



Electric Energy T&D

MAGAZINE

JULY-AUGUST 2008 Issue 4 • Volume 12

2009 Suppliers & Buyers Guide Issue

Also in this Issue

State Game Lands 33 Research and Demonstration Area: 55 Years of Integrated Vegetation Management at Work

Circle 24 on Reader Service Card

TO DO:
CONTACT
MANUFACTURER
TO ENSURE
NEOPTIX IS
SPECIFIED.



Field Proven Fiber Optic Temperature Sensors for Transformer Hot Spots www.neoptix.com

Now available on
Kelman
TransFix

CANNON

SMART TECHNOLOGY

IG Quotient

(Intelligent Grid) Report Card

FORM 394-C



88-004866-26

Cooper Power Systems

+ CATEGORY (+) (0) (1) (2) (3) (4) (5) Power Factor	<input checked="" type="checkbox"/> EXCEEDS EXPECTATIONS <input type="checkbox"/> MEETS EXPECTATIONS <input type="checkbox"/> UNDER PERFORMS <input type="checkbox"/> SUBSTANDARD
+ CATEGORY (+) (0) (1) (2) (3) (4) (5) Load Factor	<input checked="" type="checkbox"/> EXCEEDS EXPECTATIONS <input type="checkbox"/> MEETS EXPECTATIONS <input type="checkbox"/> UNDER PERFORMS <input type="checkbox"/> SUBSTANDARD
+ CATEGORY (+) (0) (1) (2) (3) (4) (5) Voltage Regulation	<input checked="" type="checkbox"/> EXCEEDS EXPECTATIONS <input type="checkbox"/> MEETS EXPECTATIONS <input type="checkbox"/> UNDER PERFORMS <input type="checkbox"/> SUBSTANDARD
+ CATEGORY (+) (0) (1) (2) (3) (4) (5) Reliability	<input checked="" type="checkbox"/> EXCEEDS EXPECTATIONS <input type="checkbox"/> MEETS EXPECTATIONS <input type="checkbox"/> UNDER PERFORMS <input type="checkbox"/> SUBSTANDARD
+ CATEGORY (+) (0) (1) (2) (3) (4) (5) Reserve Margin	<input checked="" type="checkbox"/> EXCEEDS EXPECTATIONS <input type="checkbox"/> MEETS EXPECTATIONS <input type="checkbox"/> UNDER PERFORMS <input type="checkbox"/> SUBSTANDARD
+ CATEGORY (+) (0) (1) (2) (3) (4) (5) Grid Availability	<input checked="" type="checkbox"/> EXCEEDS EXPECTATIONS <input type="checkbox"/> MEETS EXPECTATIONS <input type="checkbox"/> UNDER PERFORMS <input type="checkbox"/> SUBSTANDARD

Get smart about intelligent grids.

You need an intelligent network with real-world smarts.

Cannon's Yukon Advanced Energy Services Platform sends all other systems back to school. It not only optimizes your power and load factor, it increases reliability and strengthens voltage stability. And in your world, that's the only intelligence test that matters.

Learn more at: www.cannontech.com

Or call: 1.800.827.7966

COOPER Power Systems

www.cooperpower.com

YOU'RE ON THE CLOCK NOW... AND IT'S TICKING...



Let Us Help You Achieve NERC CIP Compliance Before It's Too Late!

Through extensive logging, system activity reporting, and the most comprehensive electronic security perimeter, Odyssey™ helps utilities comply with the NERC CIP standards starting today.

Odyssey specifically addresses the NERC CIP requirements with:

- ▶ Intrusion detection and prevention
- ▶ Real-time dialup modem defense
- ▶ Auditable event logging and reporting of all system activity
- ▶ Configurable role-based user management
- ▶ ...and much more including 2048-bit encryption!

Aegis Technologies: "Because it's the right thing to do"™

Visit www.aegistech.us/odyssey or give us a call to learn more and beat the clock

GET NERC
CIP 002-009
COMPLIANT
LEARN MORE
↓

PERFORMANCE
TROUBLESHOOTING
SECURITY



800.564.1223

www.aegistech.us

2020 N. Central Avenue
Suite 200, Phoenix, AZ 85004

Publisher:
Steven Desrochers: steven@electricenergyonline.com

Editor:
Gordon McCormick: gordon@jaguar-media.com

Contributing Editor:
Mike Marullo: mam@electricenergyonline.com

Account Executive:
Donna Williams: donna@electricenergyonline.com

Advertising Sales Manager:
Jimmy Desjardins: jimmy@electricenergyonline.com

Circulation Manager:
Janet Guay: janet@jaguar-media.com

Art Designers:
Anick Langlois: alanglois@jaguar-media.com
Tarah McCormick: tarah@jaguar-media.com

Internet Programmers:
Johanne Labonte: jlabonte@jaguar-media.com
Sebastien Knap: sknap@jaguar-media.com

**Electric Energy Magazine is published
6 times a year by: Jaguar Media Inc.**

1160 Levis, Suite 100, Terrebonne, QC Canada J6W 5S6

Tel.: (888) 332-3749 • Fax: (888) 243-4562

E-mail: jaguar@jaguar-media.com

Web: www.electricenergyonline.com

Electric Energy T&D Magazine serves the fields of electric utilities, investor owned, rural and other electric cooperatives, municipal electric utilities, independent power producers, electric contractors, wholesalers and distributors of electric utility equipment, manufacturers, major power consuming industries, consulting engineers, state and federal regulatory agencies and commissions, industry associations, communication companies, oil & gas companies, universities and libraries.

Post Publication mail agreement #40010982
Account #1899244



Industry News 8

Suppliers Index 45-68
Companies listed alphabetically with complete addresses, phone and fax numbers, e-mail, web site and contact names.

Products & Services 69-142
This section lists all the companies under the specific product or service that they supply to the industry.

Product Showcase 143
Read about new products available to the industry.

Advertisers Index 144
This index is a guide to locate specific display advertisers throughout the magazine.

COVER PAGE PHOTO: Courtesy of
Asplundh Tree Expert Co.



Electric Energy T&D MAGAZINE

IN THIS ISSUE

Page 32



Page 35



- 4 IT'S BIGGER THAN BOTH OF US!**
About fifty or so years ago – when our modern power grid and the Baby Boomers that created it – were still in their formative stages, the late comic and crooner, Jimmy Durante, recorded a duet with Patty Andrews (one of the legendary Andrews Sisters) titled, “It’s Bigger Than Both of Us.”
- 18 THE KNOWLEDGE OF POWER AND THE POWER OF KNOWLEDGE**
Imagine a future where the lights go out and, thanks to automated detection of the problem, it is corrected before any customer calls.
- 26 THE 2008 AUTOMATION/IT LEADERSHIP SERIES**
Whereas in the past much of the focus of this interview series has been on the automation side of the Automation/IT equation, in this installment we move squarely into the information technology domain.
- 31 STATE GAME LANDS 33 RESEARCH AND DEMONSTRATION AREA: 55 YEARS OF INTEGRATED VEGETATION MANAGEMENT AT WORK**
In 1953, a five-year herbicide research project was initiated that has managed to maintain its relevance for more than five decades.
- 34 STORM AND HURRICANE PREPAREDNESS: FLORIDA POWER & LIGHTS’ EFFORTS TO STAY ONE STEP AHEAD OF MOTHER NATURE**
Weather, particularly severe weather, can substantially impact the operations of utility companies.
- 38 DO VIDEO DISPLAY WALLS IMPROVE SITUATIONAL AWARENESS IN CONTROL ROOMS?**
In the past several years, many organizations have made significant investments in their control room infrastructure, with the goal of improved situational awareness for control room staff.



Electric Energy T&D
is proud to be a member
of these associations



Your new old favorite.

It's hard to beat a pair of Dickies® jeans. With great fit and styling, they are among the best-selling jeans in America.

And now those same jeans are available from Workrite®, a leading flame-resistant garment manufacturer for over 30 years.

Made of proven Indura® fabric, Dickies FR five-pocket jeans are ideal for on-the-job comfort with superior electric-arc protection.

Choose Dickies FR. And discover a new reason to trust an old friend.



MANUFACTURED
BY WORKRITE®

800/521-1888

www.workrite.com

Circle 49 on Reader Service Card



It's Bigger Than Both of Us!

About fifty or so years ago – when our modern power grid and the Baby Boomers that created it – were still in their formative stages, the late comic and crooner, Jimmy Durante, recorded a duet with Patty Andrews (one of the legendary Andrews Sisters) titled, “It’s Bigger Than Both of Us.” The song was a big hit in its time, but the title also frequently found its way into Jimmy’s stand up and sitcom routines whenever he was faced with a looming and formidable challenge.

