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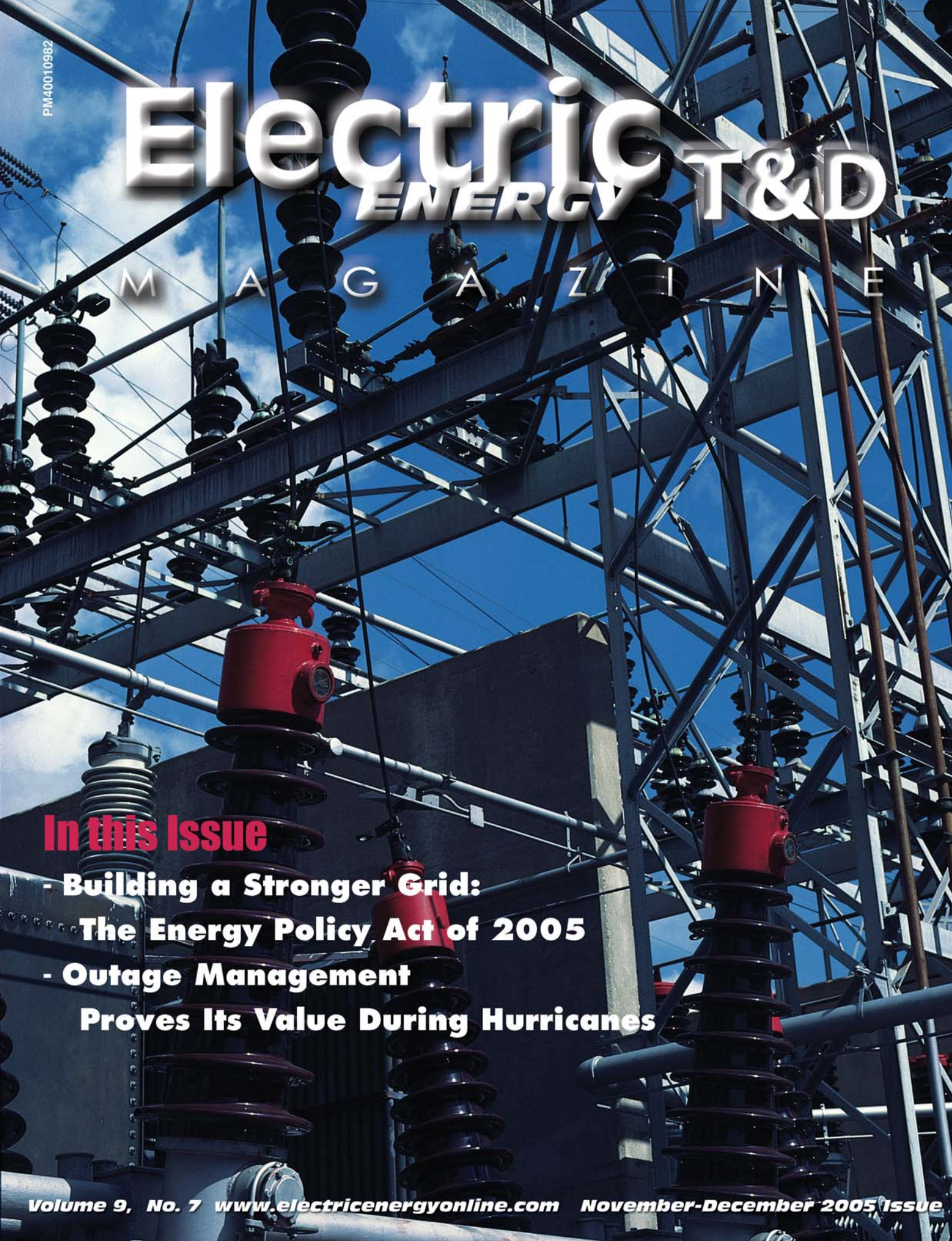
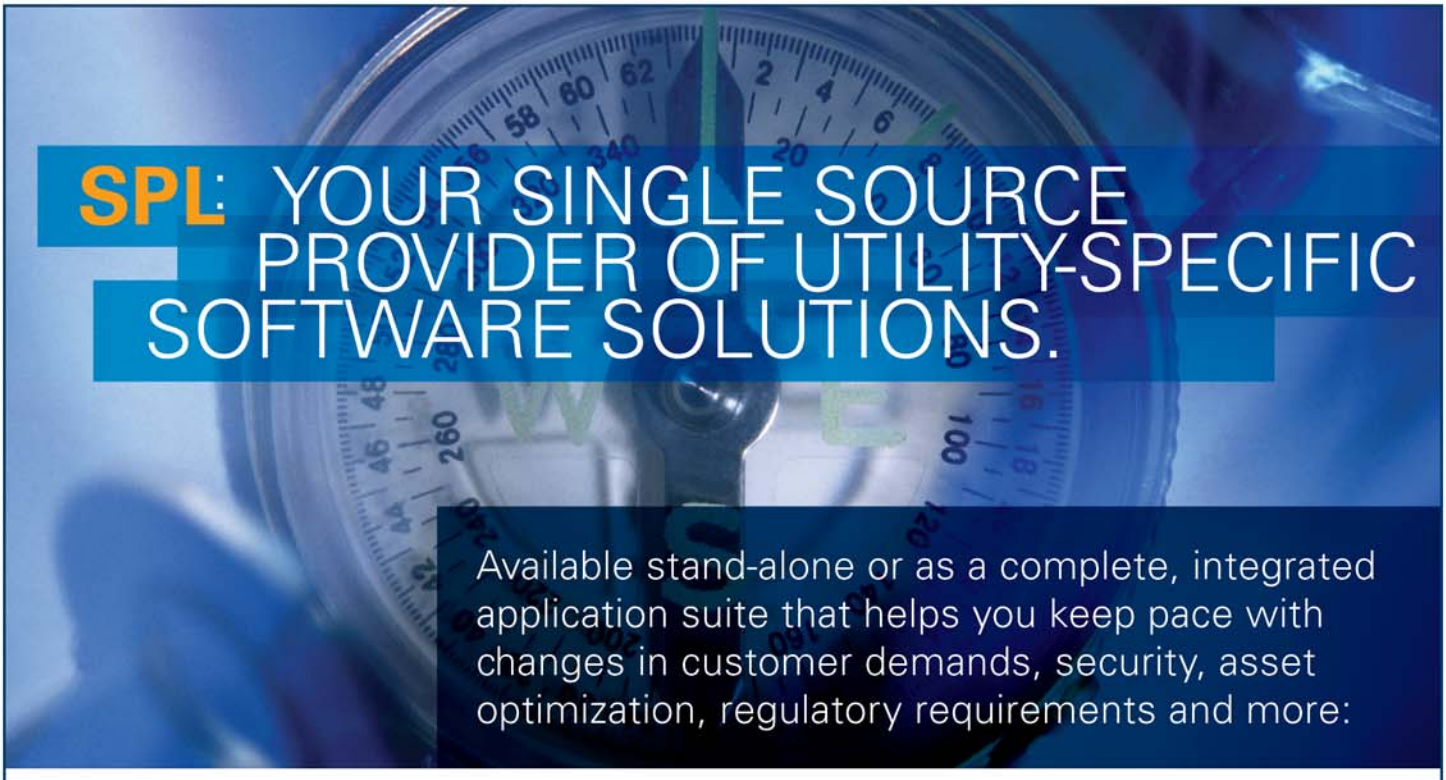
Electric ENERGY T&D MAGAZINE



In this Issue

- Building a Stronger Grid: The Energy Policy Act of 2005
- Outage Management Proves Its Value During Hurricanes

Volume 9, No. 7 www.electricenergyonline.com November-December 2005 Issue



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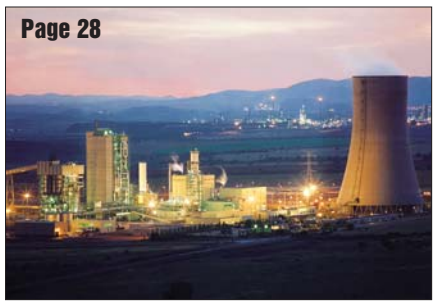

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Making Decisions Now to Meet Future Demand

By: Francis Bradley, Vice-President
Canadian Electricity Association, bradley@canelect.ca

Ensuring a strong, sustainable and secure electricity industry is at the heart of our prosperity and economic security. We need to invest in the sophisticated technologies that underpin today's electricity industry in order to build on existing strengths and remain at the leading edge. Growing electricity demand and environmental expectations require that all generation technologies – traditional and new, large and small – be available in the marketplace. Substantial investment in modernizing and extending the transmission and distribution networks will also be needed to ensure the overall reliability and security of this complex, real time system.

Clear energy policies as well as a timely and efficient regulatory framework are critical to attracting investment in our sector's full set of emerging and traditional technology options.

Rising Demand

The electricity sector will need to build infrastructure to meet future demand growth and upgrade or replace much of the generation, transmission and distribution capacity built over the last 50 years. Although the economy continues to demand less energy for every additional million dollars of Gross Domestic Product (GDP), the demand for electricity continues to grow on an absolute and per capita basis. For example, from 1990 to 2003, Canada's total domestic electricity demand grew 19.5%. Despite gains in energy efficiency, national demand is projected to grow at an average annual rate of 1.0-1.5%. Based on such projected demand figures and relatively modest technological change, the National Energy Board (2003) projects Canadian electricity generation must increase still further to 870 TWh by 2025.

Although electricity prices have been stable relative to other energy components, the forecasted supply/demand balance threatens this stability. As electricity demand steadily increases and supply tightens, consumers will face increasing prices and our current competitive advantage, as underpinned by reasonably priced electricity, may be impacted.

Generation, transmission and distribution investment decisions must be made to meet this future challenge in a context where much of the existing infrastructure will be retired or renewed over the forecast period. Replacing or refitting old power plants, achieving the environmental approvals to build new facilities on new sites, making sure that the transmission and distribution infrastructure keeps pace with electricity generation, and developing new technologies to minimize environmental impacts and maximize efficiency all take time and significant capital investment. If we do not succeed today in attracting the necessary investment to finance tomorrow's electricity infrastructure, our competitive economy and standard of living are at risk.

International Competitiveness

The electricity sector needs to compete in an international capital market where demands for electricity investment worldwide are growing. The International Energy Agency (IEA) estimates that over the next 30 years, the need for investment in the electricity sector worldwide will approach US$ 10 trillion with US$1.7 trillion required in the United States and Canada. Such investment in Canada is critical in delivering electricity for both domestic use and export. The Conference Board of Canada recently identified a number of impediments to investment in Canada's transmission infrastructure, although these impediments apply to non-transmission assets as well. The impediments include: long planning horizons to obtain regulatory approval; low regulated rates of return for investors when compared to the United States; and regulatory uncertainty in the face of continuing market restructuring. Canada must maintain a strong domestic electricity system while strengthening its role within North American institutional arrangements for ensuring system reliability, critical infrastructure protection, and efficient large regional wholesale markets.

CEA is recommending a distribution utility-supplier-government partnership to accelerate innovation, investment and implementation for electricity distribution infrastructure automation, AMR technology, BPL communications services, distributed resources interconnections, as well as regulatory innovation in support of sustainable development, customer choice and economic opportunities.

