

# CHARTWELL'S BEST PRACTICES

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Service and Delivery*

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## DTE "operating system" relies on employees, continuous improvement tools to drive out waste

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***Editor's note: This is Part One of a two-part series to be concluded in the August issue.***

In an era of shrinking margins and stringent regulations, DTE Energy leaders recognized that the company's survival as a viable enterprise required them to take the long view, to develop a top to bottom, DTE-specific "operating system" with staying power. The continuous improvement system, initiated in 1999, has not been simply a valuable exercise or set of tools to help save money and drive efficiencies, according to company leaders. It has become the standard that has carried the company into the present and will lift it into the future. This continuous improvement "operating system" has saved the company more than \$150 million and better positioned it to comply with today's regulatory and business environment, several DTE sources tell Chartwell.

With nearly 2% of the DTE Energy population employed in full-time continuous improvement positions, continuous improvement champions are scattered throughout the company. Employees have been acclimated to the principles not only through these key personnel and executive management, but also via participation in kaizen workshops – total quality management seminars that emphasize employee involvement, more than 100 of which have been held to date.

Other tools that have brought the company this far along include an executive implementation plan, the use of Six Sigma and "lean tools," learning laboratories, demonstration projects and a dedicated team of continuous improvement consultants, including the Lean Learning Center of Novi, Mich., a provider of "lean curriculum and consulting" to a variety of industries, and Achievement Dynamics, a management consulting company in Palm Beach Gardens, Fla.

### Company profile

DTE Energy's largest operating subsidiaries are Detroit Edison, an investor-owned electric utility serving 2.1 million customers, and Michigan Consolidated Gas Co. (MichCon), a natural gas utility serving 1.2 million customers. DTE Energy has 11,000 employees in utility and non-utility subsidiaries involved in a wide range of energy-related businesses. The company's growth strategy is focused on continued excellence of its core utility businesses, the development of non-regulated, energy-related ventures, and investment in and development of emerging technologies.



## Glossary

- The lean concept is a method of slashing waste. According to Jamie Flinchbaugh of the Lean Learning Center in the book *Beyond Lean: Building Sustainable Business and People Success through New Ways of Thinking*, "Lean systems give people at all levels of the organization the skills and a shared way of thinking to systematically drive out waste through designing and improving work of activities, connections, and flows."
- Six Sigma is a highly disciplined, mathematical and statistical approach to developing excellence in products and services. The higher the sigma number, the closer the product is to perfection. "Six sigma" is considered a high score and refers to a product with very few defects. The ideal objective for a product or service is to reach zero defects.
- The Kaizen method of incremental change is a Japanese management concept for continuous improvement. It is the philosophy behind many Japanese management tools such as Total Quality Control, and it emphasizes employee involvement. At DTE, a kaizen event is typically a five-day workshop with 12 to 15 participants. "It's a blitz that focuses on a particular process that you want to improve or a problem that you want to fix. We were the facilitators for those events in the early days. We then also established a facilitator boot camp where we developed internal resources at DTE so that they could then go on and facilitate their own events," says Andy Carlino, senior partner of the Lean Learning Center, Novi, Mich., and president of Achievement Dynamics, Palm Beach Gardens, Fla.

## Every process can be affected

DTE Energy's continuous improvement cycle is based upon four principles. First, start with careful planning to help reach goals and objectives. Next, follow up with consistent, standardized and effective action. Results of this action must then be measured and analyzed. Then, if necessary, take corrective actions, which leads the cycle back into planning and goal setting. These methods apply to DTE Energy's specific objectives and the company's anticipated results in four key areas: people, financial, customer/stakeholder; and competitive position.

The "total culture change" will bring with it continued savings and efficiencies, DTE leaders say, beyond the documented savings of \$150 million thus far. Improvements that already have been realized include:

- Small transformer repair time was reduced from an average of 31 days to less than two. The increased throughput allowed the company to bring additional repair work into the organization, representing a \$3 million improvement.
- Reduction of time between invoice receipt and check-cutting from 45-60 days to six days allowed the company to take advantage of prompt-pay opportunities.
- Accuracy improvement at an inventory warehouse from below 80% to 96% in less than two months, and 30 days ahead of schedule, saved the supply chain organization almost \$400,000.

- Diagnosis and minor vehicle repair at a transportation garage was improved by 50%, with \$32,000 in savings, through renegotiating of prices for parts and materials.
- Numerous intangible efficiencies have improved employee engagement and morale as well as contributed to quality improvements.

The most recent phase of the implementation plan will further drive the philosophy into the mindset and activities of the culture – “driving it into the DNA of every employee,” as company leaders say. Continuous improvement will become second nature to each employee, “so that when they come to work every day, not only are they doing a job, but they are looking at it with the lean type of eye – looking for the waste in their operation, looking for how they can improve it,” asserts consultant Andy Carlino, senior partner of the Lean Learning Center and president of Achievement Dynamics.

To get to that point, the philosophy needed to be driven into the DNA of company leaders. And that task seems to have been accomplished. The concept and implementation inspire passion in those who currently live it at DTE. “I don’t know how I would do the job I do right now without having the infrastructure we have in place,” says Shawn Patterson, director of regional service operations. Patterson has played a pivotal role in the continuous improvement effort, having served for five years as the original director of the DTE Energy Operating System Strategy Group.


“When [employees] come to work every day, not only are they doing a job, but they are looking at it with the 'lean' type of eye -- looking for the waste in their operation, looking for how they can improve it.”

### **Leaders feel the pressure, take stock of future**

By way of a little background on the continuous improvement effort, in the late 1990s, DTE leaders were feeling the pressure of the shifting regulatory environment. “The catalyst was the company taking stock of the impending future in the utility business with a likely increase in competition ... or some form of deregulation,” states Patterson. It became apparent that to remain strong, the company would need to reach for new solutions.