I think we can probably all agree that the evolving future of the so-called “Smart Grid” qualifies as a looming and formidable challenge, right? Why then, as we are facing the task of completely redesigning and repurposing the grid, are there so many technical staff members at utilities that seem not only willing – but deeply determined – to go it alone.

Let me be frank... far too many utility folks I've come across are still willing to go to great lengths to keep suppliers at bay when instead, they should be welcoming suppliers whenever they come and actively inviting them if they don't make first attempt. Engineers are supposed to be naturally inquisitive and always interested in learning new things. I wish someone would explain to me why any engineer would want to be isolated from the huge cache of information that is available from suppliers – especially when it's all free for the asking!

Another one of Jimmy's famous – and timeless – quips was this one: “Everybody wants to get into the act!” Considering the magnitude of the challenges that lie ahead for the electric utility industry, I'd say that would probably be a good thing in this case. Achieving even the most basic objectives of smart grid implementation will take a team effort, at the very least. There are so many things that have to be changed and in some cases reinvented, that I can't imagine how anyone could think they already know everything they need to know or can find that knowledge without any outside help.

Yet time and again, I hear people saying that they don't want to be bothered by suppliers calling and asking a bunch of questions or trying to find out how they can help by providing potential solutions to real needs. Exactly when did all of the knowledge about automation and IT solutions move exclusively into the domain of users? Of course I'm being sarcastic, but only to emphasize an all-too-real behavior that is anything but new.

Back when I was a salesman myself, selling SCADA systems to energy and utility companies, I was very fortunate to have worked with mostly open and friendly engineers and managers in the oil and gas pipeline industry. In fact, to this day many of us are still good friends, even though we cross paths far less frequently over the years. Thinking back to how some of those relationships were formed, I remember one particular sales trip to the West Coast that was a real eye-opener for me.

Toward the end of a long week on the road I was calling on an engineering company in Southern California that I had never approached before. The meeting was set

up by our sales representative, who had previously worked with the guy I was meeting when they were both employed by a major oil company some years earlier. However, my rep had a conflict with another appointment and left me there to break the ice on my own. Meeting new people has never bothered me, but experience had taught me that engineering consultants are usually a tough sell, especially on the first round.

After a brief wait in the reception area I was invited into his office, and we exchanged the usual greetings and pleasantries. But I noticed right away that something very different was going on than what I had anticipated. Rather than the usual stiff Q&A routine I was accustomed to – rapid bursts of questions about my company, market experience, other customers and so forth – he began the dialog by asking questions about me. Had I been to California before? Where did I get my experience? What kinds of things did I like to do in my free time? This was very peculiar, indeed.

After talking for another fifteen minutes over a second cup of coffee, he finally got around to asking about our products and services. We had a very friendly and downright enjoyable conversation about how our offerings could be applied in the projects he had on his radar at the time, and eventually the conversation came back around to how we might best go forward. By this time I was dying to ask him the obvious question: Why are you being so nice to me? Frankly, I was wondering if perhaps he didn't realize that I was a salesman! When I finally put the question to him, he suddenly became very serious as he launched into what proved to be a most interesting answer.



Intelligence Beyond Measure

Who is the Global Leader in AMI? Elster.

For over 172 years, we've been shoulders above the rest. Developing intelligent and innovative technologies for the energy and water industries.

Elster Integrated Solutions (EIS) plays the central role in addressing the challenges of today's ever-changing markets. We offer leading-edge technologies that provide actionable data and deliver value-added solutions. Elster AMI solutions enable utility customers to do their part in making a better world.

Elster consistently supplies the only real solution: Intelligence. Beyond Measure.

Intelligent solutions never cease at Elster. Elster's EnergyAxis® System is the largest, true, two-way RF mesh network deployment in the world. It's proven to work in multi-utility, high-density metropolitan environments to lightly populated rural areas. The AMI system supports residential, commercial and industrial applications. Its standards-based, open architecture is the model for the industry—flexible and adaptable to utility needs today and "future-proofed" to support any rapidly-changing infrastructure, applications and communications technology.

Do you want intelligent solutions? It's time you recognized the name of the true Global AMI Leader. Elster.

www.elster-eis.com





**Trusted Worldwide for
Quality Test Equipment**



**New Fully Automated
Glove, Sleeve & Blanket
Testers**



**New XFV the Everything
Machine! Color TDR, Fault
Locator, VLF Tester,
Burner, and More**



**New Saidi Saver Loop
Restoration Simultaneously
shows distances to each
transformer and fault**

1 (205) 788-2437
voncorp@voncorp.com
www.voncorp.com

Utility Horizons™

He started out by telling me that during his years at the oil company – where he had started as a young engineer right out of college – he was taught by his superiors that all sales people (or “peddlers” as his bosses and co-workers called them) cared about was making a sale. He was also shown how to low-ball estimates and encouraged to squeeze every last dime out of every sale as much and as often as possible and to take advantage of whatever the peddlers offered – free lunches, golf outings, etc. – without guilt or remorse. They said he shouldn’t feel badly about it because after all, that’s all peddlers were really good for anyway.

As we talked, he revealed that it wasn’t until he changed jobs and went to work for a supplier company that he finally gained some perspective. He quickly came to realize that not only are ‘peddlers’ people deserving of respect just like anyone else trying to do a job, but that they actually served a useful purpose. He went on to say that he was actually quite surprised when he realized that his colleagues on the suppliers’ sales team were all much like him, raising families and just trying to earn a living. Looking back on his oil company experience, that possibility had never really occurred to him.

He soon began to feel ashamed of how he had treated people that were just like him. So, he made a promise to himself that he would behave very differently if he ever got another chance. As it turned out, that chance was our meeting – his first since leaving the supplier company and entering the consulting world. The man’s name was Shawki Jurjis, a Lebanese engineer that taught me an invaluable lesson that I will not ever forget about the importance of treating others in the way you would like to be treated, should the tables ever be turned.

Shawki and I never actually had a chance to work on any projects together, but we became good friends nonetheless and helped each other out whenever we could. His background and mine could not have been any more different, yet we got along personally and professionally as if we had everything in common. (I haven’t seen Shawki in many, many years, but if you

happen to run across him, please tell him I said thanks for the invaluable lesson in interpersonal relationships!)

So, the next time you get a call from a supplier or find a salesperson waiting at your door, remember that they aren’t the enemy. You don’t have to put up a shield to protect yourself from inadvertently buying something, and you certainly don’t need to be rude or react in a negative way. Most sales people today are highly trained, experienced professionals that have a broad purview of what’s out there and how it can be applied in beneficial ways. Instead, consider the possibility that this person just might have the answers you need or, perhaps help you find them.

To run and hide or refuse vendor calls and meetings altogether is to risk depriving yourself of a valuable resource that is desperately needed in these changing and challenging times. And, as we attempt to completely redesign and redevelop the grid in the weeks, months and years ahead, graciously accept all the help you can get because, believe me... *“It’s bigger than both of us!”* ■

Behind the Byline

Mike Marullo has been actively involved 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 President 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.

©2008 Jaguar Media, Inc. & InfoNetrix LLC., All rights reserved.



Rugged Communications

Networking Solutions for Electric Utilities

- ▶ The Communications Backbone for Substation Automation and the emerging "Smart Grid"
- ▶ The Industry's Most Complete Line of Hardened Products
- ▶ Designed Specifically for Harsh Utility Environments
- ▶ The Industry's Most Comprehensive Cyber Security Solutions
- ▶ Advanced Network Management Software Solutions



Smart Grid

Substations

Wind

Power Generation

RuggedSwitch™ Ethernet Switches

RuggedServer™ Serial Device Servers

- ▶ High EMI Immunity (IEC 61850, IEEE 1613)
- ▶ Wide Temperature Range (-40°C to 85°C)
- ▶ Fast Network Fault Recovery
- ▶ High Reliability and Network Availability
- ▶ Integrated Cyber Security Features

RuggedRouter™
Cyber Security ApplianceRuggedWireless™
Wireless Ethernet SwitchesRuggedSwitch™
IP66/67 Ethernet SwitchRuggedMC™
Media Converters

Network Management Software



Cyber Security Solution

RuggedCom Corporate Headquarters
30 Whitmore Road, Woodbridge,
Ontario, Canada L4L 7Z4

Tel: 1 (905) 856-5288

Fax: 1 (905) 856-1995

RuggedInfo@RuggedCom.com

www.RuggedCom.com



**Looking for
the key to
networking
security?**

**Talk to the
experts about
NERC CIP
Compliance**

- »»» **Electronic Secure Perimeter**
- »»» **Secure Access**
- »»» **Network back-up and recovery**



- »»» **Hardened Substation Networking Products**
- »»» **61850 Compliant**
- »»» **Integrated LAN, Serial and WAN**
- »»» **Configurable Fiber**



GarrettCom™

Industrial Networking at Its Best™

For more information contact

510.438.9071

www.GarrettCom.com



DYMEC DynaStar Magnum

3M COLD SHRINK TECHNOLOGY TURNS 40

By Ken Arnott, Business Development Manager,
Electro and Communications Business
3M Canada

In 1968, a relatively new material, ethylene propylene diene monomer (EPDM) rubber, offered promise to Jim Sievert, a 3M engineer who had an innovative idea for the electrical industry: cold shrink.