Reducing Impacts on the Environment and Improving Efficiency

At the present time, there is no technology available to deliver electricity at the scale society requires without having some impact on land, water, air, habitat, and/or local communities. Due both to regional natural resource endowments and the economics which favour maintaining a diverse fuel portfolio, electric power production is a multi-fuel exercise.

In order to decrease the sector's overall impact, there must be support for ongoing efforts to improve the performance of existing technologies, and also support for new technologies that have a smaller footprint. Accordingly, government and industry must move more aggressively to promote the development and deployment of energy efficiency and demand side management initiatives, as well as innovative technologies such as clean coal and CO2 sequestration.

Investing in a clear and efficient regulatory regime

The electricity sector operates in a complex regulatory environment, involving all levels of government on a number of issues, from financial to environmental. While the electricity sector accepts and supports regulation that addresses the environmental, economic, health and safety interests of consumers, needless complexities in regulatory processes create uncertainty and act as a barrier to investment. As a result, CEA continues to advocate efficient, effective, timely and coordinated approaches to electricity regulation. In addition, regulatory decisions should provide clear and certain long term direction for proponents. The system should also be accountable, with opportunities for meaningful stakeholder engagement with regulators providing regular business plans with stated performance objectives and targets. As the industry moves ahead with green-field development and projects in more remote locations, aggressive action to implement a more efficient regulatory regime will help address key environmental and socio-economic issues, including First Nations' land matters.

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Investing in our work force

In 2004, CEA conducted an assessment of Canada's electricity industry labour force. Findings demonstrate that retirement in the electricity sector will have a substantial impact on the industry: 17% of the existing workforce is eligible to retire in the next 4 years and nearly 40% will be retirement-eligible by 2014. These results indicate a significant potential shortfall in labor supply for the Canadian electricity industry in the next nine years. The retirements will impact at the point when significant electricity infrastructure replacement and new capacity development is needed. Without remedial action, projects could be impacted by a lack of skilled labour. To support workforce development for the industry and to ensure an ongoing labour force supply, CEA is collaborating with the Electrofederation, the Canadian Nuclear Association, the Canadian Union of Public Employees, the International Brotherhood of Electrical Workers, the Society of Energy Professionals and other key stakeholders to create an Electricity Human Resources Sector Council. The Sector Council, an independent not-for-profit organization, will bring together key stakeholders to address HR issues such as recruiting and retaining workers, facilitating school-to-work transitions, and developing sector and career awareness strategies.

Advancing the Agenda

Implementing a comprehensive approach to ensuring a strong, sustainable and secure electricity industry requires urgent action on the part of governments and industry to foster an environment conducive to greater investment in conventional and emerging generation, transmission and distribution technologies. Aggressive action is also required to promote demand side management and energy efficiency initiatives, foster advanced technology development and deployment, introduce more efficient and clear regulatory regimes, improve reliability standards and address sector-wide human resource challenges.

Moving forward, governments and industry need to cooperate within the context of a comprehensive policy framework to develop and implement a common agenda that promotes policy certainty, predictability and investor confidence. CEA member companies are committed to working with the government on this agenda, and the Association has developed and is currently implementing a five point plan to meet these objectives:

1. Establish an investment climate to ensure future electricity supply:
2. Move government and industry towards smart and effective regulation
3. Work to ensure a sustainable future for the next generation
4. Foster innovation and accelerate skills development
5. Build on the strengths of the integrated North American system to maximize opportunities

In order to sustain our competitive electricity advantage into the future, governments and the electricity sector need to collaborate on a sound public policy agenda that will ensure adequate supply, encourage efficient use of our energy resources, and promote environmental sustainability. This will necessarily involve a renewed attention to the issues of investment in the electricity sector. Refurbishing existing infrastructure, building new facilities to meet future demand, supporting technological innovation, a sustained and long term commitment to energy efficiency and ensuring the viability of a skilled labour force are key issues on which industry and government must collaborate. ■

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Henkels & McCoy provides prompt storm restoration during hurricane season and upgrades power transmission, distribution, and substations for Duquesne Light Co.

Henkels & McCoy, founded in 1923, is one of the largest privately held engineering, network development and construction firms serving the utility, communications, and information technology industries. With more than 80 offices strategically located from New England to Hawaii, Henkels & McCoy is uniquely qualified to provide prompt disaster assistance and has experience dispatching workers and equipment to sites by air, ship or ground transportation. Most recently, Henkels & McCoy deployed more than 500 workers to restore power and communications in Katrina-affected areas and more than 275 workers to provide restoration services in the aftermath of Hurricane Rita.

Henkels & McCoy is keeping pace with changes in the utility environment, providing power companies with a variety of services for electric transmission and distribution engineering and construction. One project of interest is with Duquesne Light Co. (DLC), an electric utility serving over 580,000 customers in Western Pennsylvania. Duquesne Light Co. owns and operates a transmission and distribution system comprised of 345kv, 138kv, 69kv, 23kv, 11kv and 4kv lines and equipment. DLC has initiated a 5-year Infrastructure Upgrade program for power transmission, distribution, and substations improvements.

In 2004 Henkels & McCoy completed a 14-mile transmission line design for DLC and in 2005 was selected as engineer for the infrastructure upgrades for distribution. These upgrades will include conversion of 4kv circuits to 23kv; rehab of aerial distribution and subtransmission lines; and design of underground distribution. Henkels & McCoy is working closely with DLC's Infrastructure Investment Team with the goal to get work ready for construction starting this year and has been working on the design of thirty miles of aerial and underground distribution.●

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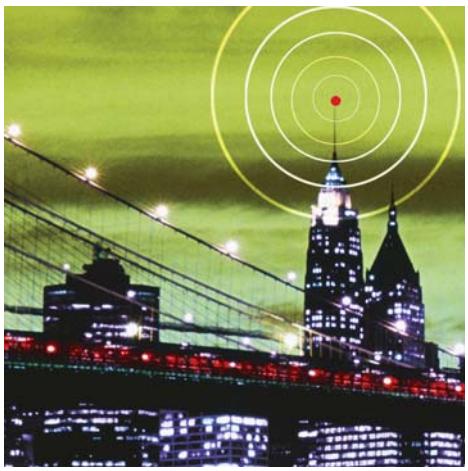
DATAMATIC AND REDMOON TO MARKET AMR SYSTEM FOR WIFI

Datamatic Ltd. (www.datamatic.com) and RedMoon, Inc. (www.redmoonbroadband.com) have announced a strategic partnership to jointly market advanced automated meter reading systems using WiFi networks to municipalities requiring a fixed network. The relationship significantly enhances both organizations' offerings to cities wanting to increase monitoring and control of water, gas and electric power distribution. RedMoon is a leading provider of mobile data networks for cities and counties. Texas-based Datamatic has been a leading supplier of enterprise meter reading solutions since 1980.

"Pioneering cost effective and feature rich solutions for our customers is at the core of every product and program that Datamatic develops," said Datamatic President and CEO Ken Kercher. "By working with RedMoon, even more municipalities can obtain time-of-use metering information as they experience the benefits of WiFi."

For over a quarter century, Datamatic has provided meter reading and field data collection solutions to water, natural gas and electric utilities. The heart of the system is the FIREFLY® Meter Interface Units that archive consumption data at user-definable intervals. Data is extracted for conversion into a graph, spreadsheet or other meaningful format using Datamatic's patented ProfilePLUS® software.



RedMoon specializes in the engineering, design, construction and maintenance of citywide mesh and fixed wireless networks. The company provides wireless high-speed Internet service as well as support and billing management systems.

"RedMoon focuses its expertise on the deployment of mobile broadband networks that cover all aspects of Internet access, Public Safety, surveillance, and utility meter reading," stated Bryan Thompson, President and CEO of RedMoon. "By working with Datamatic, utilities can use our unique mesh technology to collect data from a FIREFLY Meter Interface Unit. The result is similar to installing a fixed network, but at a fraction of the cost."

Under the terms of the agreement, Datamatic will be able to market and promote the RedMoon services to its customers. RedMoon will jointly market its services to promote Datamatic's products and services to its customers.

"Tools such as our ProfilePLUS software will make utilities more productive, customer friendly and efficient, both today and well into the future," added Kercher. "This software can allow a public or privately owned utility to monitor usage, resolve billing disputes and enforce conservation efforts. And as our FIREFLY AMR systems are compatible with all major meters, this type of collection system can be quickly deployed for a reasonable investment. Our strategic alliance with RedMoon will make it even easier for utilities to take advantage of these critical solutions." ●

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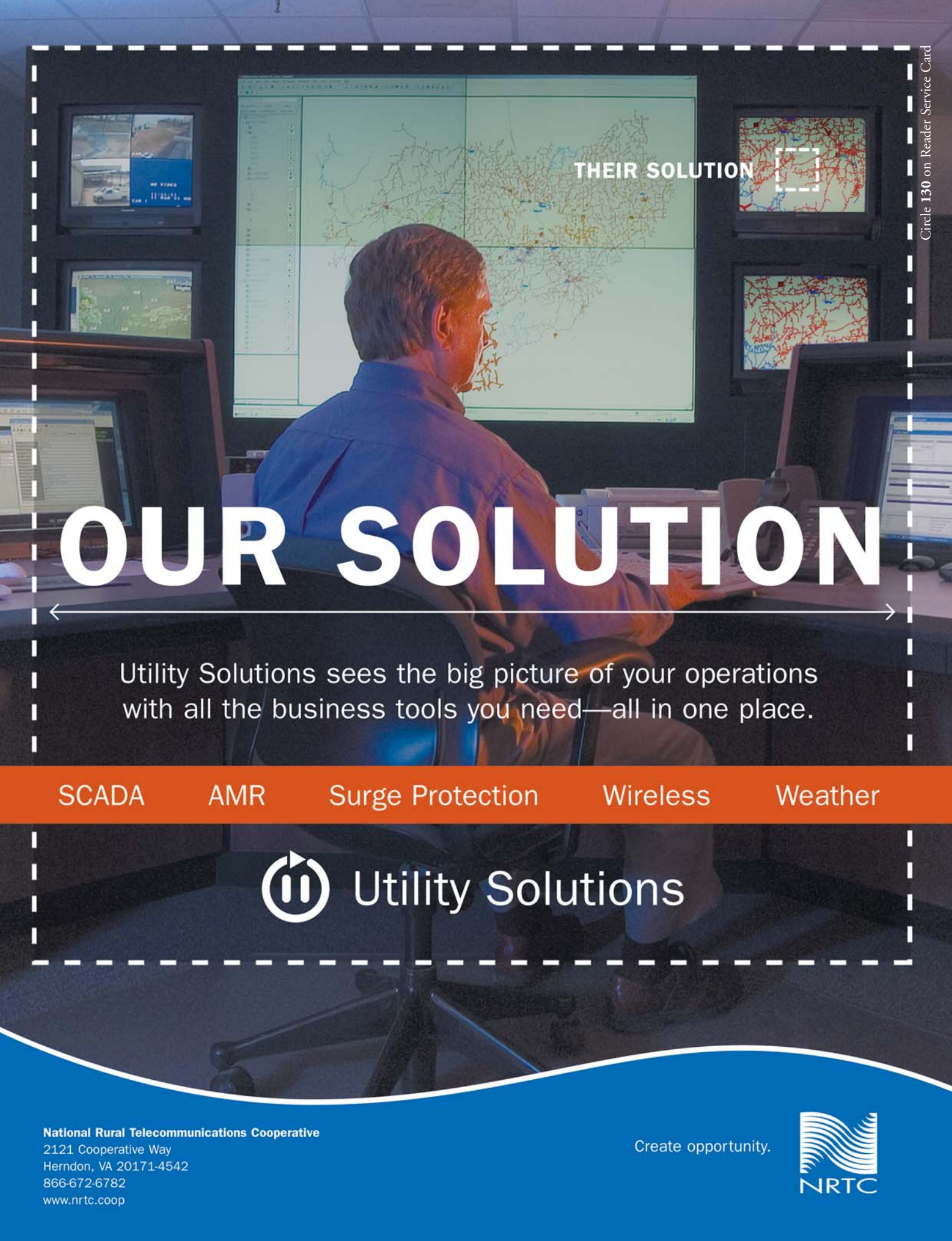

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Northern Suppliers in Action for Hurricanes in the South

It has been commonplace in the aftermath of the recent hurricanes in the South for stories to be written about how suppliers across the country and around the world have come to the aid of the many victims. Individuals and/or corporations have made tremendous efforts to provide goods and services to those in desperate need ranging from helping put food on the table to actually helping to get the power on.