At that time, the energy company was interested in hiring more people from the automotive industry. “DTE had the foresight to say, ‘We need to reach out to other industries and bring a different kind of vision, different blood into the organization,’” Carlino recalls. A Chrysler senior finance executive who came to DTE as chief financial officer recognized that automotive industry business processes were applicable to the utility industry, which at that time was facing deregulation. The CFO became the company’s champion for continuous improvement and, in 1998, brought in Carlino, who has advised many large corporate clients, including DaimlerChrysler, where he has been a consultant for 11 years.

“There was no structure ... no history, and not a huge appetite for these kinds of things” at DTE at the time, Carlino says. Then a supply chain manager, also brought in from the automotive industry, became a champion. Soon after, DTE leaders made the decision to incorporate the concepts organizationwide. Patterson was plucked from the automotive industry in 1998 and installed as director of continuous improvement for DTE Energy in 1999. He subsequently began building a continuous improvement staff.



As an agent for change, Carlino was charged with determining how to deal with the impending restructuring of the traditional business environment. He and the supply chain group took on the task. "When we came on board, we did what most of us did at that point in time. We brought a tool with us, a lean tool, and that was kaizen events. We were doing multiple kaizen events throughout the organization with significant success. We were really making some dramatic changes. But it wasn't changing the culture of DTE. We were getting pockets of opportunities, but we weren't really having huge paybacks in moving 'the big needle' at DTE and changing the culture," Carlino relates.

From the beginning, Carlino and Patterson were discussing the idea of creating an "operating system," which Carlino had done at Chrysler based on some work that had been done at Toyota. However, it was too early in the game for the utility and the industry in general, "and we thought it would be too difficult and almost too academic to take on this operating system notion," Patterson explains. "We needed to just get some gains and teach some really basic, lean, continuous improvement tools through the kaizen process."

The kaizen events drew in participants from all the business units within the power generation and energy distribution organizations. "Essentially we would work with the senior leaders in some of their critical areas or areas where we thought we could get costs out or make significant service improvements," says Patterson. In Year One, about 30 kaizen events were held. "In the second year, we had not only exposed the organization to what the kaizen is, but also started training our own resources; so by the third year, we had done more than 100 of them and pulled out some pretty significant savings for the organization." Beyond the kaizen events, "there was a tremendous amount of benchmarking and investigating," Patterson continues.

### **Merger drives home the need**

Just as the organization got rolling with kaizen events and the subsequent savings and efficiencies they were producing, everyone's attention was diverted for a time to the merger of DTE Energy and MCN Energy Group, which was announced in 1999 and finalized in early 2001. "The merger prompted a sense of urgency for the operating system concept, because we were bringing two organizations together ... each with its own way of doing things. It's not easy to have these mergers work well, and to DTE's credit they did a wonderful job of combining two organizations into one organization," Carlino says.

This sense of urgency helped foster the leadership support that was necessary for building a continuous improvement operating system. There had been previous continuous improvement efforts within individual departments, says Patterson, "but this was the first attempt to create one standard way and build a continuous improvement culture throughout the company." In forming this system, all previous related information and experiences were used, from the merger to the kaizens to other relevant data. This information was applied to the goals and objectives of the system as it began taking shape. "We used all of those things to define what our operating system was going to look like," notes Patterson.

Establishment of a fully functioning continuous improvement group didn't happen overnight. It came into being in 1999, but in the first 18 months, during the heaviest kaizen activity, only five or six employees were assigned to the

group. Prior to 2005, most participants in the group were drawn from the automotive industry. Following the merger, the group expanded to 15 full-time staff members. "After the merger, we declared that we were going to create this DTE Energy Operating System and really get serious with lean and Six Sigma," Patterson comments. Carlino defines the DTE Energy Operating Systems Strategy Group – informally known as the continuous improvement group – as "the internal operating structure that is used to manage and monitor the continuing development of the employees at DTE Energy."

Formation of the group meant that the company now had a dedicated continuous improvement staff. "Before, like many companies, we thought we could go out and train some people in continuous improvement tools and hope that things were going to happen. But as one of our vice president says, 'It's hard to get strategic at 5:00 at night.' It was really important to have a group of people who could focus on the strategic rollout of the program. It also helped with some of the tactical implementation of it," says Patterson.

### Executives come on board

As the operating system was gaining strength, the kaizen activity continued. The aim of the consultant has been to hand off the training and management of the kaizen events to internal group leaders. "We trained more than 50 facilitators, and there was a certification process, so there were a number of people involved in being able to run the kaizen events," Patterson notes.

To expand the program beyond kaizen and other tools that were in use, executive leadership had to be fully committed to the process. "We wanted to start getting our executives engaged in what this would really mean and how it would look," Patterson explains. The focus for DTE Energy was on learning more about lean tools, putting measurements in place and having an impact on efficiencies. "While we were doing this grassroots effort with kaizen and getting the results for the organization, we were also shopping the vision with our senior leaders and getting them warmed up to what an operating system would look like for DTE Energy," Patterson explains.

The company continued to reach outside the industry for assistance. For example, top executives met with the former vice president of manufacturing for the Chrysler Corp. (now DaimlerChrysler), Dennis Pawley. Pawley is known for embracing Toyota's system as the basis for the Chrysler operating system. A group of executives also visited Alcoa, toured the plants, and met with Paul O'Neill, who was chairman and CEO of Alcoa at the time.

Benchmarking was underway, Patterson says, and "we were building some pretty good enthusiasm to take it forward. But the big question was 'How are we going to build a sustainable program that really is going to include the vast majority of our employees?' The enthusiasm and results were there, but the question remained: 'Is it really going to translate into any tangible day-to-day changes that we want to start seeing in this organization?' I think there was commitment to move forward, but a lot of scratching of heads on how we were going to do this in a sustainable way."

Complicating the issue was the merger, which required the focus and resources of the continuous improvement group for 18 months. "Plus there just wasn't the

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We were building some pretty good enthusiasm to take it forward. But the big question was 'How are we going to build a sustainable program that really is going to include the vast majority of our employees?'”