Customers wanted a simpler, better way to insulate in-line splices for electrical power cables. Sievert and his team of associates, spent many months researching and developing the product at the company's St. Paul, Minnesota laboratories.

They created a new formulation of EPDM rubber that would easily stretch onto a removable core and when installed, would provide continuous radial pressure to maintain a watertight seal. Since no sources of heat or extra tools were required to install this accessory, 3M gave the name "cold shrink" to the new technology.

The first application for the cold shrink insulation product (initially known as the Pre-Stretched Tube or PST) was for buried low-voltage secondary splices. Over four decades, 3M used this technology as the basis for continued innovation:

1968

- The first step in the evolution of 3M cold shrink technology was the 3M termination quick termination medium voltage QTM applications.

1970s

- The 3M Cold Shrink Termination QT-II for medium-voltage terminations, consisting of a silicone insulator with integrated Hi-K stress relief, was introduced in the late 1970s.

1990s

- In 1993, the 3M Cold Shrink QS2000 was the first cold shrink medium-voltage splice introduced in Europe.



- A further development in 1996, the 3M Cold Shrink Termination QT-III, eliminated the need for grease, reduced the effective length of the termination and increased arc and track resistance. The QT-III insulator ended the need for sealing the top of the termination with tape, and provided improved hydrophobic recovery saving time and increasing reliability.
- In 1997, Cold Shrink Splices QS-III for medium-voltage cable were added to the product line. This one-piece design incorporates an under-cut electrode to control electrical stress within the splice.

2000s

- Cold shrink branch splices for medium-voltage cables were added in 2001.
- In 2003, Manitoba Hydro approached 3M Canada for an entirely new product: high voltage 69kv terminations that were as efficient to apply as medium voltage cold shrink terminations.
- 3M introduced cold shrink terminations for aerial and pad-mounted 69kV applications in 2005. The 3M Cold Shrink Termination Kit QT-III for 69/72.5kV replaces heavy porcelain products and heat shrink terminations. Users report that cold shrink terminations for high-voltage applications are compact and easier to handle than traditional systems and are installed in substantially less time and with greater safety.
- Additional cold shrink products will be introduced throughout 2008 including the 3M Cold Shrink Connector Insulator QSLV-M Series offering quick, consistent



The energy
to go clean.™



The thermostat manufactured in partnership with White-Rodgers. The Energy to Go Clean is a registered trademark of Comverge, Inc. All rights reserved.

Smart megawatts. Increased reliability. Reduced emissions.

Energy consumption concerns are on the rise, as is the demand for environmentally conscious energy. Comverge is leading the charge with innovative Clean Energy solutions. Select from Demand Response, energy efficiency, advanced metering, and grid management solutions, and solve your energy demand challenges while doing your part to help protect the environment. Partner with Comverge and discover the "smarter" solutions for meeting growing demand. To learn how to achieve more with less, visit www.comverge.com/smart.

www.comverge.com/smart | 888.565.5525

Circle 10 on Reader Service Card

installation and impact resistance for direct bury secondary applications suitable for a wide range of cables.

After forty years and a range of improvements, cold shrink is a vital component in the Canadian electrical industry. Today it is used in a variety of applications for splicing, terminating and environmentally sealing electrical cables for low, medium and high voltage applications by electrical utilities, wind farms and heavy industry nationwide.

Circle 50 on Reader Service Card

NERC Enforces Compliance with Electric Reliability Standards, Reliability Improvements Underway

Princeton, N.J., June 4, 2008 - The North American Electric Reliability Corporation (NERC) will submit the first set of violation notices in the United States to the Federal Energy Regulatory Commission (FERC) today for approval under Section 215 of the Federal Power Act. These notices document which reliability standards were violated and the actions taken by the companies involved to assure future compliance and improve reliability. NERC reliability standards are designed to ensure that the right practices are in place so the likelihood and severity of future bulk power system disturbances are substantially reduced.

This initial set will include a number of violations, the majority of which are documentation-related and do not include a financial penalty. The total value of financial penalties assessed equals \$255,000. Today's violations are already being addressed by the companies involved, who are required to take immediate corrective action in addition to any financial penalties.

"The most important result from these notices is that reliability is being improved across North America due to proactive efforts to prevent future system disturbances," commented Rick Sergel, NERC president and CEO. "It's often said that the first step to fixing a problem is admitting that a problem exists, and that's what these companies have done – they have stepped up to the plate and put the measures in place to improve grid reliability."

Today's financial penalties are related to violations of NERC's FAC-003-1 standard titled "Vegetation Management." Improper vegetation clearance on transmission lines was a causal factor of the August 14, 2003 blackout, where 50 million people across the Northeast U.S. and Southeast Canada lost power. Proper vegetation management within transmission rights-of-way continues to be one of NERC's primary reliability concerns. The companies involved in today's notices are taking important steps to resolve vegetation management violations and improve reliability of the bulk power system.

"Generally we are seeing a very positive response to the 'new era' of mandatory compliance enforcement," continued Sergel. "In fact, more than half of the 1400 violations reported to NERC after June 18th were self-reported, meaning that bulk power system users, owners, and operators voluntarily disclosed an issue and proposed a way to address it. This is a strong indication that the mandatory enforcement program put in place through the formation of the international Electric Reliability Organization, NERC, is driving a culture of compliance, but more importantly reinforcing reliability standards, throughout the electricity industry."

More information and details on today's and future notices can be found on NERC's website at: <http://www.nerc.com/~filez/enforcement/index.html>. This page will be updated throughout the afternoon as the notices are formally filed.

Circle 51 on Reader Service Card

AMI isn't enough: Making the case for Smart Grid Defining the Smart Grid

What makes a Smart Grid? If you surveyed 100 different people in the industry, it might yield 100 different answers. Almost everyone in the industry agrees that AMI is a part of the solution, but beyond the meter the consensus is hazy. At CURRENT, we support The Electric Power Research Institute's Smart Grid definition: "A power system that can incorporate millions of sensors all connected through an advanced communication and data acquisition system. This system



TRENCH

- ✓ Air Core Current Limiting Reactors
- ✓ Line Traps PLC
- ✓ Relay Communication Channels
- ✓ Capacitor Voltage Transformers
- ✓ Current Transformers
- ✓ Potential Transformers
- ✓ Metering Transformers
- ✓ Low Power V/I Transformers
- ✓ LV-HV Bushings (Pwr Transformer)
- ✓ Capacitor Bank Protective Relays
- ✓ Resonant Grounding Systems
- ✓ Composite Bushing Insulators

TRENCH LIMITED
 71 Maybrook Drive, Toronto ON M1V 4B6 Canada
 Tel.: 416-298-8108 • Fax: 416-298-2209
www.trenchgroup.com



Why Do So Many End-Users Specify INDURA® Ultra Soft®?

EXTENSIVE EXPERIENCE

Established in 1919, Westex has been setting the standard for high quality flame resistant fabrics for decades.

PROPRIETARY TECHNOLOGY

Years of R & D coupled with custom equipment & proprietary technology gives Westex fabrics superior performance characteristics.

CONSISTENT QUALITY

True quality should be measured over time. For over 20 years the INDURA® guarantee of flame resistance for the life of the garment exemplifies the Westex production expertise.

INDUSTRY LEADERSHIP

Our commitment to the FR clothing market has allowed Westex to lead the industry with innovative new fabric styles & comprehensive technical support.

MARKET-PROVEN PERFORMANCE

With decades of outstanding real-world proven performance and millions of garments in service worldwide, INDURA® Ultra Soft® is truly a proven product.