What might be easily over-looked however, are the efforts made for those businesses that have been forced to scramble for goods and services for their everyday activities because of the tremendous draw on raw materials to the devastated areas of the South. Many utilities across the nation have had major challenges sourcing core products and services.

Bell Lumber and Pole Company is one company that is applying its diverse resources to the need of the many utilities who have seen their traditional supply chains for core products, in this case, utility poles become very limited or non-existent.

Unguyed full-tension dead-end laminated pole.

Bell Lumber and Pole Company supplies Western Red Cedar, Northern Red Pine, Coastal Douglas Fir, Southern Yellow Pine, Lodgepole Pine and engineered wood structures (in partnership with Laminated Wood Systems). Bell has utilized its full-product mix to help ease the concerns for many utilities outside of its traditional selling areas and has in turn added many dozen new customers as well as re-confirming their reliability to its current customer base in direct response to the storm.

Customers from Pennsylvania to Ohio, to Texas, Iowa and Nebraska and everywhere in between have taken Bell Lumber and Pole on as a key supplier for their utility pole needs. Many have realized that to have Bell Lumber and Pole as their supplier results in having access to the most diverse and reliable product lines for distribution and transmission in North America, if not the world. ●

For more information and references, call the U.S. corporate office at 651-633-4334.
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Pole Suppliers Perform Heroically in Storm Aftermath

Among the unsung heroes in battling the effects of Hurricanes Katrina and Rita must surely be numbered the producers of wood utility poles.

The record of remarkable delivery was brought to light in a Storm Response Survey conducted by the Southern Pressure Treaters' Association (SPTA). Carl Johnson, executive director of SPTA, said, "We surveyed pole treating companies in late September. We expected to learn that many poles had been delivered in a short period – this industry has shown its grit in previous emergencies – but I did not anticipate the volume or speed of those shipments, especially in view of the hardships faced by plant personnel and pole haulers."

The survey report says "wood pole manufacturers shipped an estimated 5,200 wood poles, or 130 truckloads, within the first 24 hours" of the storm's passing. Another 5,500 wood poles (138 trucks) were delivered the next day, and 9,000 more poles (225 trucks) on the third day. This totals 19,200 wood poles delivered

Cleco line
It is usually not wind that causes a pole to fail in a hurricane, but the weight of trees that fall on lines.
Photo courtesy of Cleco Power, Pineville, Louisiana.

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in a 72-hour period, despite serious problems with communications, road passage, fuel shortages, and plant damage.

In the four weeks that followed Katrina's destruction, an estimated 89,000 to 92,000 T&D poles were shipped in 2300 trucks, some also carrying water and food for linemen and residents. In addition, approximately 90,000 wood crossarms were delivered.

While rushing poles to Gulf Coast utilities, many treating plants had to deal with their own problems. A significant number of plants operated at reduced capacity due to storm-related damage and/or timber supply shortages.

The immediate needs of the region have cut into pole inventories. Some forestland has been damaged, and numerous logging crews have stopped cutting poles and saw timber to work on FEMA-funded clearing operations. This combination, along with higher fuel prices, has resulted in higher procurement and delivery costs for new orders. However, all pole treating plants are operating and most are working extra shifts to rebuild inventories. Delivery time for the most common distribution poles is somewhat longer than usual, but poles are available and standing timber is ample for meeting demands.

Martin Rollins, P.E., who conducted the survey for SPTA and resides in Gulfport, Miss., said "Without the industry's efforts, people in the Gulf Coast would have had a much longer wait for electricity."

In addition to supplying poles for the Gulf Coast, members and non-members have also donated $30,000 to the SPTA Hurricane Relief Fund for employees of the four pole treating plants in the affected area.

A copy of the Hurricane Special Report can be found at www.spta.org. ●

For more information, contact:
Huck DeVenzio
Arch Wood Protection, 770-801-6600
Carl Johnson, SPTA, 318-619-8589
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K&H Industries Announces Product Improvements to StarBeamTM and NightRayTM Vehicle-Mounted Lighting Systems

Angola, NY, September 16, 2005— K&H Industries, Inc., a manufacturer of portable lighting and power solutions for heavy-duty commercial and industrial applications, today announced details of significant product improvements to their StarBeam and NightRay product lines..

These improvements, which greatly enhance the quality and durability of the StarBeam and NightRay units, are part of ongoing upgrades that K&H has implemented since acquiring the designs and production equipment for these vehicle mounted lighting systems from Galco, Inc., of Tulsa, OK, in June of 2004.

Specific improvements to the dual-lamphead, remote-controlled StarBeam product include:

- Corrosion-resistant stainless steel shafts with stronger, finer threads;
- TECHFLEX expandable braided wire sleeves and redesigned wire attachment points;
- Expanded, tougher wire lead insulation;
- Redesigned lamphead mounting with simplified adjustment hardware; and
- Molded fastener inserts and tighter overall fit and finish tolerance.

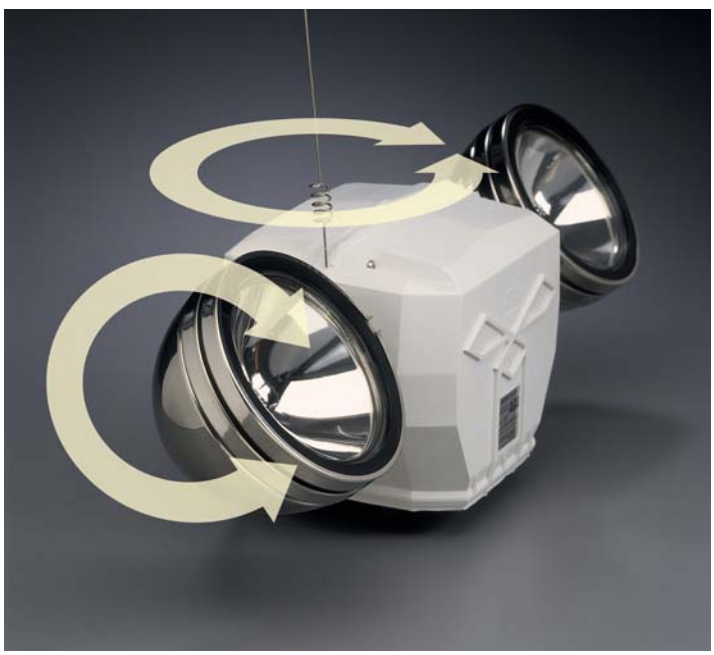
The single-lamphead, remote-controlled NightRay product improvements include:

- Redesigned clutch stops;
- More substantial internal mounting posts;
- Stainless steel vertical shafts;
- Integrated textured motor housing cover; and
- Newly designed vertical shaft mounting nut and cable path.

"These improvements reflect the significant effort made by our engineering and manufacturing resources strengthen what are already respected product lines," commented K&H Industries' Executive Vice-President Joseph Pinker, Jr. "They will aid the thousands of customers who depend on StarBeam and NightRay lighting systems to make their jobs safer and more productive."

About the StarBeam and NightRay Product Lines

StarBeam and NightRay lighting systems are used around the world in a variety of commercial and industrial applications that require the controlled illumination of wide areas from a vehicle mount in support of utility and facilities maintenance, public safety, rescue, fire and marine services.



With 330 degrees or more of available motor-driven rotation in both the horizontal and vertical planes, single- or dual-lamp configuration, and spot or flood capability of up to 3 million candlepower, StarBeam and NightRay lighting systems let users control both the placement and output of high-quality task lighting in extreme operating environments. Hard-wired or wireless remote control options allow user guidance up to 300', significantly improving the safety and productivity of single-person work crews.

About K&H Industries, Inc.

Headquartered near Buffalo, NY, K&H Industries, Inc., is a leading supplier of temporary lighting and power solutions to a variety of demanding commercial and industrial applications include the aviation, fleet, auto-aftermarket, construction, chemical, petroleum and marine industries. Founded in 1961, the company designs, manufactures, sells and services a full line of heavy-duty work and specialty lights, retractable cord reels, temporary power products, and industrial plugs and connectors. ●

For more information, contact:
Contact: Peter Durbin, 716-549-0135
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The Power is with Us…

By Michael A. Marullo, Contributing Editor

First, I want to thank Jaguar Media for allowing me to dedicate this editorial to the hurricane relief efforts in my home state of Louisiana and the entire Gulf Coast region, which includes our neighbors in Florida, Alabama, Mississippi and Texas. Special thanks also go out to our colleagues, friends and others who sent messages of caring and concern following the two hurricanes that brutally devastated this area. It definitely made one of the most difficult episodes in my life easier than it might have otherwise been, knowing that we have so many friends in so many places.
Thank you.

I'm very fortunate to be able to say that my personal experience in this unprecedented national disaster has a happy ending with no loss of life and only minimal property damage endured by friends, family and business associates. Others – many, many others – have not been so lucky. People who had a lot more to lose as well as those who lost everything bore the brunt of these killer storms. However, as a longtime resident and business-person returning to this area in its aftermath, I feel that I have a perspective worth sharing, especially as it relates to our industry;

I hope you agree. – *Mike Marullo*

In the nearly 35 years I've lived in the New Orleans area, I have never before evacuated for a hurricane; I really didn't intend to leave for Katrina either. However, when I woke up the Sunday morning before the storm hit, I knew that this time it would be different. Having seen the destruction caused by Hurricane Camille on the Gulf Coast in 1969, I knew better than to defy a Category-5 storm, which is what Katrina was before weakening to a Cat-4 and making landfall on August 29th.