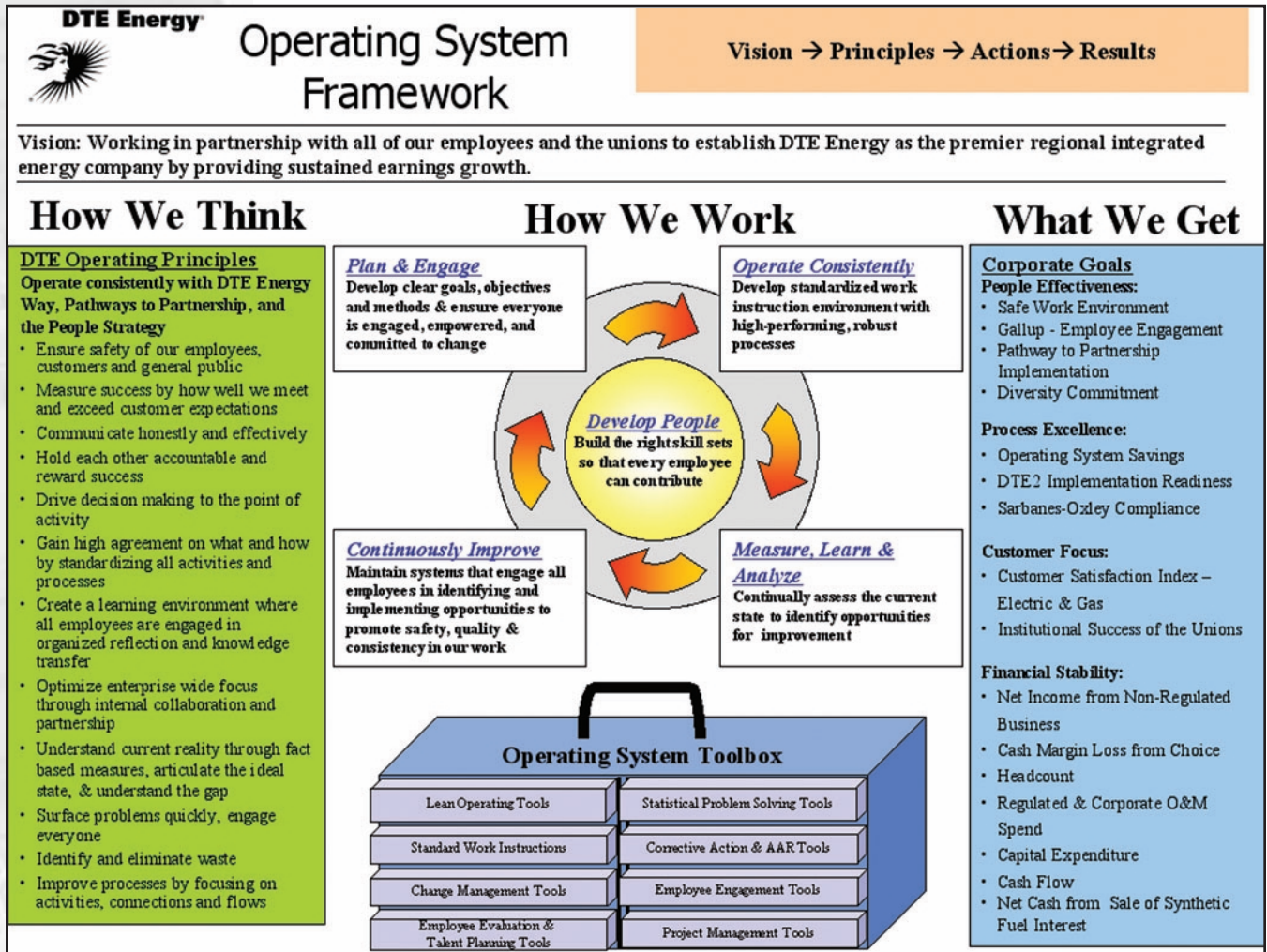
organizational capacity to think this through anymore. There was enough change on the plate," Patterson says.

## Operating council boosts program to new level

The big boost came around mid-2002. "After the merger, we formed an operating council in the company, which [consisted of] all of our senior operating leaders – the presidents of our three major business units and their vice presidents ... and HR and IT. That became a pretty important forum, because they were challenged with the task of implementing a DTE Energy Operating System – soup to nuts. Literally we had a notion of what it was, but there was nothing on paper to say, 'Here's what we want it to be for DTE Energy,'" Patterson relates.

In the meantime, Patterson, Carlino and others put together a coalition of consultants and internal resources that became the tactical arm for the operating council, notes Patterson. "One of the first things we did was pull this operating council together into a two-day workshop, and we crafted the DTE Energy Operating System." (See chart.)

Source: DTE Energy



Carlino says: "That was a pretty important event because it started creating ownership." Having to put pencil to paper and determine the principles that were to drive the organization and the tool set that would effect change was a milestone and turning point, he adds.

The operating council and the continuous improvement leaders worked together to flesh out the plan over a two-month period, ultimately producing a 60-page document. The continuous improvement group serves as the technical executors of the plan.

The document defines and delineates specific areas in which DTE Energy will apply the lean and Six Sigma tools, including:

- senior and mid-level leadership's role as champions;
- human resource requirements – such as the number of full-time employees to be engaged, where they will be deployed and which skill sets they should possess;
- corporate communications' role in sharing information and results throughout the company;
- measurement and accountability in continuous improvement-related areas, such as the company's bonus structure and talent planning programs.

Specific strategies and plans of action were scheduled to take place in six-month increments. For example, in the area of leadership development, the first six months were aimed solely at DTE Energy's most senior executive group. The plan stated that the CEO, under this plan of action, was going to sponsor five half-day sessions that would present an executive-level overview of lean tools.