When It Comes To Safety...The Fabric Brand Matters.



The safety of your employees is too important to let just anyone make the FR fabric decision for you... so specify the FR fabric brand first.

Generic/off-brand fabrics often claim they are "as-good-as" Westex fabrics but our consistent performance just proves there is no substitute for the original...which is why INDURA® Ultra Soft® fabrics are specified by brand name at thousands of End-Users globally.

www.westexinc.com • 866-4-WESTEX

Westex Inc. 2845 West 48th Place • Chicago, IL 60632
773-523-7000 • fax 773-523-0965

 **WESTEX INC.**
A WORLD LEADER IN FLAME RESISTANT FABRICS

will provide real-time analysis by a distributed computing system that will enable predictive rather than reactive responses to blink-of-the-eye disruptions."

A misconception within the electric utility industry is that Smart Grid will gradually evolve from AMI. In reality, AMI is only a piece of the puzzle – and insufficient to address the multitude of issues facing the power system. Utilities' aging workforce may be a legitimate reason to simply install AMI or AMR, but the long-term concern lies with utilities' aging infrastructure. Investing in AMI-only solutions not only is not Smart Grid, but may not even be upgradeable to support a Smart Grid capable of monitoring those assets.

If a utility wants only wants to read meters, then the slow, 28- or 56k-speeds of wireless AMI technology are admittedly adequate. However, the full realization of Smart Grid demands high-speed communication to pass the millions of discreet points within a distribution grid, including enabling real-time distribution asset monitoring; automated fault analysis; advanced consumer-focused demand response programs; and the capability to support and manage home area networks, renewable energy sources, distributed generation, and plug-in hybrid vehicles. If we intend to meet the Department of Energy predictions that Smart Grid will reduce carbon emissions by 25 percent and save \$80 billion in new generation, these components are essential.

While AMI may be an important part, the majority of the benefits reaped from Smart Grid come beyond what occurs at the meter. At CURRENT, we have worked with leading industry consultants on investment models that reveal a Smart Grid solution delivering eight times the net present value of an AMI installation over the standard 17-year lifetime of an AMI program.

And, as CURRENT has shown utilities, customers, and regulators at the world's largest Smart Grid deployment with Oncor in Dallas, and will soon show with Xcel in Boulder, Colo., Smart Grid is a reality now. A true Smart Grid ultimately meets and exceeds the function

of AMI while also improving the efficiency, reliability, and reducing utilities' environmental footprint. CURRENT's solution, thus far, is the proven Smart Grid, offering more Smart Grid functionality than any other solution.

Consequently, due to the high costs of meters and communication modules, deploying narrowband AMI networks ultimately locks utilities and their customers out of actual Smart Grid benefits. Utilities that are looking for the cheapest solution instead of the most cost-effective fail to realize they will be forced to replace the low-speed AMI meters just a few years down the road. Electricity demand and the amount of information that intelligent grids will need to process are growing increasingly more complex, so while a narrowband AMI solution may be the quick-fix option for utilities now, they would make a mistake similar to paying for an analog television because it's the cheapest functional option available.

But like the antiquated rabbit-eared antennas in our living rooms, the days are numbered for settling on low-bandwidth AMI trying to pass as Smart Grid.

Circle 52 on Reader Service Card

World's First Superconductor Transmission Cable System Commissioned

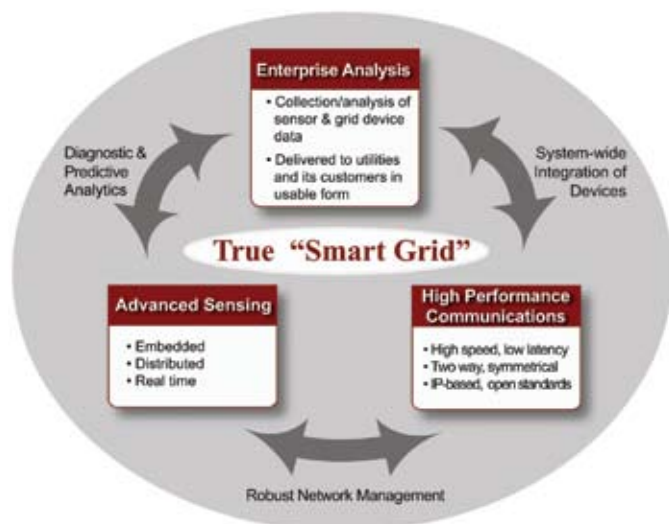
American Superconductor Corp., Long Island Power Authority (LIPA) and the U.S. Department of Energy have commissioned the world's first high-temperature superconductor (HTS) power transmission cable system in a commercial power grid.

The 138,000 volt (138 kV), 2,000-foot HTS cable system includes three phases connected to LIPA's power grid through six outdoor terminations. It was energized on April 22, 2008 at the Holbrook substation on Long Island, New York. The HTS cable system, designed, manufactured and installed by Nexans, utilizes HTS wires produced by AMSC, which is the prime contractor for the project. The liquid nitrogen refrigeration system used to maintain cable cores at cryogenic temperature was manufactured and installed by Air Liquide.

Hair-thin HTS wires conduct 150 times the electricity of similar sized copper wires. Operated at full capacity, the HTS cable system deployed in LIPA's grid is capable of transmitting up to 574 megawatts (MW) of electricity, enough to power 300,000 homes.

LIPA is the third electric utility in the U.S. to have deployed an HTS cable system. At nearly half a mile in length, the LIPA installation is the longest of the three deployments and the first to operate at transmission voltages.

AMSC is also leading the development of an extension of the HTS



GET WHAT'S HOT! HOT SUMMER. COOL DEAL!



Many cameras
available to
choose from!

NOW WITH
FUSION!

CHOOSE AN INFRARED CAMERA...

ORDER BY **SEPTEMBER 30, 2008** & CHOOSE 1 FREE GIFT!



FREE Nikon® 16x50
Action Extreme
Binoculars



FREE EXTECH®
Troubleshooting Kit



FREE Certification
Training OR
FREE FLIR Camera
Calibration

*2nd Gift
Bonus
Offer!*



Order by September 15th & also get
FREE BOSE® QC3 Headphones

Visit goinfrared.com/hotoffer9

CHOOSE A FREE GIFT!

"I'd recommend FLIR for inspecting substations, transmission and distribution lines, and to provide a higher level of customer service with infrared energy audits and home inspections.

Since we've had our infrared program in place, the savings have run well into the millions of dollars."

Barry Bowman
Sumter Electric



"FLIR cameras are durable and dependable. It is a cornerstone of our PDM program. Our FLIR cameras pay for themselves each and every month, and the service and support is just top notch and always helpful."

Scott Alford
Predictive Maintenance Coordinator
Arizona Public Service



 **FLIR**
THE GLOBAL LEADER IN INFRARED CAMERAS

1 800 464 6372
Canada: 1 800 613 0507
goinfrared.com/hotoffer9

cable system which will replace one of the existing phases with a 600-meter-long cable made with the company's proprietary second generation "2G" HTS wire. AMSC will supply approximately 60,000 meters of its 2G HTS wire, known as 344 superconductors, needed to manufacture the cable for this turnkey project. It will also incorporate Secure Super Grids™ technology, a proprietary system-level solution introduced by AMSC in May 2007.

Secure Super Grids utilizes customized 2G HTS wires, HTS power cables and ancillary controls to deliver more power and simultaneously suppress power surges. They also utilize multiple paths for electricity flow to ensure reliability when individual circuits are disrupted. Once completed, the extension will be the world's first transmission-voltage cable system powered by 2G HTS wire.

The DOE is expected to provide AMSC with \$4 million in federal funding for the project. As much as \$5 million in additional DOE



funding may be made available for continued implementation of this two-and-a-half-year project through March 2010.

AMSC is leading a separate project to demonstrate and deploy the first distribution-voltage (13kV) Secure Super Grid solution in the power network of Consolidated Edison in Manhattan.

Circle 53 on Reader Service Card

HD Electric New Cable Identifier

HD Electric Company's NEW PF-50 Cable Identifier identifies the correct phases of de-energized and discharged overhead and underground cables. It consists of a transmitter and receiver that are designed to be hand held with or without gloves or with optional accessory hotsticks. Red LED's on both units indicate that the PF-50 units are connected to the same cable. Maximum cable length is 5,000 feet. Because of its higher test voltage, the PF-50 can test a mile of cable.