Just months before moving to New Orleans from Upstate New York in 1970, I visited the Mississippi Gulf Coast exactly one year after Camille had struck the area. What I saw was shocking; it looked like it had happened the day before rather than the year before. The enormity of the destruction was hard to grasp at first, but it made a lasting impression as I watched the recovery take place, very slowly… over the next 25+ years! At the time, Hurricane Camille was considered a 100-year storm; a once-in-a-lifetime event. Then, on August 24th, 1992 along came Andrew, the hurricane that wiped out Homestead and much of south Florida – another 100-year storm, but amazingly still in my lifetime (and I wasn't even 100 years old yet!).

But that was south Florida, a long way from New Orleans, and we all know that major hurricanes never hit the same place more than once in a lifetime, right? Well, that's what we thought until FOUR hurricanes last year took essentially the same path in the eastern Gulf of Mexico in about as many weeks. Even so, I figured that after two major storms in less than 40 years, the odds were still on my side. I also figured that the likelihood that another killer storm like Camille or Andrew would strike New Orleans was pretty slim since we had dodged that bullet so many times in the past. (So much for the playing the odds; that's why I stay out of casinos!)

By 5PM Sunday (August 28th), having hastily packed up the cars with the most critical personal and business belongings, I was mindful of what was about to happen. Eight hours later, we had made it to West Monroe, Louisiana – a trip that ordinarily would have taken less than half the time. But that was NOT our intended destination. There were simply no hotel rooms anywhere to be found in north Louisiana or even as far north as Memphis. So we wound up spending the night in the car and in the back of a flatbed truck (till it started raining) in the parking lot of the local Jeep dealership, which I now fondly refer to as The Jeep Motel. (There's at least one in almost every city!)

Once we finally arrived in Dallas at about 2PM on Monday, we stayed glued to the TV for most of the next two weeks watching the unthinkable eerily unfold hour-by-hour; day-by-day; minute-by-minute. We've all seen the images on TV showing the destruction caused by these storms. Unbelievable though they might seem, they still cannot convey the breadth of the destruction for hundreds of miles in all directions. Even being here in the middle of it, the destruction remains surreal; it just doesn't seem possible that this really happened.

The hotel management and staff and the people in Texas were absolutely wonderful. They went far beyond the basics to make us comfortable and provide anything we needed; usually without even having to ask. The second day we were there, a local moving company showed up at the hotel with literally a truckload of food and fed everyone in the hotel for a couple of days. The first weekend after we arrived, a church group put on a home-cooked dinner for everyone there. Then, a couple days before we left, an Oreck (vacuum cleaner company) franchisee from the Washington, DC area flew to Dallas, bought a truckload of food, snacks and refreshments at a nearby Sam's store, dropped it off at the hotel, got back on a plane and flew back to DC.

For those who may not know, David Oreck,

the founder and owner of the company, is from New Orleans, but this guy acted on entirely on his own. When I asked him what motivated him to do it, he said, "I just couldn't sit in front of the TV and watch all those people suffer anymore without at least trying do something to help." (Thank goodness for good Samaritans.)

These are just a few of many acts of kindness and generosity that many of us have experienced during this ordeal. However, there are other things that also deserve recognition, namely the tireless and downright heroic deeds of our electric utility industry. Following are a couple of examples, but there are many more that unfortunately will probably never be told.

One thing you learn fast in the aftermath of a hurricane is how much we all rely on power and communications. The first thing you want to do is make sure that your friends and family are safe and get your life back in order ASAP, but you cannot do any of that without electricity. I'm very fortunate to have a longtime friend at Entergy that I know I can rely on for the straight scoop in times of crisis. Make no mistake, there is not going to be any return to normal here for a long time, but that made his insights all that much more important. Also, as a friend, I was genuinely concerned about his own wellbeing and that of his family.

There was no way to call him, but when I finally reached him via email a week or so after the storm, he was already at an Entergy command post in Jackson, Mississippi, about 3 hours north of New Orleans for some time. He said his family was okay, but he had not even been to his house to see if he still had one. A couple of weeks later (just before Rita made landfall) we exchanged brief emails again. This time he had been home for a short stint (his house was okay) but was again headed back to his post at the Jackson command center. By the way, Jackson was not spared the storms either with tornadoes inflicting millions of dollars worth of damage throughout the metro-area; hardly what one could consider an escape or safe haven for anyone.

After we returned home two weeks after Katrina, the power was already on, but then everything went dark early the next morning as the feeder bands from Rita started to blow the already bent and broken trees and branches around. I was just about to report the outage when a neighbor said that help was already on the way. It seems that an Entergy lineman who lives just up the street had already identified the blown fuse on the distribution line and was in the process of changing it out for a new one. Power was restored a short time later, and we rejoiced over not having to ditch another refrigerator full of food.

However, our celebration was short-lived when another wind gust a few hours later caused the same fuse to blow. This time I happened to catch the Entergy guy in his truck as he was heading across the river in search of another fuse. In our brief conversation, I learned that he had been working practically around the clock since well before Katrina arrived; this was to have been his first day off in nearly a month. He wasn't happy, but he was definitely determined to spend his first day of rest in an air-conditioned house and enjoying a cold beverage after doing without those amenities for so long. He returned about an hour later, his front seat piled with extra fuses!

Needless to say, I have nothing but the utmost respect for both my friend and my neighbor and the many people like them who put duty and responsibility to their communities ahead of all else. I'd like to think I'd do the same under similar circumstances, but that is no easy call for anyone to have to make. In the days and weeks that followed, I've witnessed

unimaginably rapid progress in restoring power throughout the region in the midst of the most complete devastation I've ever seen in my life. How those crews managed to resurrect such a badly broken network in such a short period of time defies all reason (and in some cases, physics!).

Actually, I do know a couple of the answers: Disaster Planning and Mutual Cooperation. Anyone who lives in an area prone to natural disasters – whether hurricanes, tornadoes, floods, earthquakes, ice storms, or a combination – knows the value of having a disaster recovery plan. And, utilities across North America learned a long time ago that no one utility could weather these catastrophic events alone. Hence, within days after Katrina struck, it was gratifying and very reassuring to see trucks and equipment moving in, literally from all corners of the continent to work long, hard days, nights and weekends beside their industry brethren.

Another dimension of the good coming out of an otherwise very bad situation is the wave of contributions received from the constituents of our industry. A few days ago I learned that one of our most prominent suppliers to the utility automation/IT industry had donated over $100,000 to the Louisiana Hurricane Relief Fund. Of that amount, about a fourth was donated by the employees themselves and was then triple-matched by the company. This is just one that I know of; I'm sure there are others. And, despite the tendency to perhaps sometimes (often?) feel like no one really cares much about anyone else in our fast-paced world, all I can say is wrong, wrong, wrong! People we've never met – and probably never will – have opened their hearts and wallets to help complete strangers, just because they can.

I suppose I would be remiss to end this without saying something about automation. There is actually so much to say that I'll have to gather my thoughts on it for a future column. For now, let it suffice to say that the vital role automation not only already plays – but can and should play in disaster planning and recovery in the future – cannot be overstated. Meanwhile, I'm happy to know that when towers need to be erected, power lines re-strung, substations rebuilt and services restored, our industry is more than up to the challenge. So, the next time you see a utility crew in your neighborhood, give 'em the high sign or a pat on the back, and tell them that Louisiana and the entire Gulf Coast says, "thank you for a job well done." The power is (truly) with us!

(Because of the context of this article, I've focused mainly on the exemplary deeds of our devoted colleagues and friends in the electric utility industry. However, let me also acknowledge that the acts and dedication of all first-responders including police, fire, ambulance, EMS and others from as far away as Alaska, Canada, Mexico and even from abroad, all deserve our deepest gratitude and appreciation for all their help. They are among the true heroes of our time. – Ed.) ■

About the Author

Mike Marullo has been active in the automation, controls and instrumentation field for more than 35 years and is a widely published author of numerous technical articles, industry directories and market research reports. An independent consultant since 1984, he is co-founder and Director of Research & Consulting for InfoNetrix LLC, a New Orleans-based market intelligence firm focused on Utility Automation and IT markets. Inquiries or comments about this column may be directed to Mike at MAM@InfoNetrix.com.

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Outage Management Proves Its Value During Hurricanes

- One hundred percent of a utility's customers without power.

By Terry Nielsen, SPL

That would have been an unthinkable nightmare just a few months ago. Today, we all know it's a reality that more than one utility faced as a result of Hurricane Katrina.

Rebuilding the devastated infrastructure will take months. But reconnection has gone remarkably swiftly. Just 12 days after Katrina ended, for instance, Mississippi Power reported that all customers that could accept power had been reconnected.

That achievement results from many factors, including long-standing preparedness practices. Highly trained local crews, planning, drills, and crews from utilities outside the affected region all helped. But in the past decade, an additional factor has significantly speeded recovery from widespread power outages: implementation of outage management systems (OMS).

OMS pays for itself during "ordinary" emergencies like wind and ice storms that impact large numbers of customers, where as many as 50 or 75 percent of a utility's customers lose power. They are invaluable in:

- Keeping track of what is restored and what is not.
- Running damage-assessment routines that give utilities an accurate assessment of the resources required to manage the restoration.
- Prioritizing restoration activities based upon needs like medical facilities, critical infrastructure such as 911 centers, police, life support customers, etc.
- Supplying information about the current status of the outage for customers, the media, and concerned friends and relatives outside the affected area.
- Providing estimated restoration times based on known damage and available resources.

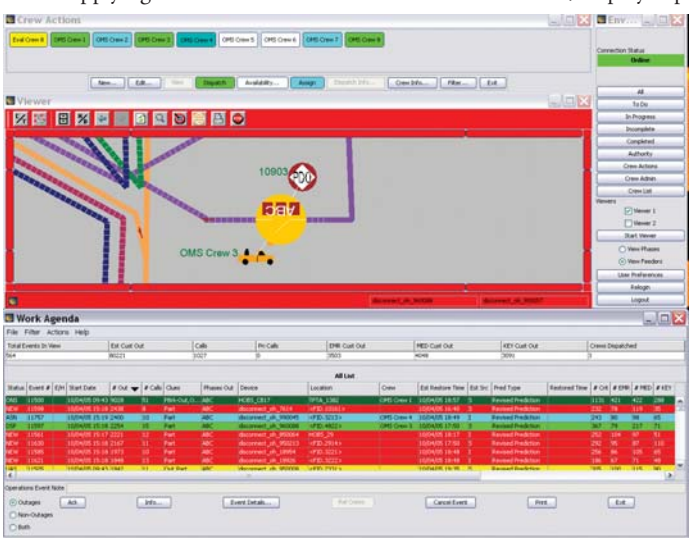
OMS users have proved eager to share their experience with others. And the consequent body of knowledge and best practices that have accumulated over the past few years proved invaluable in dealing with the unprecedented emergencies of Hurricanes Katrina and Rita.

Preparation

Twenty years ago, hurricanes hit with only the most general warnings to affected areas. Improvements in meteorology today track hurricane paths more accurately and provide close estimates of their likely strength. The OMS-using utilities of the Gulf region had time to put emergency preparedness plans into action.

First on the agenda was preparing the OMS for heavy use by doing some routine maintenance. These preparations tuned the system for the storm, much as a homeowner puts up storm shutters and makes that last-minute trip to the grocery store for batteries and bottled water. In the case of the OMS, preparations anticipate the larger than normal number of people who will be using the system and the large amount of data that will accumulate. Utilities typically make sure the database is properly tuned, deploy laptops to temporary users, and make sure everyone's training is refreshed.