Gail C. Chadwick, iSixSigma staff writer, described the method of ranking Six Sigma achievement levels in a recent article:

*“Motorola, the company that holds the Six Sigma trademark, says the data-driven defect-reduction process has saved the company more than \$16 billion over the past 15 years. Six Sigma has generated similarly stunning results at companies here and abroad in the manufacturing, transactional, and service sectors. All businesses -- regardless of sector, size, or project - link their success to one factor. In Six Sigma parlance, it's the Black Belt.*

*The term Black Belt refers to project leaders, skilled in the use of statistical methods and interpersonal communication, and dedicated to using Six Sigma methods to ensure customer satisfaction. Green Belts require less training than Black Belts and take responsibility for leading fewer projects, while Master Black Belts spend nearly all of their time consulting, mentoring, and training Green Belts and Black Belts. Not surprisingly, the term Black Belt has its roots in the exotic realm of martial arts. Like a person skilled in the Oriental sport of karate, the Six Sigma Black Belt is self-assured and knowledgeable, the result of intensive training and real-world experience. The Six Sigma Black Belt is disciplined, purposeful, and decisive, able to lead highly focused efforts aimed at improving a company's bottom line. And, to ensure continued improvement, the Black Belt works affirmatively to identify and mentor new Black Belts.”*

## Consultant works himself out of a job

With implementation of the plan, the role of Achievement Dynamics has been slowly diminishing as DTE Energy staff takes on more and more of the consultant's former responsibilities. In the last part of 2004, Patterson exited the director position of the DTE Energy Operating System Strategy Group, handing the reins over to the new director, Tom Witte. "It continues to evolve," Carlino says, "with Tom starting to take it to another level."

Leading up to this time, the operating system group has implemented a series of new tools and tactical approaches, including learning laboratories and demonstration projects. "Shawn [Patterson]'s challenge was to develop these internal resources and the continuous improvement group, and then move them out into the business units, so he would have an army of experts who would become part of the business units," comments Carlino. "They were seeding the organization with these experts."

The organizational effort has been years in the making. "The plan got us going and got everyone on the same page in terms of how we wanted to roll this out," Patterson says, "but I don't think we were creating any religion around this." That will be next on the agenda. With Witte now at the helm, big changes are once more in the air. "Tom is continuing to take the DTE Energy Operating System to another level, and he is bringing in a lot of Six Sigma black belts that supply the line organizations [with] training," Carlino states. "We're also working with demonstration projects for them so that the new black belts will learn the way, and then we [the outside consultants] will get out of the way."

***Read Part Two of the DTE Energy continuous improvement story in the August issue of Chartwell's Best Practices for Utilities & Energy Companies.***

## Collaboration of vendors key to Xcel Energy's Utility Innovations project

***Editor's note: Two Chartwell researchers/editors attended the opening of Xcel Energy's Utility Innovations center on May 18, 2005, in Denver. This article is provided by Garrett Johnston, manager of the Chartwell Metering Research Series, based on the presentations made at the opening and his post-opening one-on-one interviews. For more information on the Utility Innovations project, go to the link on the Xcel Energy Web site under "Newsroom."***

DENVER – Ray Gogel, vice president and chief information officer for Xcel Energy, believes the idea of “innovation” seems almost out-of-place in the utility industry. That’s why the term “Utility Innovations” seems more like an oxymoron such as “military intelligence” than a realistic initiative, Gogel joked at the May 18, 2005 opening of Xcel Energy’s Utility Innovations center in Denver.

Xcel executives Wayne Brunetti and Dick Kelly made it clear to the industry analysts and journalists attending the opening that the aim of Xcel’s Utility Innovations project is to develop an innovative brand that appeals to investors. Their goal is to use the center to develop a utility that differentiates itself through regular use of technology to improve customer satisfaction and decrease costs.

Xcel Energy – serving 3.3 million electric and 1.8 million gas customers in a 10-state Western and Mid-Western service territory – has teamed with IBM, Indus, Itron, Mercury and SPL WorldGroup to form Utility Innovations. The project is led by its Strategic Advisory Board (S.A.B.), consisting of executives of each of the five technology providers, some of which are competitors. Each partner brings different services and/or products to create the product integration.

- IBM - provides broad-base technology, software solutions, systems integration and project management.
- Itron - provides meters and automated meter reading for Xcel Energy South; meter data management, asset management and billing software applications.
- SPL WorldGroup - provides distribution management and outage management systems.
- Indus - provides asset suites, which includes a supply chain system and work management, and Indus Service Suite, which includes scheduling, mobility solutions and resource optimization.
- Mercury - provides IT Governance Center software and monitors IT demand.

While utilities struggle to find new revenue streams, many have abandoned non-regulated services, based in part on the failures of some utilities’ energy trading businesses. “We all basically provide the same service,” said Wayne Brunetti, Xcel chairman and CEO. “The [project’s] goal is to provide the highest level of services at a reasonable cost, and I believe technology can help.”

Gogel added that the goal of the Utility Innovative project is to see how Xcel Energy can leverage technology in a different way to improve performance. The project is designed to reduce outages and enhance response as well as

customer service. Specific upgrades include but are not limited to, additional assistance for customer service representatives handling high bill inquiries, enhanced predictions of estimated restoration times, and enhanced distribution of outage restoration crews and field workforce.

"It's been one of the most successful things I've ever seen," said Dick Kelly, Xcel's president and chief operating officer. "There is the possibility that Xcel and its partners will hit a home run."

### **Project cost: \$13.5 million**

The project costs about \$13.5 million including \$3.5 million paid by Xcel with shareholder dollars, states Xcel Energy. Xcel insisted participating vendors be stewards of Xcel and not view participation as a sales opportunity.

Xcel has different vendors in its service territories. For example, it uses Itron's mobile solution in Colorado and Cellnet's fixed network in Minnesota. When asked how the utility went about choosing vendors, Gogel said they wanted energized and involved partners and that the utility had a long-standing collaborative relationship with Itron. Itron had already devoted a vice president to serve on a board for one year.