Features & Benefits

- Higher test voltage of 50 VDC allows for longer cable lengths to be tested - up to

5,000 feet

- Hand held units identify lengths of cable
- Use in overhead or underground systems
- Identify cables up to 5,000 feet in length
- Compact, lightweight and easy-to-use
- Super bright LED indicators
- Large copper alligator clips with heavy duty boots
- Low battery indicator
- Powered by field replaceable 9V alkaline battery in each unit

Operation

The front panel on the transmitter and receiver units has a green LED for the battery indicator as well as 3 red LED's to indicate that the units are attached to the same cable. Once the cable has been isolated, tested and grounded, connect the ground clips on each unit to a known system ground. After the transmitter and receiver have been turned on, touch the units to each end of the cable to be identified. The red LED's will illuminate to indicate that the PF-50 units are connected to the same cable.

Circle 54 on Reader Service Card

Hastings Introduces New Telescopic Stick

Hastings, Mich., June 2, 2008 - Hastings—worldwide manufacturer of hotline tools and equipment—announces the launch of a new addition to the popular Tel-O-Pole product line.



The revolutionary HV-312 is an updated version of the top-selling HV-208 model. Like the HV-208, the new model consists of five adjustable sections made of lightweight and durable fiberglass that disassembles in seconds for easy maintenance and repair. The HV-312 retracts to 3', extends to 12',

SOLUTIONS

Systems, Services, and Products
for the Protection, Monitoring,
Control, Automation, and Metering
of Utility and Industrial
Electric Power Systems
Worldwide.



**Making Electric Power Safer,
More Reliable, and More Economical®**

Tel: 509.332.1890 • Fax: 509.332.7990
email: info@selinc.com • www.selinc.com/eeo7

A single source that offers a full range of products to fit your specific needs.



Concrete Pole



Muscle Pole™
Narrow Base - Reduced Diameter



Hybrid Pole
Concrete Base and
Steel Upper Section



Steel Pole

Valmont Newmark knows your power delivery structure needs may not be as easy as specifying one type of pole for the entire project. Terrain, environment and soil conditions are all factors when determining the structure that best fits the need. As the nation's premier provider of spun concrete, tubular steel and

hybrid poles, we provide single-source access to a diverse product portfolio. Now you can easily customize line segments with site-specific poles, enhancing economics and total line integrity. Valmont Newmark will help you choose the most efficient structures to deliver power to your customers.



Our 14 locations (including our two newest PennSummit locations) throughout the United States and in Mexico, help facilitate a timely delivery.

valmont 
NEWMARK

Utility Division, Valmont Industries, Inc.
Two Perimeter Park South, Suite 475 West
Birmingham, Alabama 35243
800-533-5103 • Fax: 205-968-7201
www.valmont-newmark.com

Your partner for innovative solutions

and features a redesigned canister that incorporates a snap-on lid secured with a lanyard. A light weight, bucket storage canister is available for both models.

The Tel-O-Poles patented design is ideal for linemen working out of a bucket truck and allows for quick and easy access to a disconnect tool with an additional four feet of length.

For more product information, visit www.hfgrp.com/request_catalog.htm and enter "HV-312" in the comments field.

About the company

Hastings is a world-class manufacturer of fiber glass products and tools for the electrical power and communications industries. Since 1959 Hastings has pioneered design and fabrication of hot line tools to withstand today's toughest field conditions. With a passionate commitment to innovation, Hastings products make the job safer and easier.

For more information, contact Heather Isch of LKF Marketing at 269-349-4440 or 269-349-6128. E-mail: hisch@lkfmarketing.com

Circle 55 on Reader Service Card

Great Leaders ask Great Questions: Twenty Questions to Energize Your Safety Process

By Carl and Deb Potter

Questions – A tool for leaders

Did you ever play the game "Twenty Questions" as a kid? Maybe your mom liked to ask you questions, such as "Where were you?" "Who were you with?" "Do you know what time it is?" Most of us don't like to be hammered with questions, but we do like to give our opinions. Great leaders understand that about people and work to find ways to ask questions that invite input and stimulate dialog. When it comes to safety, leaders can use questions to gain significant insight into the state of the organization.

No Such Thing as a Dumb Question

No questions are dumb, some are just better than others. Creating questions to gain understanding about your organization requires both art and science. They should be open-ended, not lead to a specific answer, encourage the participant to answer honestly and openly, and be directed toward a topic yet not so specific as to allow a one or two word answer. It's important to develop your ability to ask follow-up questions, too. If you've ever watched a TV lawyer (or a real one, for that matter) you've seen this technique in action. The attorney will ask the witness a question, wait for an answer, then follow up with a question, "Then what happened?" You can also learn this technique by watching great talk show interviewers such as Larry King or Oprah Winfrey. They've made their careers on their ability to ask great questions.

Make a List and Check it Twice

Have you ever realized that it was a good idea to ask questions, but you just can't think of any – especially open-ended ones? You're not alone. It happens to all of us. One technique that works is to make a list of open-ended questions and add to it. Keep your list in your daily planner and refer to it frequently. Assess your questions to see if you can improve them or add to them.

Here is a list of twenty questions to get you started. What questions can you add to the list?

1. How safe do you feel doing your job?
2. What do you hear employees say about safety in our company?
3. What is the last safety training course you attended?
4. What do you like best about the safety meetings in your department?
5. What do you expect of me when it comes to safety?
6. What safety policy or rule is the most aggravating to you and why?
7. What is a hazard that you face when doing your job that you think I don't know about?
8. How are you personally involved in the safety process here?
9. What are your safety goals for this year?
10. How do you like to learn about safety incidents?
11. What did you do in the last job briefing?
12. Who is responsible for safety here?
13. What happens when you have a safety concern?
14. How does the company demonstrate that it cares about your personal safety?
15. What else could the company do to show you that we care about safety?
16. When an injury occurs how do employees react in your group?
17. How were you trained to do your job safely?
18. How do you learn about hazards that affect your work?
19. How do you know if you are working safely?
20. If you could change one thing about our safety process, what would it be?

These are just some of the questions you can use to gain insight into your safety management process. Remember, the most important part of the question is the answer you hear, so take time to listen.

Keep Those Questions Coming

Learn all you can about asking good questions by making a list, watching and listening to experts who have mastered the art of inquiry, and continually practice listening. You'll be amazed at what happens when people know you care enough to ask them a question and then take the time to listen to them. You can have a very significant influence on your organization's safety when you use this technique.

Circle 56 on Reader Service Card

Helping Crews Work **SAFER and SMARTER®** For Over 75 Years.



"Our goal is to meet the needs of our customers every day. Following safe work practices ensures that we can do that."

Scott Brewer,
El Paso Electric
El Paso, TX

At Altec, our top priority has always been knowing and understanding the day-to-day needs of linemen. And one requirement that never changes is safety. That's why everything we do, from design and manufacturing to customer service and operator safety training, is aimed at helping our customers provide crews with the safest work environment in the industry. For over 75 years, we've been building equipment that helps you work

"Safer and Smarter®".

Altec Safety Technology

Altec ISO-Grip® with Interlock Guard • Altec SENTRY® Program • Standard Five-Function HOP
Altec Electronic Side Load Protection • Standard Outrigger Interlocks • Altec Rota-Float®
Altec Opti-View® Control Seat • Altec LMAP • Automatic Boom Stow • Fleet Management

For more information, call 1.800.958.2555 or email: sales@altec.com
or visit us on the web: www.altec.com



Circle 2 on Reader Service Card



The Knowledge of Power and the Power of Knowledge

By Bob Gilligan, General Manager, GE Energy-Transmission & Distribution Business

Imagine a future where the lights go out and, thanks to automated detection of the problem, it is corrected before any customer calls. Imagine all utilities having digital wallboards, enabling any office space to be a control center with real-time views of the operations from anywhere in the corporation. This degree of ubiquity and operational efficiency is still some time away, but this is one of the objectives of the smart grid: a grid that will meet the future need for power in a reliable and efficient way, a physically interconnected grid with wires, poles, transformers etc., as well as a grid that is interconnected with a common communications infrastructure including hardware, devices and monitors that are all interoperable.

We live in a world surrounded by digital devices from iPods¹ to Blackberries². We even have smart cable boxes that know when to record our favorite shows. We may inadvertently expect the same to be true for our electric grid. In fact, this is hardly the case today. While some larger utility companies have installed newer supervisory control and data acquisition (SCADA) systems, most are operating with aging and increasingly outdated systems. For instance, when the lights go out in a block or neighborhood, we expect the utility company to be aware of the problem, isolate the cause and quickly mobilize to fix it.

