized solutions. In the past, the firm has installed and programmed energy-management system computers from 14 different manufacturers.

If customers knew what they wanted ahead of time, they would draft specifications and solicit bids. But most customers have no idea what they want, so they hire an independent consultant to do the analysis and make recommendations. "This is not necessarily a low-bid market," says Lubinski. "Jobs are not awarded on the basis of price alone." The customer looks to the consultant to explain what is feasible, how much energy will be saved, and how much will be cost justified.

According to COMSE's engineers, Lance Vukoder and George Locher, Jr., building owners are sometimes confused by the firms that claim to be energy consultants. Some firms offer "free audits." But these firms know ahead of time that the "audit" outcome will be to recommend the only product they represent. In essence, they know they have the solution before they know if the building has a problem.

On each job, COMSE goes through a two-step procedure prior to drafting a proposal. The first step is the preliminary analysis, which usually takes a half day for the average building. Lubinski will sit down with the customer, review utility

bills for the previous 12 months, and discuss the customer's operations and existing automatic controls. The preliminary analysis or feasibility study is designed to rule out buildings that do not have good payback potential.

If COMSE thinks the customer could benefit from energy management, they will recommend the next step, an energy audit. The audits are conducted by one of COMSE's mechanical engineers. The company charges a fee for the audit, which involves on-site inspection by the engineer plus a computer analysis. Depending on the facility, the audit can take anywhere from a few hours to over a month.

The audits are designed to determine specifically what strategies or equipment will produce the best return-on-investment for the building.

The engineer develops an energy management strategy, which is submitted to the customer in the form of a proposal. If the customer accepts the plan, COMSE will design the system, install it (using labor from the sister electrical contractor companies), download its customized computer programs and test everything to ensure it is working correctly. The firm also trains the customer's key personnel, and continues to monitor the system after installation.

"We don't abandon the customer once the job is done. We stick around to fine-tune, make seasonal changes, and make sure the system fits into the building's routine operations."

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