According to Ray Gogel, chief information officer of Xcel, the Utility Innovations project is designed to increase accuracy and efficiency in a wide range of operational needs, including:

- Outage management/prevention;
- Seamless integration of multiple systems; and
- Real-time presentation of critical information.

The ultimate results will be business success created through improvements in:

- System reliability;
- Customer service/satisfaction;
- Regulatory compliance; and
- Costs.

Like some other partners, LeRoy Nosbaum, CEO of Spokane, Wash.-based AMR market leader Itron, said he was skeptical initially of working with competitors and other vendors on the Utility Innovations project in part because of the risk of disclosing proprietary information and the open-ended nature of the deliverables. But in the end, Nosbaum said, the Utility Innovations project will help Itron more efficiently and effectively allocate the \$45 million it spends annually on research and development.

Itron's R&D efforts are often off the mark or sometimes too late, Nosbaum said. But the UI project has helped Itron improve productivity by providing instant feedback on pilot initiatives and a "real world laboratory." Itron is already selling products in the U.S. derived from the UI project, Nosbaum said.

### **Why not just install various systems independently?**

President and COO Kelly said Xcel Energy's strategy "focus on the customer" has been referred to as "back to the basics" by some, but that the utility has no intention of going "back." Instead Xcel Energy is continuously looking forward. Focusing on customer service involves focusing on reliability, he explains.

## F Y I

**The information collected by the fixed network helped the utility understand how AMR can aid in more efficiently restoring power during outages and handle off-cycle meter reads. Meter data is also flowed into Xcel's Indus mobile workforce system and SPL WorldGroup outage management system.**

Utility Innovations' initiatives in 2004 included:

- integrating communication of the utility's outage management and meter systems for outage reduction and response and enhanced customer communications during disruptions;
- accessing loads and conditions of assets real-time;
- utilizing a real-time, wireless environment for the workforce to better serve customers; and
- using dashboards for real-time information presentation to utility executives on the state of the utility (see July 2003 issue of *Chartwell's Best Practices for Utilities & Energy Companies* for a full case study on Xcel's use of automated scorecards).

Based on the project, Xcel has concluded Itron has the ability to upgrade the mobile technology installed in Xcel's Colorado territory to fixed networks that could handle reads from up to 1,000 meters. The information collected by the fixed network helped the utility understand how AMR can aid in more efficiently restoring power during outages and handle off-cycle meter reads. Meter data is also flowed into Xcel's Indus mobile workforce system and SPL WorldGroup outage management system (SPL WorldGroup purchased outage management vendor CES International in May 2004.)

Testing was conducted between July and October 2004 in Xcel Energy's Arvada Service Center to gauge the impact of real-time technology on outage response and work processes. The service area of Arvada, serving 5,550 customers, presents certain geographical challenges including trees, hills, and many homes of all types, according to Xcel Energy.

Forty automatic data collectors were installed by the partnering team to join existing AMR installations, and meters were scanned continuously with a schedule of five-minute uploads. Workflow optimization was tested by field crews using wireless devices for real time collaboration.


Many utilities have installed automated and/or advanced metering systems, as well as outage management and mobile workforce solutions. So, why didn't Xcel just install individual systems for outage, metering instead of creating a whole project that has cost the utility \$3.5 million and other participants another \$9 million?

"We did not want a preconceived answer," said Corey Hessen, executive director of Xcel's Utility Innovations center. An example of the innovation and integration Xcel is seeking is the new Nintendo Revolution game system designed to play any video game ever made, said Hessen.

### **IBM: 'Intelligent network' could help improve outage response**

An intelligent network can help detect outages faster, better protect assets and avoid blackouts, said Guido Bartelis, general manager for Global Energy and Utilities Industry. Bartelis. IBM is focused on Intelligent Networks, which the company sees as the solution for improving customer service and regulatory requirements. "It's about transformation of the industry," Bartelis said.

The utility industry is primed for innovation using information technology, Bartelis told Chartwell in a phone interview. While automotive, telecommunications and finances are driven by competition, the utility industry is driven largely by cost, he said. "Efficient management of assets and costs is a key objective for utilities," Bartelis added.



IT can help improve efficiency instead of building more capacity, Bartelis said. And that can happen as younger, more IT-literate executives replace the numerous baby boomers reaching retirement age.

### **Willing to share innovation with utilities**

Moving forward, Xcel will annually rotate the executive directors of the Innovations project to ensure creativity. But the program is not merely being done for publicity, said Xcel officials. Utility officials want to make Utility Innovations a “real, living, breathing, actionable” part of its organization, said Hessen.

Xcel is willing to share information with other utilities. In fact, all five CEOs from Atlanta-based Southern Co.’s operating subsidiaries visited Xcel the week of May 9. He said an Oregon municipal utility has also called to get information about the project. But Xcel is not looking for the project to become a profit center, Hessen said.

## Co-op energy advisor program has two seemingly disparate goals: increase kWh sales and educate about efficiency

**Company Profile:**  
**Wabash Valley Power, Indianapolis, Ind., is a generation and transmission cooperative that provides wholesale electricity to 27 distribution systems and about 325,000 end-use customers in Indiana, Illinois, Michigan and Ohio.**

Wabash Valley Power Association, a generation and transmission cooperative, has spent the past year laying the groundwork for its new Energy Advisor Program, which combines energy efficiency solutions with promotion of electric products.