But the reality is that the utility waits for calls from its customers to find out if there is an outage and only then begins to look

for the problem. Aging transformers located throughout the network are subject to failure, but instead of having advanced monitoring or diagnostic devices, most utilities still depend on field personnel to collect oil samples from the transformers, send them to a lab and then, wait several days or even longer for the results – hardly a ‘real time’ assessment of asset condition.

The power industry today still is operating in many ways as it did during the industrial age; one characterized by:

- A large aging fleet of transmission and distribution (T&D) assets.
- Lagging construction of transmissions facilities as compared to new generation.
- Manual intensive outage planning and emergency management, requiring significant, time-consuming coordination between field crews and control-center staff.
- Increasing demand for power by all types of users.
- Growing sensitivity to power quality and reliability due to increased dependence upon electronics and computers.

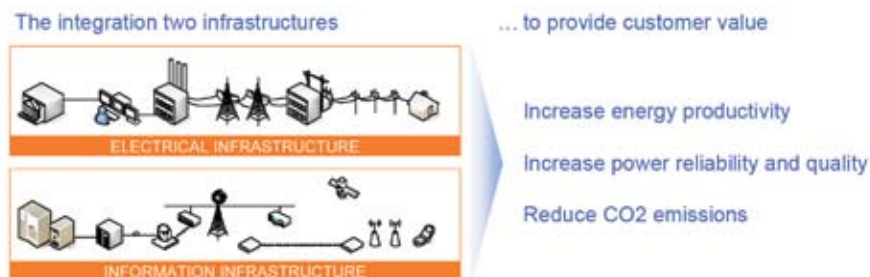
- A highly regulated industry with fragmented federal, state and local regulatory requirements.
- Growing environmental sensitivity to fossil fuel based power generation.

The Smart Grid

The digital revolution changed how consumers use information and allows them to continuously be ‘connected.’ It is now time for that digital revolution to address the electrical system where there is currently an information vacuum from substation operations down to the energy consumer. The smart grid fills the vacuum by overlaying the entire system from power generation to power consumption with a standards-based, integrated information and communications infrastructure. (Refer to Figure 1 – Smart Grid Infrastructures)

A smart grid can better manage electrical power demand down to the residential level, network small-scale distributed energy generation and storage devices, communicate information on operating status and needs, collect information on

Figure 1. Smart Grid Infrastructures



¹ iPod is a registered trademark of Apple Inc.

² Blackberry is a registered trademark of Research in Motion

WE BURN IT AT BOTH ENDS.



THAT MEANS YOU DON'T HAVE TO.

At POWER Engineers, that's what we do best—help you sleep again—and rest assured that your project is getting done and done right. Sure, all projects have risks, but we choose to identify and manage those risks with a proven, project-driven approach. Interested in a challenging career with the leading T&D engineering firm? Check out www.powereng.com/careers.

OVERHEAD TRANSMISSION | SUBSTATIONS

UNDERGROUND TRANSMISSION | ROUTING & SITING

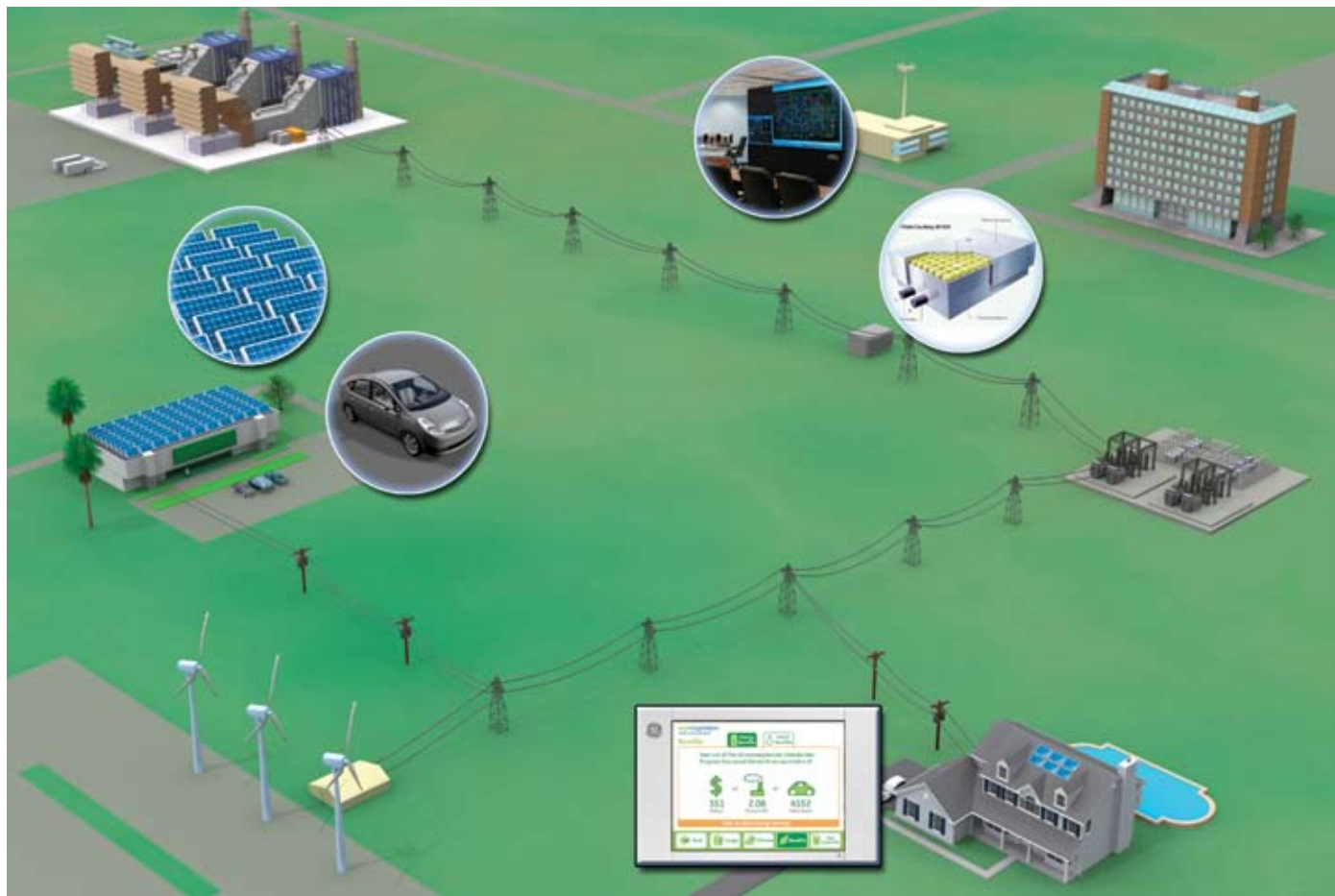
ELECTRICAL SYSTEMS STUDIES | GEOGRAPHIC

INFORMATION SYSTEMS | TESTING & COMMISSIONING

UTILITY AUTOMATION | CONSTRUCTION MANAGEMENT



Figure 2. Smart Grid Building Blocks



prices and grid conditions and move the grid beyond central control to a collaborative network³. (Refer to Figure 2 – Smart Grid Building Blocks)

The smart grid will be composed of numerous automated T&D systems, each operating in a coordinated, efficient and reliable manner. It will be capable of handling emergency conditions with ‘self-healing’ actions and will be responsive to energy market and utility needs. It will serve millions of customers and have an intelligent infrastructure enabling the timely, secure and adaptable information flow needed to provide power to the evolving digital economy. Simply put, the smart grid is going to be ‘intelligent’ and ‘integrated’ from end-to-end, from generation to consumption.

The challenge lies in taking the smart grid from a conceptual blueprint to cost effective implementation. This is not one size fits all.

Each utility and territory will have a unique hierarchy of needs for the various elements of a smart grid. Some utilities might start with advanced meters while others might start with substation monitoring and diagnostics. The key is to gain support for large-scale demonstration projects to solve real problems and validate benefits.

This requires a cooperative effort between utilities, technology providers and regulators to fund and implement these projects. American Electric Power (AEP) has already taken a step in that direction by partnering with GE Energy, a business unit of General Electric, to pursue the development, integration and deployment of advanced energy delivery infrastructure and metering technologies. GE Energy is aligning its efforts with AEP to define operator and consumer benefits and attain regulatory support for their implementation plans.