Storm preparations also involve a check with the OMS vendor to ensure that support is ready. During emergencies, vendors can make sure that the experts in the system are on standby and are familiar with the systems that are most likely to be impacted. Vendors can discuss with utilities any changes to the system that might have been made recently. Vendor experts may



How OMS Works

Typically, outages are small and localized. A curious squirrel trips a breaker or a careless construction worker cuts a line. In this case:

- The outage management system (OMS) goes into action based on customer calls or on electronic notifications from an automatic meter reading and monitoring system.
- It pinpoints the problem location as closely as possible based on the pattern of calls or notifications. A controller dispatches a crew, using the data from the utility's Geographic Information System (GIS). The crew reaches the problem and reports details.
- The OMS uses those reported details to analyze the number and type of customers affected. It identifies other parts of the system that might be involved. And it prioritizes restoration options based on factors like critical needs, available crews and equipment, and contractual penalties for extended outages. In this example of a localized outage, for instance, the OMS would identify the switches whose opening and closing will restore the most power to the highest priority and largest number of customers. The controller, however, makes the final choice of restoration plan.
- Now the OMS moves into modeling mode, tracking all changes made to a system. This tracking is a safety device, ensuring that work proceeds in ordered steps that protect workers from the consequences of unexpected power flow.

During major storms like Katrina, these steps undergo some modification. Outages are not treated as individual occurrences. They are instead amalgamated into an overall assessment of system damage. In this way, as the storm wanes and crews can be safely deployed, the highest priority customers get initial attention, and control centers can appropriately prioritize repairs over the entire distribution system.

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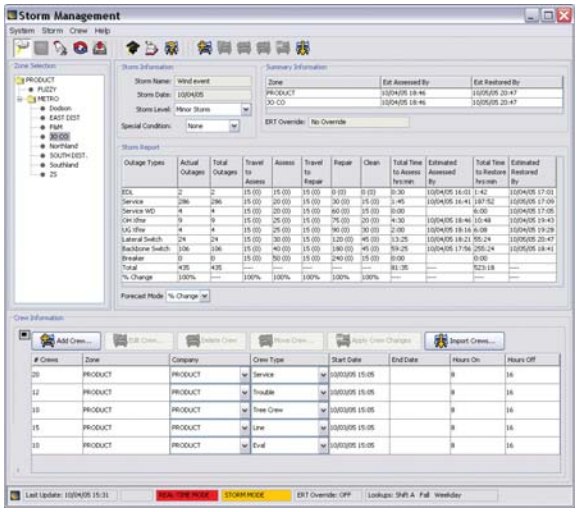
Why Use OMS?

Not every utility uses OMS. But those that do report substantial improvements in customer service statistics and restoration costs. Here are some typical results:

- A utility in southeastern Canada reports a 25% drop in aborted switching operations.
- A southern US utility reports an 80% improvement in crew dispatch accuracy.
- A utility in a sparsely populated western state reports that average outage times have fallen from four hours to one.
- An eastern US utility was able to restore power to all customers within 8 days rather than a predicted 10 without OMS.
- A UK utility reports a 45 percent drop in customer minutes lost, a 10 percent drop in faults, a doubling of fault progression information, and a 20 percent reduction in repair costs.
- A recent survey shows OMS reduced staff needed for maintenance and support fell 0.5 to 1.5 FTEs (full-time equivalent employees) as compared with the staffing needed for legacy systems.
- A similar survey showed reductions in the System Average Interruption Duration Index (SAIDI) of 5 to 15 minutes.



- *Bar chart of a UK utility's rise in 24-hour restoration percentages (data in the right column) for successive storms (data in the left column).*

Dec. '98	*61*
Feb. '01	*94*
Jan. '05	*95*
Feb. '05	*100*

also review preparations with the utility team and offer suggestions based on the experiences of other clients in similar situations.

In the past, vendors frequently sent OMS gurus to be on-site. But when a storm is predicted to affect a wide area, it may be more valuable to keep the gurus back in their home offices where they can support multiple utilities. Delaying deployment also permits vendors to send people to the sites of greatest need—locations it may be hard to predict accurately prior to the storm.

As systems become more robust, the need for on-site vendor gurus becomes less critical or even redundant. Our own experience during Katrina, for instance, was that none of our clients needed anything more than phone consultation.

Initial Assessment

As storms wane, the OMS typically focuses on damage assessment. How many poles are down? How many lines, transformers and switches are damaged. This knowledge helps determine the number of crews, the type of equipment, and the quantities of materials that restoration will require.

In parallel, utilities line up 'mutual aid' from other utilities whose crews are available to assist in the restoration efforts. Tentative assignments are made so that out-of-region crews have ready access to the knowledge and experience available only from local crews.

The first outside help will likely come from affiliate utilities in the same parent company or regional cooperative association—at least, those outside the areas affected by the storm. It's particularly easy to use that help when it arrives from utilities using identical systems. In Katrina, for instance, Georgia Power easily provided Mississippi Power not only with crews but also with additional dispatch resources from Georgia Power using the IT and communication infrastructure of the parent, Southern Company. This was possible because both utilities use SPL OMS. As dispatch practices become more standardized, of course, this type of aid will likely be possible from additional utilities, not just those with the same parent holding company.

Phased Restoration

Once crews could safely begin work, the OMS provided a prioritized list of outages to be restored.

First on the list, of course, were sites where live downed wires presented safety hazards and where critical infrastructure had been damaged. An OMS handles this by presenting to the

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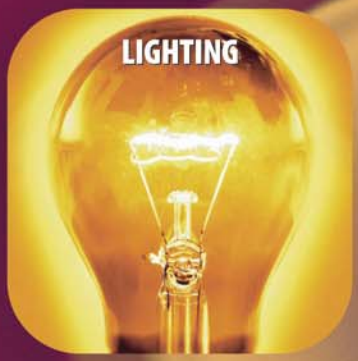

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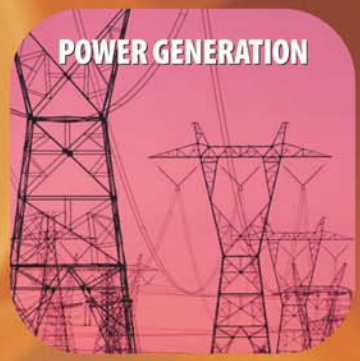

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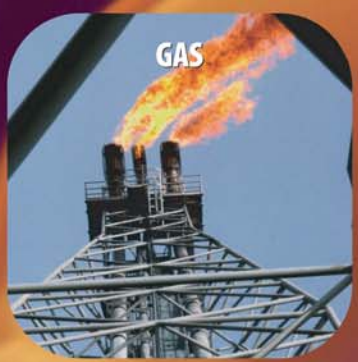

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dispatch users a prioritized list of work-based rules established long before the storm, typically during system deployment.

Second are outages that affect large numbers of customers. Because the OMS contains an accurate, real-time model of the utility's distribution system, it can track how many customers are affected by the identified failures. As restoration proceeds, OMS users update the model to keep track of who is restored and who is not. This provides a good picture of what is going on and allows the utility to track the progress of restoration region by region. The OMS also provides accurate updates that utilities can pass on to the media and customers.

In parallel with the early restoration activity, field crews undertake detailed damage assessment, identifying the locations, types and severity of damage. This tedious survey covers every electrical circuit across the entire affected territory. At the best-equipped utilities, employees can enter survey results directly into the OMS using laptops or mobile computers in the field. Other utilities arm field crews with paper forms that are then keyed into the OMS each evening.

Putting the damage assessment information into the OMS helps remove the "fog of war". Utilities can draw up better "battle plans" based on a more detailed picture of the work needed

The final phase of restoration addresses damage that affects only one or a few customers. In regions with light damage, this generally takes place within 24 hours. But in the case of Katrina, power restoration in many cases must be preceded by building repairs that could take months. Clearly, some customers will not rebuild, and there will be no restoration.

Retrospective Assessment

Because an unprecedented number of utility customers lost power during Katrina, the storm put outage systems through paces that laboratory exercises—no matter how extensive—can never fully provide. Snapshots of databases that utility employees took during restoration efforts will help vendors clear up glitches and make the OMS of the future even better. Comparison of the damage and actual restoration efforts against the early projections, for instance, can help the utility tune its prediction model and resource forecasting models.

Utilities are likely to find that changes need to be made in other IT applications, too, especially in asset management. Only a few utilities, for instance, use the electronic tagging that can pinpoint equipment location and speed return. Even fewer can readily change equipment maintenance cycles from those based on average use to those that keep equipment running when usage becomes 24 hours per day, seven days a week, for weeks on end.

Pulling Together

The most inspiring lessons of Katrina are those of the human spirit. Utility employees performed their jobs despite damaged facilities, long hours, and life-threatening conditions. Volunteers were plentiful; at Mississippi Power, for instance, more than 200 employees from other Southern Company utilities moved into the area to provide relief. Even more remarkable are the many who worked for the good of their communities when they themselves had lost all material possessions and in many cases were uncertain about the fate of family members.

But we also learned just how important OMS technology is in underpinning these efforts. A tried and tested outage management system, employees trained in its use and in the restoration process, and accurate OMS data can dramatically increase the efficiency of outage restoration. ■

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Building a Stronger Grid

The Energy Policy Act of 2005

By: Russell Tucker, Director, Federal Regulatory Affairs
Edison Electric Institute, www.eei.org

America's electric companies welcome the Energy Policy Act of 2005 (EPAct). It is long overdue legislation. During the past four years, the industry has advocated the need for a comprehensive package of electricity reforms. Both to meet the demands of today, and to prepare for the challenges of tomorrow. A steadily growing population and economy, coupled with the expanded use of electric technologies, has led the U.S. Energy Information Agency (EIA) to predict that America's electricity use will increase around 2 percent annually through 2025, representing a 50 percent increase over today's electricity use.

The new law recognizes that the electric power industry must keep pace with this growth. It will modernize U.S. electricity regulation. It will help the industry to maintain a diverse fuel supply and to build more environmentally-sensitive generating plants, both of which will be vital for meeting the nation's continually growing demand for power. The legislation will also contribute to much needed flexibility in corporate structure and business models. And importantly, it will reinforce the reliability of the power grid. Each is essential for generating and delivering the power that has long been the cornerstone of America's well-being and economic growth. Taken together, these measures will result in an industry suited to the future needs of its customers. Now that the bill is law, we are confident that the nation's transmission network will meet the challenges of the 21st century.

Maintaining Reliability

The energy legislation will help to ensure that the U.S. electric transmission system remains reliable. This task gets bigger and more vital each year. Today, electric utilities deliver almost 4 billion kilowatt-hours of electricity to more than 290 million Americans nationwide. And they do it with over 160,000 miles of high-voltage transmission lines.