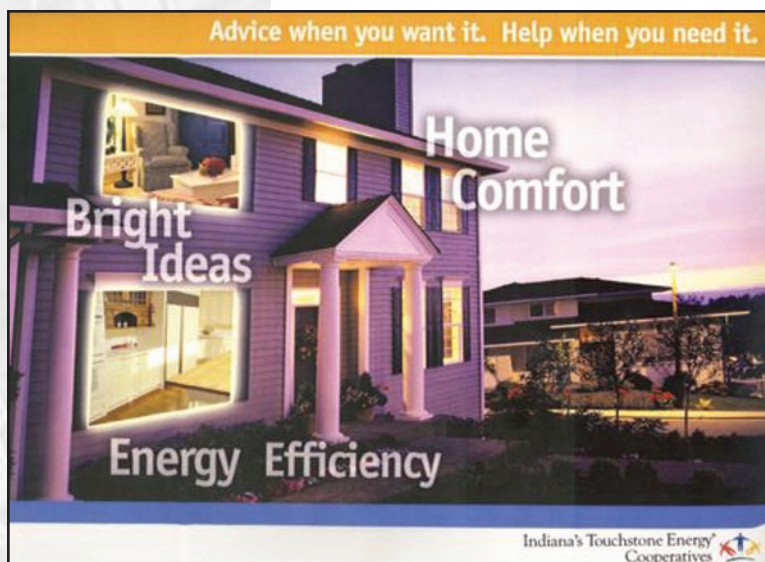
Through the program, each of Wabash Valley's 27 distribution cooperatives has put in place at least one trained energy advisor to assist customers with energy needs. The G&T supports the cooperatives' individual programs through training, information and marketing efforts.

Wabash Valley and its member cooperatives started building the infrastructure for the Energy Advisor Program in 2004. It was conceived in 2003 by a subcommittee of the board of director's strategic planning committee. "They were concerned that we were seeing market share of electric products drop – we've been seeing that for several years – and they formed an energy sales committee. The energy sales committee actually came up with this idea. Other cooperatives in other places around the country have energy advisors but [the committee] decided to call this the Energy Advisor Program," explains Laura Matney, marketing coordinator for the program. In organizing and rolling out the program, "members of the energy sales committee were either directors or managers from the individual cooperatives, so they were involved with us."

The Energy Advisor Program was a way to formalize and aggregate activities related to energy efficiency. "In many cases, they already had someone on staff who was doing something very similar," such as answering high bill complaint calls and discussing energy efficiency issues with customers.

The program's focus is energy efficiency and customer service. Even though one of the main goals is to increase kilowatt-hour sales, "we also want to be faithful to our customers at the same time," Matney points out. That means that an energy advisor visiting a home is acting as an advisor, not a salesperson. "If ... natural gas is the best way for them to go, we'll tell them that. So while we are trying to increase kilowatt-hour sales, we also want to help our customers learn about energy efficiency and using energy wisely ... and help them figure out what really is best for them and their lifestyle."

Wabash Valley chose a creative method of financing the program. As a member of Touchstone Energy, the G&T pays 100% of the funding for its distribution systems. "The funding the G&T uses for the Energy Advisor Program comes from our portion of Touchstone Energy advertising dollars,"



*Wabash Valley co-ops use this marketing piece to reach out to customers.  
 Source: Wabash Valley Power Association*

Matney explains. "We chose to do that in order to advertise both Touchstone Energy and the energy advisors on the premise that the customers are getting this extra service because we are Touchstone Energy cooperatives. We're trying to put 'more meat on the Touchstone Energy bones' by doing it this way. We're definitely supporters of Touchstone Energy, but our systems have advanced to the point where we need more substance and not just an image message."

## Co-ops set goals, determine plans

In the past year, organizers at the G&T and the cooperatives have spent a lot of time setting up the program. Typically, Matney and Williams have been out in the field at least three days a week and have visited all 27 co-ops as part of program development.

Ultimately, the distribution cooperatives create the focus of their programs. "It's important to have the management of the cooperative and the person who is actually going to do the work all on the same page," Matney relates. These two individuals must determine the overall marketing and customer service plan and target goals the cooperative wishes to achieve.

This means "having some clear-cut goals and deciding what products they're going to focus on if, in fact, they are going to focus on products." These goals should be as specific as possible. For example, a cooperative may plan to install 30 heat pumps for the coming year, compared to the five it had installed in the past year.

Matney advises that utilities embarking on such a program need to ask some serious questions to determine what they want to achieve. "Are they willing to look at their program and make the changes that are necessary, and maybe even hire somebody ... to be focused on this program? How much in the way of resources are they willing to allocate to it?"

In conferring with the cooperatives, the G&T brought along a useful tool to help with the decision-making. "We went out with a margin analysis model that enables us to [plug in] their local rates and their local rebates to give them a ballpark idea of what each of those units – a heat pump, for example – is contributing to the co-op's margin on a yearly basis. It tells them whether they're losing money, whether they're not losing money. We reviewed all those results with each individual co-op. We had a consultant develop that product for us. It was eye-opening to several of us, even though some of [the cooperatives] already had an idea."

Working together yet allowing enough room for independent initiatives has been a goal in developing the fledgling program. "We have been figuring out how to get a good, solid foundation, a program that will work in some ways for everybody, yet have it flexible enough for each co-op to do it their own way. That's been one of the challenges."

In implementing their goals, Matney says, "each cooperative takes it from a little bit different angle. We have one co-op, for example, whose energy advisor spends a lot of time out in the field talking with customers, going to their homes and doing energy efficiency inspections. We have other cooperatives that don't have anybody who goes out to homes for that purpose but they can answer questions or they can make referrals to other vendors around the area who can help them with that. It's customized for each individual cooperative."

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## F Y I

**Cooperatives are expected to have an influence on electric sales through their many endeavors in the Energy Advisor Program.**

### **The G&T provides the support**

After working with the cooperatives to help define the goals and direction for their individual programs, the G&T marketing group kicked in as the support system to help them achieve their objectives.

Matney's role at the G&T includes keeping all the energy advisors informed and up to date on the latest, most efficient products, current standards and technical issues. As the technical advisor for the cooperatives, Matney serves as the clearinghouse for information related to heating, cooling and all energy efficiency areas. Matney can help in calculating costs and savings for home heating needs such as gas log versus heat pump, radiant floor heating and the zero degree or northern climate heat pump. "I am involved in helping the cooperatives identify the training needs they have, [for example], Do we need to bring in somebody that will talk about insulation? Do we need to bring in somebody like a heat pump manufacturer to talk about heat pumps? I am especially [concerned with] new technology out there that we need to be aware of, and I bring those experts in to train our cooperative members."