Benefits to the Utilities

The integrated smart grid is going to provide many short-term and long-term benefits to the utilities. Together with better returns on investments (ROIs), and increased revenues in the long run, there are going to be many intangible benefits that cannot be measured in absolutes, like greater job satisfaction and improved customer relations. However, the core benefits to a utility are significant, as summarized below:⁴

Operational Efficiency

Through complete integration of the system, all assets and resources of the utility can be managed more efficiently. The T&D systems will provide a real-time view of operations and will be able to detect and correct problems at very early stages, thereby avoiding costly power interruptions.

³ Grid 2030 – A National Vision For Electricity's Second 100 Years – US Department of Energy

⁴ Mazza, Patrick, “The Smart Energy Network: Electricity's Third Great Revolution,” c. 2003



Try this once, and you'll believe.

The next generation in cable injection. All the benefits of cable injection with none of the first-generation limitations.

Proven. The best solution for aging cables.

In just two years, Novinium® technology has proven itself to utilities all over the world. It's significantly easier to install than other cable injection methods, with no soak tanks, and less craft labor. Novinium technology is safer. Non-flammable. More cost effective. And, results have shown, Novinium technology simply works better.

Better Than Cable Replacement. We Guarantee it.

Give us a project, and we'll show you the future.

References, and successes, count. But until you've tried Novinium technology, it's hard to appreciate how superior, easy, and simple our approach really is. We invite you to call, and share your next cable rehabilitation project with us. Let us do an evaluation, and tailor a Novinium solution for you.

This is what
Second Generation
Cable Injection
looks like.



The best utilities embrace the very latest in cable injection technology. See Novinium case studies at: www.novinium.com/casestudies.aspx

Safer. Faster. Better.

novinium
cable life extension



www.novinium.com PHONE 206.529.4828

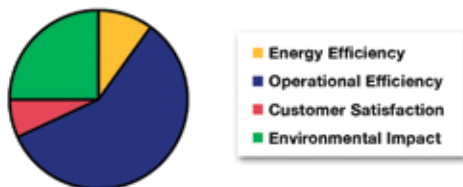
Novinium® is a registered trademark of Novinium, Inc.
The Novinium® process includes patented and patent pending technologies.

Environmental Impact

Utilities will be able to manage peak load times by leveraging information coming from meters; thus, facilitating better use of distributed energy resources and demand side management. The integrated grid also will reduce field trips by crews by automating detection and switching actions, quickly reducing the outage size and helping to return the grid to service with fewer dispatched vehicles.

Energy Efficiency

Smarter energy usage data management will enable more optimal use of existing assets, improving the rate of return on capital investment and lowering utility operating costs.



Customer Satisfaction

A 'smarter grid' will enable power to be restored with minimal downtime and enable customers to receive timely updates on the status. Customers will be 'connected' to the utility through home area networks and will get a more complete breakdown of their energy usage, allowing them to operate certain appliances at times when electric rates are lower and optimizing their overall energy utilization.

The Building Blocks of the Smart Grid

The smart grid is not going to happen overnight. The various elements of the smart grid will be implemented over time to meet the changing needs of each utility. The building blocks of the Smart Grid are going to be:

Advanced Metering

Currently, most existing meters simply report the aggregated consumption of power by the customer over a specific time period – usually about 30 days. However, with smart meters fitted with two-way communications, the

utility will know consumption patterns down to each individual household, commercial or industrial customer level, and interval readings – as frequently as every 15 minutes or less – are also possible. The inclusion of smart meters in the networked smart grid will enable the utilities to know how to manage load at any given time. The meters also will allow utilities to:

- Connect or disconnect power remotely
- Read the meters remotely and accurately
- Report time-of-use data and send real-time pricing signals, so the customers can make smart energy choices on an informed basis
- Provide additional competitive power offerings like broadband over power lines (BPL) and home area network (HAN) capabilities
- Encourage consumers to reduce power consumption during peak load times

Utility Enterprise Asset Management

The power industry is a capital-intensive industry, with expensive equipment. To squeeze the ultimate performance from its myriad vital assets, many utilities employ enterprise asset management (EAM), which focuses on achieving the business benefits of lowering the lifecycle costs of physical assets. EAM also improves asset utilization and ROI by increasing the effectiveness of capital investments and operation and maintenance work planning.

In the smart grid environment, custom legacy IT systems will be replaced over time by modern EAM systems built on open-standard platforms and conforming to interoperability standards, reducing implementation and maintenance costs. These systems will share information on each asset, down to recording the historical cost of maintaining and operating these assets and enabling the utilities to maximize ROI for the assets. Moreover, the geospatial applications of the EAM will allow utilities to optimize the geographic location of assets and provide service crews with more efficient access to the assets as well as reducing travel time and costs.

Distributed Operations and Automation

Distribution management systems (DMS) and associated SCADA systems will have

a more comprehensive visualization of the entire system, integrating all relevant network information from various sources in a dynamic system topology model. They will also have the self-healing functionality to instantly detect and react to power disturbances with minimal customer impact.

SCADA systems will have monitors or sensors built with real-time data acquisition capabilities to capture and analyze voltage sags and swells, high frequency impulses, transients, and various other power distortions. Fault detection, isolation and recovery and volt/VAR management by switching in capacitors and voltage regulators can be managed remotely, enabling timely action to minimize down time and improving the quality of service.

These improvements would, in turn, result in less coordination with field crews to manually operate switching actions, thereby reducing the number of vehicles on the road and lowering harmful emission levels. Field crews will be directed to the specific problem area with a preliminary diagnosis and the appropriate resources to complete the repair in a single trip. Over time, the first generation of trouble call type outage management systems (OMS) will gradually give way to smart grid DMS/OMS platforms that are linked to the advanced metering infrastructure (AMI).

The smart grid will have a combination of a centralized strategy complemented by a local strategy. Distribution operations software would control the overall system and set the parameters at the grid level, and the substation controllers – along with distribution controllers – would contain a sufficient level of control logic to support the overall grid control scheme.

Substation Automation

In the smart grid, automated substations provide capabilities that have been unavailable in traditional substations to link in new, smart information and control technologies. Power saving and energy efficiency can be realized by installing voltage control technology that improves overall

A graphic showing a globe with glowing red lines representing data or energy flow, set against a background of a world map with a grid overlay.

smart grid. smart planet.™

actionable intelligence / integrated advanced sensing / enterprise analysis / high-speed two-way communication / non-proprietary, flexible, open IP architecture / ubiquitous in-home network support / distributed generation real-time smart metering and demand response / underground fault detection / transformer monitoring / substation management / support for renewables / **smart grid is now, smart grid is CURRENT®**

More information on the CURRENT Smart Grid™ Solution can be obtained at www.currentgroup.com or by calling +1(301) 944-2700.

currentgroup.com

substation efficiency. Automated substations will have inter-device communication, interoperability and early alarm notification systems. Sensors will monitor transformers (e.g., temperature, moisture, gases, etc.), relays, digital fault recorders, breakers and station batteries to ensure all are working efficiently. A single automation platform will perform the roles of security gateway, SCADA, data concentrator, hardwired I/O, sequence control logic, communication processor, port switch, protocol converter, sequence-of-events (SOE) recorder, alarm annunciator, local data warehouse and substation human machine interface (HMI).

Systems Integration: Unlike the traditional grid, the smart grid will need to be built on an enterprise service bus (ESB), which is a distributed, message-based integration solution based on open standards. The role of an ESB is to facilitate reliable communications between IT resources such as applications,

platforms and services that are distributed in multiple systems throughout a utility enterprise. It provides foundational services for complex architectures, is event driven and incorporates a standards-based messaging system and also allows IT personnel to exploit the value of messaging without writing code.

The (Obvious) Future

The smart grid is no longer just a concept. A number of utilities have initiated pilots or large-scale demonstration projects of various smart grid solutions. A common factor for all of them is recognition that successful programs require significant business process change in addition to technical program execution. This is about changing the way utilities operate and the way they interact with their consumers. The smart grid requires utilities to:

- Adopt a top-down strategy that is comprehensive and includes the entire system and operations instead of looking at

individual functions in isolation.

- Commit significant budgets and leadership talent to smart grid projects.
- Bridge the gap between IT and operations.
- Adopt industry standards-based systems with demonstrated interoperability, to ensure easy sharing of information across the enterprise.

The future smart grid is going to be a fully integrated system from generation to consumption. The smart meters will provide constant status updates at the point of use, and utilities will be immediately aware of potential disruptions or other issues, vastly improving overall reliability. Customers will call only to report dangerous conditions and obtain estimated restoration time. There will be proactive monitoring of networks to avoid outages and incidents and self-healing restoration tools to provide dramatic reductions in customer outage durations.