Courtesy of Siemens AG

Beyond the need to accommodate this growing demand for electricity, the nation's transmission network must also contend with the country's evolving wholesale electricity markets. These are changing the way the grid is operated and used. Together, these changes have made it apparent that the grid needs to be managed in new way. Congress recognized this need and included in the EPAct measures to create a self-regulating electric reliability organization (ERO). The ERO will enforce reliability rules that are mandatory on all users, owners and operators of the nation's transmission system. The Federal Energy Regulatory Commission (FERC) will have oversight in the United States. By February 6, 2006, FERC must complete its initial rulemaking to establish the requirements for the ERO, and its related regional organizations. Major stakeholder groups have been working together since before the Act became law to help expedite these proceedings and clarify the critical issues that still need to be resolved.

Given today's wholesale electricity markets, maintaining reliable service also means having a transmission siting process that can consider regional and even national needs. The Act recognizes this and grants FERC the authority to approve the siting of electric transmission facilities located in "national interest electric transmission corridors". The Department of Energy (DOE) must identify such corridors by August 6, 2006, and then again every three years thereafter. These corridors may include any geographic area experiencing electric transmission capacity constraints or congestion.

Traditional state siting processes focus only on local upgrades to existing transmission systems. Before states will grant utilities siting permits, utilities typically must prove that the new facilities are needed. This determination of "need" often focuses on service to in-state

consumers. Most state siting laws do not allow for the consideration of regional, or out-of-state, benefits of new transmission lines. If states consider only intrastate benefits and not regional benefits, they may have little choice under state law but to reject the proposed line, even if the benefits to the region are significant.

The new backstop siting provisions in the EPAct will continue to give states the first opportunity to site new transmission lines, which we believe will continue to be adequate in most cases. FERC, however, can use its new authority if states cannot or will not act in a timely manner to approve the siting.

The federal permitting process to site energy facilities, particularly those concerning transmission lines across federal lands, can also be a necessary but difficult multi-jurisdictional process. In some areas of the country with extensive federal landholdings, the broad scope of federal approvals needed for transmission facilities is the principal impediment to building new transmission. The EPAct streamlines the process for siting on federal lands by designating DOE as the lead federal agency to coordinate all federal approvals and related environmental reviews. A related provision in the reliability section of the EPAct assures that federal land agencies will expedite approvals to transmission and distribution facilities when necessary to comply with reliability standards, or in situations that imminently endanger the reliability or safety of the facilities.

Another siting measure in the Act requires FERC to exercise its Federal Power Act (FPA) authority to facilitate planning and expansion of transmission facilities to satisfy distribution utility service obligations to retail customers. FERC must also enable such utilities to secure firm transmission rights or equivalent tradable or financial rights on a long term basis to meet such obligations.

Strengthening Transmission

Beyond supporting measures that will help to maintain reliable electricity service, the energy legislation will encourage critically needed investment in the grid. These infrastructure measures will have the effect of strengthening wholesale competition as well.

The nation's electric transmission network was built in large part over 50 years ago to reliably serve local demands for power, and interconnect neighboring utilities. It continues to do these jobs, but the country's continually growing demand for power is making it harder for the existing system to keep up. The grid is also now being asked to support an increasing number of wholesale electricity transactions.

Just in the last five years, for example, the volume of these deals has increased by 300 percent. This has left the grid at times facing more requests for transmission than it can handle. Last year, the North American Electric Reliability Council found that the number of transactions that could not be completed because of congestion had increased to more than 2,300. This compares with 300 uncompleted transactions in 1998. Grid congestion limits, and in some cases denies, access to less expensive power that may be available to utility customers. It also hinders the development of the country's competitive wholesale electricity markets.

The nation's electric utility companies have long recognized the growing demand being placed on the grid. They are investing to expand transmission capacity. Between 1999 and 2003, for example, shareholder-owned utilities increased their annual transmission investment by 12 percent annually, for a total of nearly $18 billion. Looking ahead through 2008, preliminary data indicates that utilities have invested, or are planning to invest, $28 billion more—a 60 percent increase over the previous five years.

The EPAct contains a number of transmission-related components that will help to

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ensure that this money, and more, gets invested in the grid, including repealing the outdated Public Utility Holding Company Act (PUHCA). This will broaden the pool of potential investors to include non-utility investors, such as other energy and industrial groups, financial institutions, private equity groups, and foreign utilities. The result will be more choices and lower costs for consumers.

PUHCA had imposed geographic integration requirements on both registered and exempt holding companies, which ironically promotes market concentration. For the approximately 30 companies registered under the Act, the U.S. Securities and Exchange Commission (SEC) must approve corporate structure, the purchase and sale of securities, the purchase and sale of assets, and the acquisition of other companies. The Act also specified that any acquisition of another company by a registered holding company must meet certain criteria before receiving SEC approval. Registered holding companies also needed prior SEC approval before they could establish and finance a subsidiary.

The repeal of PUHCA will lead to greater competition and as a result, more services and choices for consumers. Other changes that are expected as the result of repealing PUHCA include:

- A greater flow of capital into U.S. energy markets and faster development of new generation and transmission capacity.
- More suppliers in electricity markets by allowing exempt wholesale generators to sell directly to retail consumers.
- Fewer hurdles to forming regional independent transmission companies.

The EPAct will also help to encourage more transmission investment by reducing the depreciable lives for electric transmission lines (at 69 kilovolts or higher voltage levels) from the current 20 years to 15 years. It will also extend a tax provision for one year to allow companies that sell transmission assets to a FERC-approved transmission organization to defer the gain on the sale of those assets through 2007. And EPAct requires FERC to provide transmission investment incentives and assure cost recovery for reliability investments.

In the past, FERC has supported rate incentives for entities that join regional transmission organizations (RTOs), contemplate construction of new transmission, or deploy new transmission-related techniques. FERC had delayed finalizing its policies in this area pending passage of the energy legislation. Now that the bill is law, the Act grants FERC the authority to stimulate more investment in a number of ways.

Importantly, the Act requires FERC to provide incentives for transmission investment and to assure investors that they will be able to recover their costs. By August 6, 2006, FERC must establish rules that provide rate incentives for the enhancement of the transmission system aimed at improving reliability and enhancing generation by removing congestion. Incentives are also provided for participation in transmission organizations.

We are encouraging FERC to be guided by the following principles as it carries out the responsibility of establishing incentive-based rate regulations for transmission facilities:

- Allow for cost recovery of fixed and variable costs and a reasonable return on transmission investment.
- Eliminate the 'pancaking' of rates within an RTO.
- Ensure that cost responsibility follows cost causation.
- Minimize the potential for cost shifting.
- Permit the recovery of all prudently incurred transition costs.
- Aim these incentives at all transmission models—integrated utilities, independent transmission companies, and merchant transmission.

More transmission means a stronger electric system and a more affordable power supply. The Energy Policy Act of 2005 has created a welcome set of guidelines for achieving both goals. EEI and its member electric utility companies are dedicated to continuing to work with federal and state regulators to see that the full potential of the new energy legislation is achieved, and with it, a grid that can satisfy the country's power needs well into the 21st century. ■

—EEI—

Courtesy of Siemens AG

CEO Accountability for Communication: Bottom Line Impacts, Measurement and Solutions

Two CEOs, real stories, names deleted to protect the guilty--which are you?

By: Howard V. Perlmutter, PhD., Vice Chair of the Global Interdependence Center and Professor of Social Architecture and Management Emeritus at The Wharton School, University of Pennsylvania.

CEO #1 conducted a major survey of the quality of communication in his organization and found that it was quite poor. His reaction was that the results were outrageous and it was not nice of his staff to say these things. He did nothing, frequently expressed disappointment with his subordinates and ultimately was fired by his board.

CEO #2 conducted a similar survey, which implicated his own communications practices as a factor in a declining business outlook that was eroding the confidence of his employees and his investors. He accepted accountability for the situation and pulled his key people into a productive retreat that resulted in a corporate-wide initiative to improve the quality of dialog on all levels of the organization, including the executive management tier. The firm subsequently experienced a dramatic turnaround that secured his tenure at the helm and saved the company tens of millions of dollars.

Contrast the two along these dimensions: Executive # 1 remained at the defensive stage in his communication with subordinates throughout his tenure, while executive #2 moved from defensiveness, to dialog with his team, to design for change. This is a 3-D sequence that I have found characteristic of constructive action.

The quality of communication inside and external to a corporation has always been one of the most important variables in its success, as well as the most difficult to measure and manage. There is extensive research that shows most catastrophes happen because of communication failures--what I call "Deep Dialog℠ failures" to emphasize the interactive character of ineffective communication.

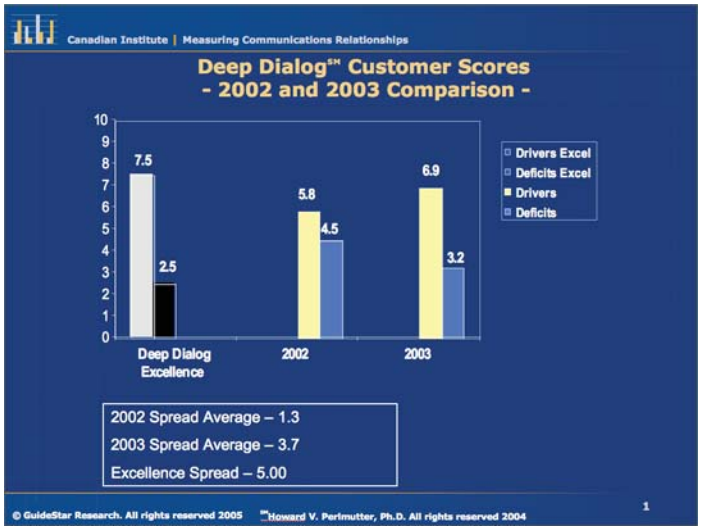
In the global context of the 21st Century, we will see increased levels of interdependence in different societal domains, e.g., political, military, legal, economic, socio-cultural, scientific and technological, and in health care and global ecology. Along with the opportunities for new markets there is also a likelihood of major catastrophes, e.g., involving the use of weapons of mass destruction by terrorists, the prospects of a global pandemic of avian flu, new levels of inter-religious violence, new risks of increasing poverty among four billion persons on the planet.

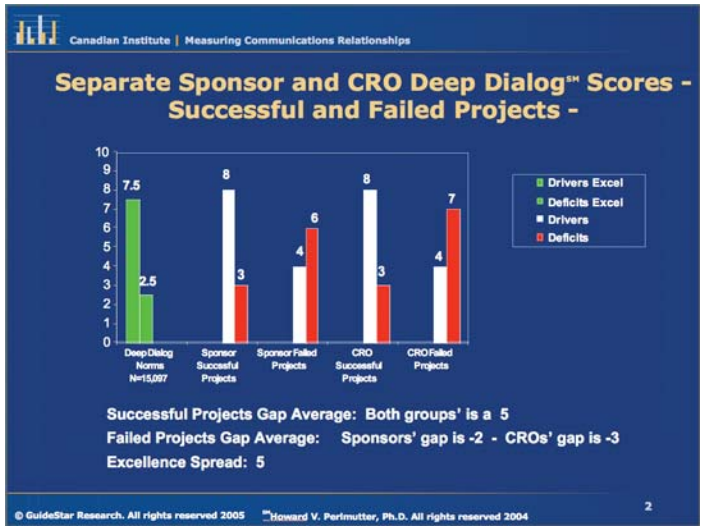
In this often dangerous and shrinking world, the likelihood of any company going it alone is very small. More than ever, CEOs will be accountable for the quality of communications with all key stakeholders, including customers, vendors, partners, investors, and governments, and these stakeholders increasingly cross languages and cultures. Yet rigorous examination and implementation of strategies to improve the quality of collaboration is rarely evident in corporations today.