Leading the program with Matney in the marketing department is marketing manager Wendy Williams, who oversees the program's strategic development, advertising and marketing. Together they act as liaisons between the G&T and the member cooperatives. "We work with our member systems to determine what their needs are and how we can help them meet those needs. For example, somebody called in and said, 'We think we need a surge protection brochure.' And we can do that for them. We also let the other cooperatives know that we were getting ready to produce this and several more said they would like to have information on this also." Also supporting the program from the marketing area are the economic development director, administrative assistant and customer information manager, who help develop target marketing for specific promotional campaigns.

### **Local effort and input is imperative**

As the program evolves, there will be more emphasis on one of the original goals – increasing kilowatt-hour sales. Cooperatives are expected to have an influence on electric sales through their many endeavors in the Energy Advisor Program, which include "building better relationships with the local builders and heating and cooling contractors."

One of the planned additions to the program is the customer information seminar, which will be held at the individual EMCs with the assistance of the G&T. "I will help them track down any resources I can to provide for their customers, but I don't come out necessarily and do the seminar for them. We think there is much more impact if they have somebody locally to do that. The local co-op needs to be building the relationship with their local customers," Matney says.

Overall marketing works in a similar way. "We'll help them with any of the areas of marketing," including seminars, ads in local homebuilder magazines; radio and newspaper advertising; and general promotion of the value of electricity over gas or propane," but the cooperatives will take the initiative in their own advertising and marketing campaigns.

## Energy Advisors must learn the ropes

In developing an energy efficiency and marketing program with 27 busy cooperatives, Matney says, "The main challenge that I hear from everybody is the fact that the people who are doing this at co-ops already wear 10 different hats. For those who are interested in learning more, having the time to learn what they need to know is [difficult]." But with the goal of increasing kilowatt-hour sales, there's no getting away from the extra workload. "You have to talk to people and the phones have to ring."

The energy advisor position by definition is a proactive type of job, and one that requires knowledge of the customer, products and the market. "Not only do they need to know something about water heaters [and other products] but they also need to know how to market," Matney comments.

An example of an energy advisor who has been proactive in seeking out knowledge and training for the job is Gregg Wright of Hendricks Power Cooperative, Danville, Ind. He has learned the ropes – and become a specialist, despite not having a background in this area – by studying, attending training classes, purchasing tools to help him better perform in his job and going out on energy audits with an experienced auditor.

Hendricks Power, likewise, has been promoting Wright's services in its advertising. Hendricks Power promotes the Energy Advisor Program as a free service for customers who have questions related to the following:

- Making a home more energy efficient;
- Ensuring windows are properly caulked and insulated;
- Finding information on electrical safety;
- Determining if geothermal heating and cooling is the right choice;
- Heating and cooling a new enclosed porch;
- Comparing electric and gas water heaters;
- Installing new ductwork and an energy-efficient heat pump;
- Comparing the cost of electricity versus other fuel options;
- Learning about environmental benefits of electricity;

To bolster the effectiveness of the Energy Advisor Program the Wabash Valley marketing department has been keeping a close eye on the upsurge of similar programs around the U.S. "There have been so many co-ops across the country that do similar things, and they are either light years ahead of us or are just kind of starting like we are. It's been very helpful to talk with them. It's been wonderful to be able to share experiences and ideas from different co-ops," states Matney.

The program is expected to bring in positive results in the coming years. "It's only been in effect for about a year now ... and we're going to benchmark it against a couple of surveys in the next couple of years."

However, for Wabash Valley and the distribution cooperatives, offering such a program is the right thing to do, according to Matney. "I think we're getting back to what I thought an electric utility should have always been doing – helping its customers understand how to use their energy better. It's a limited resource."

## Progress Energy tests outbound calling to avoid disconnects

### Company Profile:

**Progress Energy, Raleigh, N.C., is an energy company with more than 24,000 MW of generation capacity and \$9 billion in annual revenues. The company's holdings include two electric utilities serving about 2.9 million customers in North Carolina, South Carolina and Florida. Progress Energy also includes nonregulated operations covering competitive generation, energy marketing, natural gas production, fuel extraction and broadband capacity.**

Progress Energy recently concluded a three-month outbound calling pilot using automatically generated phone calls to help prevent payment delinquencies. Using the EnvoyWorldWide Notification Services application, the utility contacted late-paying customers with gentle reminders to make their payments on time. The program's goal is to break a continuing cycle of service disconnects and reconnects for these customers. About 60% of Progress Energy customers who are disconnected for non-payment are reconnected within two days.

Although still in the assessment stage, immediate pilot results have been favorable. About 5,200 customers were on the call list every day. The average contact rate was 65%.

In a separate program, Progress Energy has been successfully using the EnvoyWorldWide notification services to alert large industrial customers during curtailment events. This service allows the utility to inform customers within minutes when the power supply is reaching capacity, determine customers' ability to reduce consumption, and receive a complete report of the communications for regulatory purposes.

But using the Envoy service for payment reminders is an entirely different and more complex application that requires further study by the customer accounting group. "We started the pilot in March and we just concluded the three-month trial in May. We're assessing the benefit of the program and what our next steps will be to see if we're going to continue with it and if we're going to look at other vendors," reports Ellen Fagan, manager of customer accounting.

Pilot objectives included the following:

- implement an automated outbound courtesy call to remind customers that a recent payment had not been received;
- target residential customers;
- time the call appropriately in order to allow the customer time to pay prior to the due date for the past-due amount;
- measure the impact of the call on payment activity in order to determine if the call made a difference or whether other factors were involved;
- avoid wasteful calls by not making calls too far ahead in the billing cycle to customers who would have paid on time and therefore did not need reminders.

### Customers conditioned to wait until 11th hour

State regulations require the utility to contact customers before disconnecting for nonpayment. In North Carolina and Florida, that involves meter readers leaving a door hanger 24 hours before disconnection. In South Carolina, the utility has to send customers a letter. In all three states, if the customer is disconnected he or she has to pay a reconnect fee as well as a deposit if there is not already a deposit on the account.

The pilot project team wanted to get ahead of the process by influencing chronically late-paying customers to make their payments a little bit earlier. The last-minute notifications seem to stimulate customers to call the utility at the 11th hour. "We found that customers became oblivious to [door hangers and mailings], and oftentimes waited for someone to show up to disconnect their power before they paid. We felt we had kind of conditioned customers," Fagan says.

"We were hoping that by doing it this way we would eventually eliminate phone calls into the center, which are long and challenging calls, because the customers are really trying to negotiate, whereas if it's earlier in the process, there's a little bit more flexibility," she continues.

The extra fees are an expense many people want to avoid, but "we don't want to use [those expenses] as a tool for collection, and we feel we can prevent that through the outbound calling process," Fagan says.

In addition, "we are going with mobile meter reading in the near future," Fagan says, which means the company must find alternatives to using meter readers to deliver door hangers.

As such, "we are assessing the value of this to see if the technology meets our needs and if we can cost-justify it going forward," she explains, adding that no decisions have been made yet.

In setting up the new process for the pilot, the project team chose to leave a "gentle reminder" that does not address specifics of the customers' bills. "We didn't want to share that they owed \$150, for example. There was no discussion [in the phone message] that the account was delinquent. It was a gentle reminder seven days prior to the expiration of the final notice, a prompt to get them to pay."

In the message, customers were given the option to pay by credit card by pressing 'one' on their phones or to make further arrangements by pressing 'two.' "We were trying to get them to use the technology so we would not drive the phone call back into the system," Fagan says. Another option is for customers to call a toll-free number and use a special access code to hear a message stating the amount of money owed. Customers could make a payment during that call as well.

The billing system generated a list of about 5,200 accounts each day, targeting customers who were habitually late-paying. "We would pass it on to the vendor, who would then program the calls. This was all done through technology; no human voice was used." They were able to contact about 65% of those 5,200 accounts per day, Fagan says. About one-third of the contacts were with live customers, the others involved leaving a message.

### **System generates excellent response**

The system generated an excellent response. "Throughout the three months we averaged about 2,000 fewer disconnect orders per month. We were delighted with those results," Fagan comments. "Sixty percent of the customers we contacted paid. Payment by customers not contacted remained below 40%."

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”

These results were gratifying, she adds, but the challenge that remains following the pilot is to determine if the results are sustainable. Because the automatic notification was new to customers, the project team must assess if these are lasting results or just a response to the novelty of the process.

In the early stages of assessing the pilot, the project team noted increased rather than decreased calls to the customer care center. Again, the project team must determine if the increase in calls will be an ongoing situation or simply the result of the new process and technology.

“We were hoping to see fewer phone calls into the center. [However], we found that even though we gave customers the 800-number and the option of using the VRU, a lot of them opted to call back into the center. So we did see a spike, particularly later in the day and early evening with customers who came home from work, found a message and then called back into the center. It impacted our call center to the point that we had to do some staffing adjustments,” Fagan explains, adding that the increase wasn’t “significant” but did have an impact.

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The nature of the pilot requires the project team to do a lot of weighing and balancing to determine whether some issues are temporary or permanent. “It’s obviously a savings when we don’t have to dispatch 2,000 non-pay disconnects and 600 reconnects in a given day, but we also want to know the costs that are associated with having to take these phone calls. We did some tweaking ... because we were initially very much affecting the call center. So we modified our approach, which somewhat impacted our effectiveness. But we still were able to achieve the reduction in non-pay disconnects.” Because of the time and cost required to re-record the messages using professional voice talent that EnvoyWorldWide provided, “we didn’t want to keep going back into the studio. ... So we had to allow ourselves the time to assess the fine tuning and to make sure that what we were fixing was addressing the problem. We were very careful and methodical,” Fagan reports.

### **‘No frills’ program saves money**

The system was very simple. Progress Energy provided the customer lists and Envoy handled the calling. The utility assigned an analyst to define details and interface with the vendor. The analyst coordinated the nightly transmissions of files from Envoy with the IT department and was the point of contact for any changes that needed to be made. For example, based on feedback from CSRs, he helped clarify and fine-tune the verbiage used in the message.

Another change that was made during the pilot involved the timing of the reports downloaded for the vendor as well as the time of day the calls were made. “Respecting people’s privacy and dealing with the technology have been the other challenges,” Fagan reports.

In calculating expenses prior to rolling out the pilot, the utility compared vendor costs and determined that Envoy met its needs in this area. “When we looked at different vendors ... we went with the per-minute vs. per-record costing. We weren’t charged for not completing calls. They really absorbed the developmental costs for us. Others were looking for more of an investment from us. But it was really a no frills [program],” Fagan says.

In the pilot, Progress Energy paid about 15 cents for delivery of each 60-second message. "It's a far greater expense to have a live agent talking to a customer. [However], you don't have the expertise and the negotiation skills, and it may end up that [customers] call up to talk to the agent anyway," says Fagan, adding that the automated call is also less expensive than mailing a letter. In addition, Progress Energy leaders must consider the added expense (or potential infeasibility) of using door hangers once automated meter reading is in place.

Fagan expects a final decision on the viability of the program by August. Before that time, the project team will conduct a final review of all technology that currently exists in the field. "We're meeting with the senior management team in our department to review the proposal and then we would probably do an RFI just to make sure ... although we've been very pleased with Envoy. They've been very supportive and responsive to us during the whole trial."

A pilot program is valuable for revealing the unexpected. "We felt that by giving the customer a direct path through our automated system, it would eliminate the need for them to call directly and talk to an agent. We were surprised by how many customers still opted for that. I think that was the biggest surprise." Some of the program's results may change over time as customers become accustomed to the process and the technology. Considering the original objective, Fagan reiterates, "we're pleased with the results to date ... and we feel very good about the pilot."

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