For example, no 21st Century CEO would think of proceeding with a major acquisition or merger without a meticulous assessment of the financial resources, physical assets and market position of the intended partner, yet a surprising number will forge ahead in complete ignorance of systemic deficiencies and strengths in the quality of communication. If one or neither of the merging organizations have healthy collaborative cultures, this can materially affect the success, duration of transition, and degradation of profitability and growth, even failure of the merger, if not addressed early on.

Even preliminary analysis of the state of communication in the global R& D function can uncover current and future dangers in implementing strategies. Such negligence can frequently result in chronic corporate underperformance, as well as chronic discontent among customers, employees, and investors. At worst it can spell disaster for the leader's own career as well as for the enterprise as a whole.

Failed or underperforming mergers are only one example of the impact that systemic communication problems can have on a business enterprise. Major deficiencies in what we call dialog can sink almost any collaborative venture, from a design partnership to an international distribution agreement to a regulatory approval. The plain fact is that the quality of communication and the depth and extent of genuine collaborative dialog with all stakeholder groups concerned with the enterprise, will correlate very strongly to financial performance.





And increasingly, investors take seriously the quality of engagement with stakeholders of different outlooks, as for example, those who advocate "greening" in the growing field of corporate responsibility.

In This Light, How Then Can We Explain The Pervasive Neglect That This Critical Corporate Asset Receives?

Part of the explanation is that CEOs tend to concentrate their attention on things they can measure, like sales forecasts or production costs or the profitability of their primary customer relationships. Thanks to the development of increasingly sophisticated methods for analyzing business performance over the past two decades, CEOs today have very powerful tools for measuring and analyzing "the numbers." However, they have had virtually no tools or methodologies to account for, and become accountable for, their most critical communications assets.

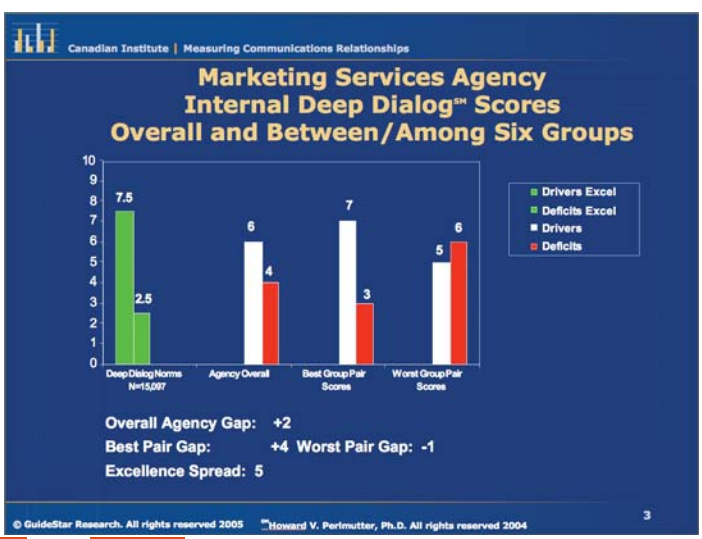
The capability to measure the problem accurately, design and implement new processes for improvement, and measure our success in achieving our objectives can only flow from the rigorous application of an empirical methodology that allows us to define and analyze our communications assets in terms that can be accurately measured. Only then can they be effectively managed.

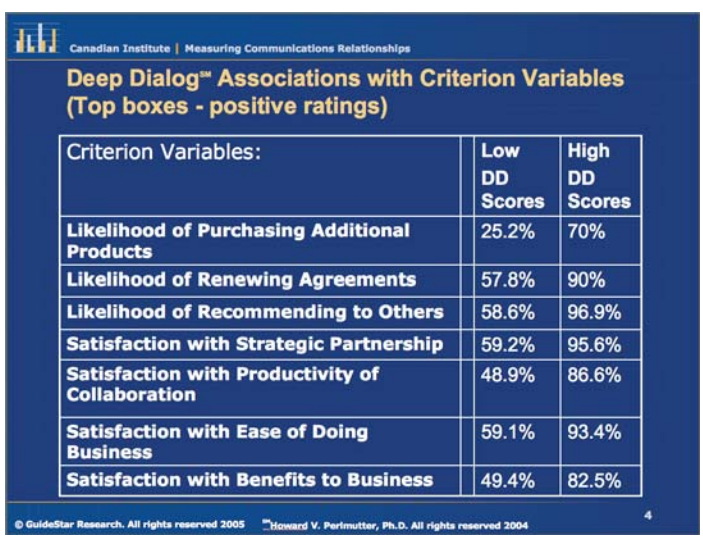
An Empirical Methodology for Measurement and Analysis

My work in consulting and executive education for the past 35 years has been devoted to understanding how to build viable and legitimate globally oriented organizations, especially enterprises, cities, and even countries. This led to the development of an analytical methodology that can assess the depth, breadth and effectiveness of global mindsets, and the quality of dialog across a wide range of business enterprises and social organizations.

This methodology is called Deep Dialog℠, for the end is at once empirical and comprehensive. It enables business executives to assess the status of their human communications networks and identify their most significant dialog drivers and deficits. As importantly, it enables these leaders to design and implement processes for continued improvement and then track the success of their initiatives.

As an empirical methodology, Deep Dialog℠ traces its origins to the Advanced Management program at Wharton, programs in Europe, and my consulting around the world. These programs included hundreds of CEOs and CEOs-to-be from around the world. I drew on the experiences of 150 of these senior executives, asking them to compare the communication characteristics that distinguished their most successful ventures from their least successful initiatives--those considered serious failures.





Criterion Variables:	Low DD Scores	High DD Scores
Likelihood of Purchasing Additional Products	25.2%	70%
Likelihood of Renewing Agreements	57.8%	90%
Likelihood of Recommending to Others	58.6%	96.9%
Satisfaction with Strategic Partnership	59.2%	95.6%
Satisfaction with Productivity of Collaboration	48.9%	86.6%
Satisfaction with Ease of Doing Business	59.1%	93.4%
Satisfaction with Benefits to Business	49.4%	82.5%

The Seven Deep Dialog℠ Drivers:

- Bridging begins with an openness to differences. In later stages, there's a willingness to identify and accept these differences and find common ground. The highest level involves rejoicing in differences, listening for reciprocal meaning, and building on and transcending differences.

- Bonding starts with a person seeking and beginning to find personal chemistry, with limited initial trust. At subsequent stages, trust and respect grow, as does compatibility. At the highest level, feelings of deep friendship may grow, and heart-to-heart conversation ensue. Key features are high levels of mutual trust and respect, and seeking continuity of relationships. In some countries, mainly Latin and Asian, bonding may be the key dialogue driver with customers.

- Banding, in its initial stages, involves less "I vs. you." Later, the use of "we" begins to prevail and people begin to share a vision and engage in team thinking. At the highest level, people experience real interdependence and shared identity based on common values. We found in one study that banding is a key indicator of good relationships with customers, where they feel the vendor is "on their side."

- Blending begins with a co-learning orientation that may come initially from brainstorming, but more likely is born of merging different views and coming up with ideas neither side had alone. Moving higher on the scale, it may involve reframing one another's ideas and can lead to discovering new directions. At the highest level, it may involve building on each other's strengths and reducing weaknesses to create breakthrough ideas.

- Bounding represents a concern with focus and finding a common direction. This can lead to seeking doable initial projects, as well as understanding or revising the boundaries of cooperation. The result is that relevant resources are made accessible to suppliers and customers.

- Binding involves a joint commitment and a future orientation with the different dialogue partners, each of whom accepts a stake in achieving the shared objectives. At the highest level, mutual trust and respect are sufficient to ensure continuity among partners, including suppliers and customers.

- Building is a joint implementation through collaborative social architecture, i.e., a shared vision and mission, with shared governance or leadership process, a shared strategy, and shared operating cultures, with structures for easing implementation.

The Five Deep Dialog℠ Deficits:

- Fallow relationships are moribund; each side knows little about the other. There may be underlying fears or disinterest, or geography may keep the sides far apart physically--but we also found people who work a short geographical distance from each other and yet never have had a conversation. This applies especially to some corporate leaders.

- Feeble dialogue is characterized by a low level of openness, inattentive listening, and an unwillingness to share good information. It's often marked by defensive encounters and infrequent meetings, resulting in lowest-common-denominator outcomes.

- Frozen communication occurs when people get stuck in fixed or polarized positions. Egocentrism prevails. Intermediation may fail, as efforts to unfreeze the relationship are resisted. When this occurs between vendors and customers, the ensuing debates can be disastrous.

- Failing dialogue is signaled by increasing mutual distrust and lack of respect. Efforts to bridge differences diminish, conspiratorial theories develop, and there's a marked reduction in bonding. Without third-party intervention, failing dialogue tends to break down--a particularly serious situation when it involves key customers. Empathy is low, and there even may be sporadic hostility.

- Failed dialogue is marked by bad memories and unsettled scores, and efforts to renew dialogue are discouraged. Empathy is absent.

The results were rather remarkable. There were significant differences in the pattern of dialog behaviors for successful and failed ventures. The successful venture scored high on the Dialog Drivers and low on the Dialog Deficits, while the failed ventures scored low on Dialog Drivers and high on Dialog Deficits. (See sidebar.)

Seven Dialog Drivers and Five Dialog Deficits

The data from these CEOs resulted in identification of seven distinctive primary drivers of effective dialog and five critical dialog deficits that signal major weaknesses in the quality of communications and collaboration between groups. The identification of these twelve specific attributes has in turn allowed accurate measurement of the quality of collaborative communication within enterprises and between an enterprise and its customers, suppliers, partners and investors. Repeated statistical analysis over thousands of client cases has demonstrated that measurements of communication quality based on these 12 attributes are both reliable and valid. (Additional detail is available at www.DeepDialog.com.)

It is essential that a methodology yield valid and reliable results, but it is even more important that its results be actionable. By identifying the seven drivers of healthy dialog, the Deep Dialog℠ methodology provides business leaders with a ready-made roster of the communication processes they must initiate and foster in order to eliminate critical communication deficits. By providing a simple and easily applied instrument for measuring the spread of these drivers across the communications network, Deep Dialog℠ makes it easy for leaders to track and evaluate the successes of their collaborative initiatives.

This instrument, a succinct survey questionnaire and analysis, is administered via the Internet to target populations of any size. It is easy to take, easy to record, low-cost and can be readily deployed anywhere in the world. The audit scores and score patterns reveal strengths and weaknesses that, in effect, identify the DNA of a collaborative communications relationship between or within groups.

The Methodology in Action

Analyses based on the Deep Dialog℠ methodology have been successfully applied to a wide variety of business issues across a broad range of industries and geographic regions. In one of the earliest examples, a study focusing on quality of dialog enabled a leading player in the computing industry to expand the outlook of its chief operating managers from a predominantly national orientation to a truly global mindset, with a concomitant increase in the volume of international business.

In another example, a major European-based engineering firm was able to stem the defection of top managers from its American affiliate, with subsequent improvements in the revenue and profits derived from its American markets.

In yet a third case, a large European electronics firm instituted communications programs designed to foster cooperation between mid-level managers from its own operations and its newly-acquired American manufacturing subsidiary, successfully eliminating internal rivalries that would have negated the synergies that originally drove the merger.

In similar fashion, Deep Dialog℠ analysis enabled a major insurance firm to increase the levels of cooperation between its various national affiliates, thereby improving service delivery and enhancing its customer retention efforts.

Opportunities for improving business performance by strengthening the quality of collaborative communications will only increase. Prevailing trends in the global economy will create increasing needs in almost every industry and region. Just a few of the applications include:

- The upsurge in mergers and acquisitions that generally accompany economic recovery will demand that managers in many firms begin to communicate across organizational lines that were inviolable only a few days before.

- The continued globalization of the world's regional economies will demand cross-cultural bridging on a scale that we have never before witnessed.

- Increasing reliance on supply chain integration as a strategy for shortening product development cycles will require mangers within an enterprise to communicate confidential information to suppliers outside the enterprise on a routine basis.

- The need for globalized enterprises to satisfy multiple regulatory authorities and legal jurisdictions, perhaps best illustrated by the need for pharmaceutical companies to satisfy both U.S. and EC standards, will demand that businesses engage in effective dialog with government agencies to a degree never previously anticipated.

Accountability

Business enterprises are essentially exercises in collaboration, and collaborations—whether between firm and customer, manufacturer and supplier, manager and investor, company and partner networks, or employee groups working together—depend for their success on sustained and successful dialog between the collaborating parties. Significant deficits in communications will virtually guarantee the failure of any collaborative effort. Examples abound, from failed NASA space missions to the disappointing results of highly touted mergers such as Daimler-Chrysler.

The consideration of failure should also remind us that methodology can only take us so far. The success or failure of any initiative will ultimately depend on the commitment of the man or woman at the top of the organization.

The quality of communication in a collaborative venture ultimately determines the financial returns of the venture, as well as the company's reputation and perceived corporate social responsibility. Seen in this light, analytic methodologies like Deep Dialog℠ represent a highly cost-effective form of insurance against collaborative failure, in addition to building "relationship capital."

But these methodologies can only succeed in organizations where a chief executive assumes accountability for communications quality in the same manner and to the same degree that he or she accepts accountability for financial performance. In communications, as in every other aspect of business performance, the responsibility for success and the leadership to achieve it still rests with the CEO. ■

For more information about applications of the Deep Dialog℠ survey methodology in corporate environments, see www.guidestarco.com.

For an analysis of CEO-CIO dialogic relations, email Kerns@guidestarco.com with "Digging Beneath Deep Dialog℠" in the subject line.

About the Author

Howard Perlmutter, Ph.D., is Vice Chair of the Global Interdependence Center and Professor of Social Architecture and Management Emeritus at The Wharton School, University of Pennsylvania. He is the creator of Deep Dialog℠ and will soon publish First or Last Global Civilization? The Race.

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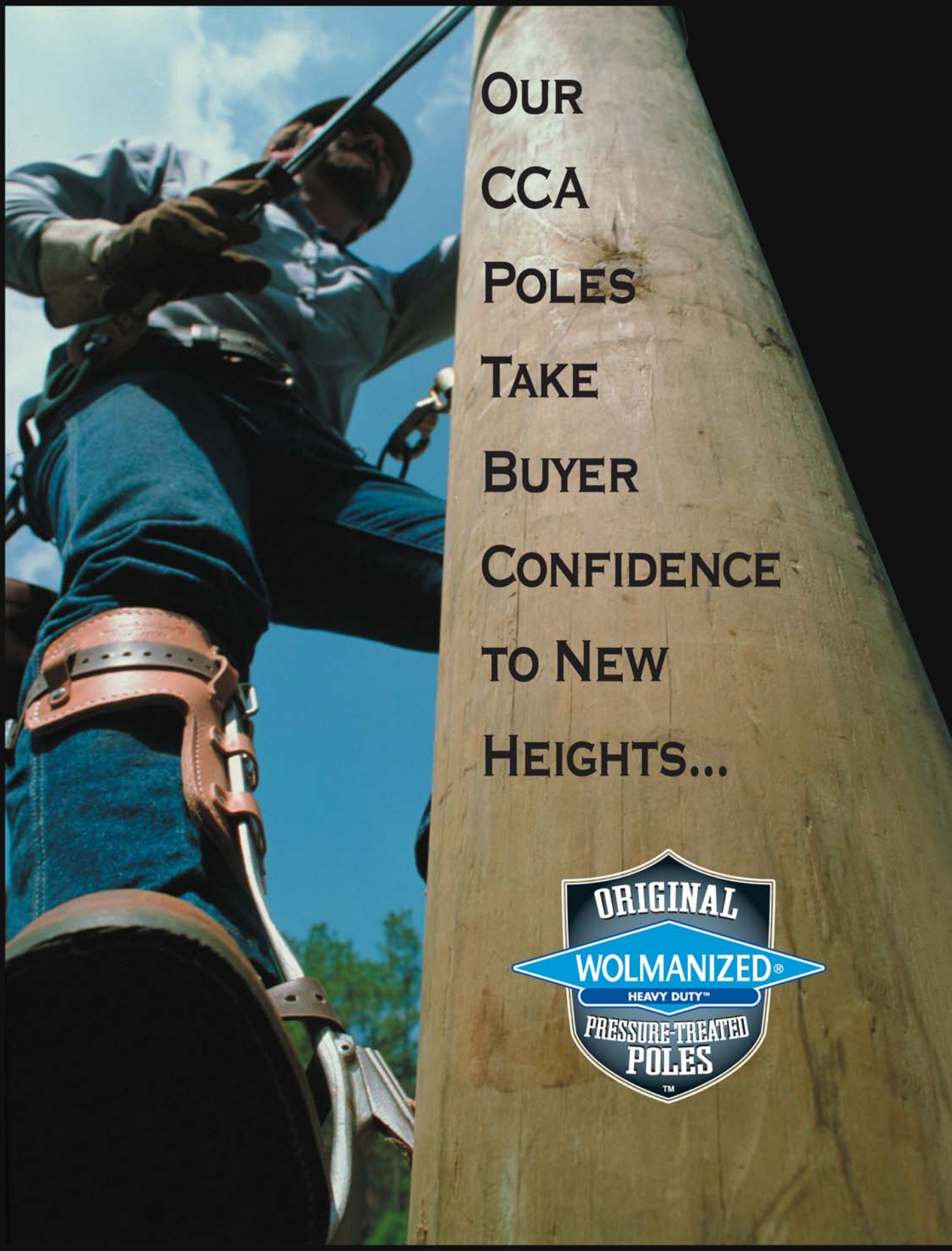
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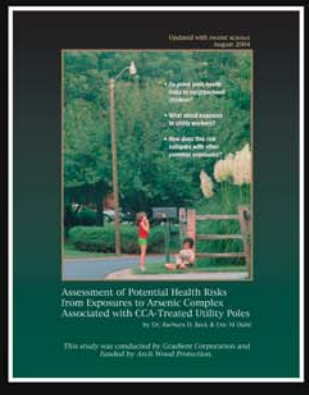

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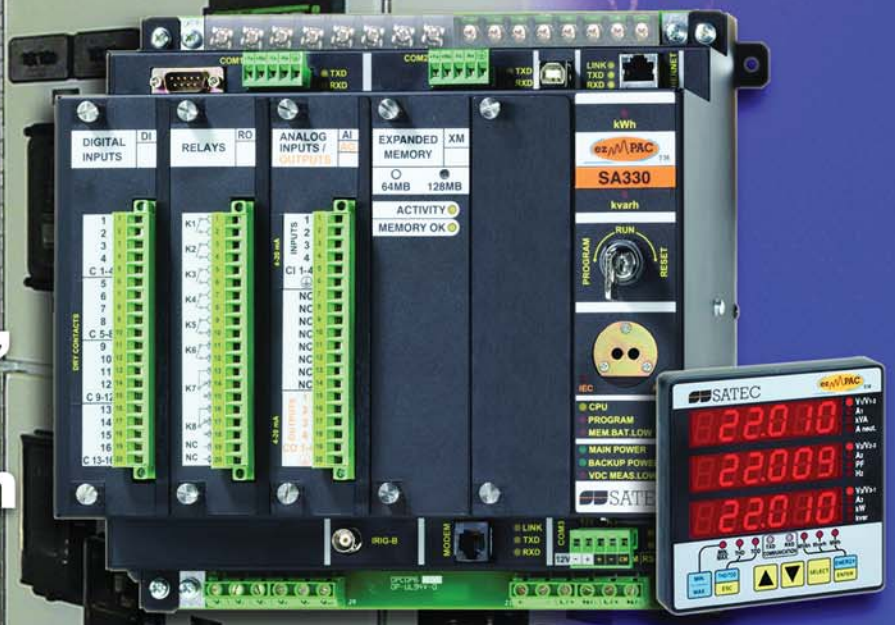
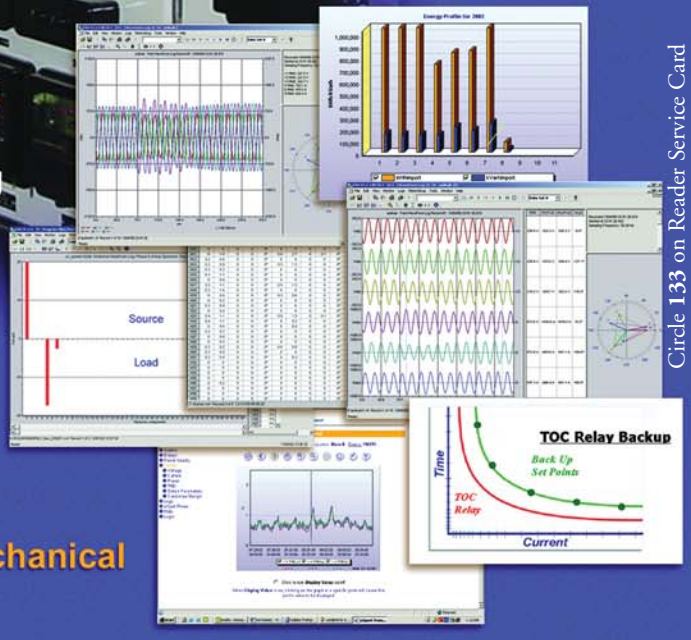
Power Intelligence Unit™

Automate by Adding to Existing Relays, Instead of Replacing Them



- **ONE ezPAC™ on each Feeder Circuit provides ALL the information needed for Automation:**
  - Accurate Measurements / Revenue Metering
  - Fault Analysis and Recording - Sequence of Events
  - Power Quality - Harmonics
  - Smart I/O
  - SCADA / e-mail / Web Access
- **Installation at a Fraction of the Money & Time**
- **Minimum Disruption of Operation - Low Investment Costs**
- **Enhancement / BackUp of Existing Electromechanical or New Relays**



SATEC
Powerful Solutions

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