Automated advanced distribution infrastructure and outage management system (ADI/OMS) integration will significantly reduce the field trips required to investigate 'single customer' outages. The net result will be a better understanding of the state of customers and the ability to analyze and overall grid health and operational reliability and stability at any point in time.

About the Author

Bob Gilligan is the General Manager for GE Energy's transmission and distribution business. In this role he is responsible for delivering integrated network reliability solutions to the T&D, Oil & Gas and Telecom sectors. The business includes a diverse group of products and services including intelligent electronic devices, meters, transformers, GIS software, distribution management systems software and energy management systems software. He was appointed to his current position in January 2004. ■

wire
SERVICES

Airborne LiDAR Data Solutions

- Thermal Rating Analysis
- Vegetation Management
- Digital Imagery & Video
- Upgrade Engineering

www.wireservices.ca

Manitotha Hydro POWERED BY A TRADITION YOU CAN TRUST LSI LiDAR Services International Inc.

Are you a UTILITY of the FUTURE?

We can help you get there...

Open Systems International, Inc. Worldwide supplier of the most open, modern and flexible SCADA,
Energy Management, Distribution Management, Generation Management and Substation Automation Systems.
www.osii.com

OSI



Chris Warrington

The 2008 Automation/IT Leadership Series

By Michael A. Marullo, Automation/IT Editor



Fiona Taylor

First Data Utilities

Chris Warrington, President/CEO

Fiona Taylor, Vice President

Whereas in the past much of the focus of this interview series has been on the automation side of the Automation/IT equation, in this installment we move squarely into the information technology domain. In May, I spent four sizzling days on the Riverwalk in San Antonio at the CS Week Conference. It was 98 degrees the day I arrived with temperatures hovering around the 100-degree mark for the rest of the week. But it wasn't just outside where things were hot. Inside the convention center, the CS Week Conference team put on another stellar event with over 1,500 attendees and 116 exhibitors showing their latest solutions for this once again vibrant part of the automation/IT marketplace.

Among the most prominent exhibitors at the show was First Data Utilities, an acknowledged global leader in Customer Information Systems. During the course of the conference I was privileged to meet with FDU senior management to discuss how the CIS business has changed since their acquisition of Peace Software in 2006 and how they see the future unfolding as utilities wrestle with converting unprecedented amounts of data into useful, accurate and timely information. I trust you'll find the comments shared here by Chris and Fiona to be every bit as interesting and insightful as I did.

– Mike Marullo, Automation/IT Editor

EET&D: Chris, I understand that you've fairly recently taken the helm of First Data Utilities. Maybe you could start by sharing some of your impressions about customer service markets and where you see FDU heading under your leadership and guidance.

Warrington: When I took the lead at First Data Utilities, I immediately set about the task of reinventing CIS for utilities. One of the most significant issues we identified is that utilities continue to suffer from the traditional model of installing an expensive, complex, large monolithic CIS application and either to manage an aging legacy system or embarking on expensive and risky upgrades every few years – a model that has not dramatically changed in the last 10 years. Among my first official acts in this new role was the initiation of a product strategy team, headed by Fiona

Taylor, whose primary goal it was to change the balance of that equation.

On the back of our latest release, *PeaceX CIS*, we will continue to invest heavily into innovation and development of our CIS and constantly strive to find new ways to reinvent CIS for utilities. Fundamentally, First Data Utilities is about changing the traditional view of the CIS, providing an option to the way customer information systems are deployed and maintained and thereby reducing the cost to serve.

EET&D: The CIS market seems to be on the move again lately, yet the level of project activity – especially among large utility enterprises – has remained relatively flat over the past few years. Is there anything on the horizon that you see changing the status quo?

Warrington: With investments in Smart Grid Initiatives and Advanced Metering Infrastructure projects growing steadily year-over-year, utilities are on the verge of perhaps the most significant business change in decades. To further complicate matters, utilities face the simultaneous challenges of inflexible legacy CIS systems compounded by an aging workforce.

Moreover, while modern CIS software products offer significant advantages over previous generations of software technology, CIS replacement and upgrade costs remain as high as ever. This high cost has proven to be a major barrier for developing sound business cases, particularly when capital expenditure is competing with other critical grid-centric investments. However, we see some major trends that have converged to offer utilities a



Complete Structure Solutions

Another Meyer Advantage

While your project is in its infancy stage, talk to T&B. We can help you evaluate the correct structure for the project. Whether the solution is tubular, lattice or a combination of both.

Our early involvement in your transmission projects means more opportunity for including new ideas that are designed to help reduce total installed transmission project costs.

LET'S MAKE IT HAPPEN.SM



www.meyersteelstructures.com

ISO 9001:2000 CERTIFIED

Thomas & Betts

Thomas & Betts Corporation
Steel Structures Division
8155 T&B Blvd
Memphis, TN 38125
877 2TB-MEYER
Canada 905-858-2525

www.tnb.com

new solution that will help to readdress CIS the cost/value equation.

EET&D: You can probably easily guess my next question: What are some of the trends that are driving this resurgence?

Warrington: Clearly there are a lot of forces in play, and there will be more as utilities move forward with reinventing themselves in a drastically different business and market environment than was the case only a few years ago. But, since we can't possibly cover all of the forces at work in this complex market, I'd like to briefly address some specific trends that we feel are particularly significant from a customer service and information technology perspective.

EET&D: It sounds like we're about to cover quite a lot of ground, so let's take them one at a time. Then perhaps Fiona can chime in on some of the more technological dimensions since I understand that she has been at the helm of your development response.

Warrington: Okay, but first we need to briefly discuss the risk issues. Vintage CIS systems are inherently risky because they usually rely on inflexible, inefficient technology that often proves difficult to manage and maintain when it comes to things like interfaces, new products and new applications. Some utilities address these requirements by commissioning additional customizations to their existing systems; however, this just further complicates maintenance

and upgrades as utilities are driven further and further into a custom solution.

Naturally, the cost of maintaining significant customization and outdated code also increases as the technology ages, and the retirement of specialist programmers and support employees for legacy applications further increases the risk of managing these complex systems. A strategy employed by some utilities involves adding bolt-on products to the legacy platform. This addresses a short-term need but further adds to the already complex web of point-to-point and custom integration.

EET&D: So, isn't this the ultimate justification for replacement?

Warrington: While at first it might seem like the business case for replacement would be clear, there is still a significant barrier that utilities need to overcome, which involves the proper estimation of upgrade implementation costs. As both hardware and CIS software costs have declined substantially over the past decade, implementation costs have not. Keep in mind that implementation relates not just to the initial installation but also to each subsequent upgrade. This means that unless carefully managed, upgrades can prove to be just as costly, risky and time consuming as an entirely new implementation.

EET&D: Assuming that utilities eventually adopt that approach – that is, the beneficial outcome of making a significant investment in new technology – how will they justify the huge up front cost?

Warrington: To address the challenge of justifying the expense associated with a traditional CIS implementation, utilities can take advantage of the convergence of four major trends: User Interface Advances, Business Process Optimization, Componentization and Service-orientation. Fiona, why don't you go ahead and take this first one?

Taylor: First, it's important to understand that software usability for a utility CIS perspective is the ease with which front line customer service representatives and back office billing and collections personnel can access, comprehend and enter information on their computer screens. Beyond aesthetics, the benefits of employing software usability engineering include faster training, higher productivity, enhanced error prevention and detection, and improved customer satisfaction – all of which contribute to a utility's bottom line through operational cost savings.

While these benefits might drive the motivation to replace a legacy CIS, even a well designed user interface can require significant redevelopment as utility business processes change. By separating out the optimized user experience from business logic layers via service-oriented architecture (SOA), the user interface can be oriented according to user experience and business process.

The New JIFFY LOCK

The JIFFY LOCK from **INNER-TITE**
is the most secure clamp-on ringless locking device you
can buy...and now it has more features than ever!

FEATURING

PATENTED PRELOAD TECHNOLOGY
for quick, keyless installation.
U.S. PATENT 6,684,670

INTEGRATED PERMANENT SEALING TAB
the most secure sealing provision available.
U.S. PATENT PENDING

NEW CLAMP DESIGN
Strong UNIVERSAL CLAMP
secures to the SIDE or BOTTOM
of most RINGLESS METER
SOCKETS without punching
a hole. U.S. PATENT 6,763,691.
OTHER PATENTS PENDING.



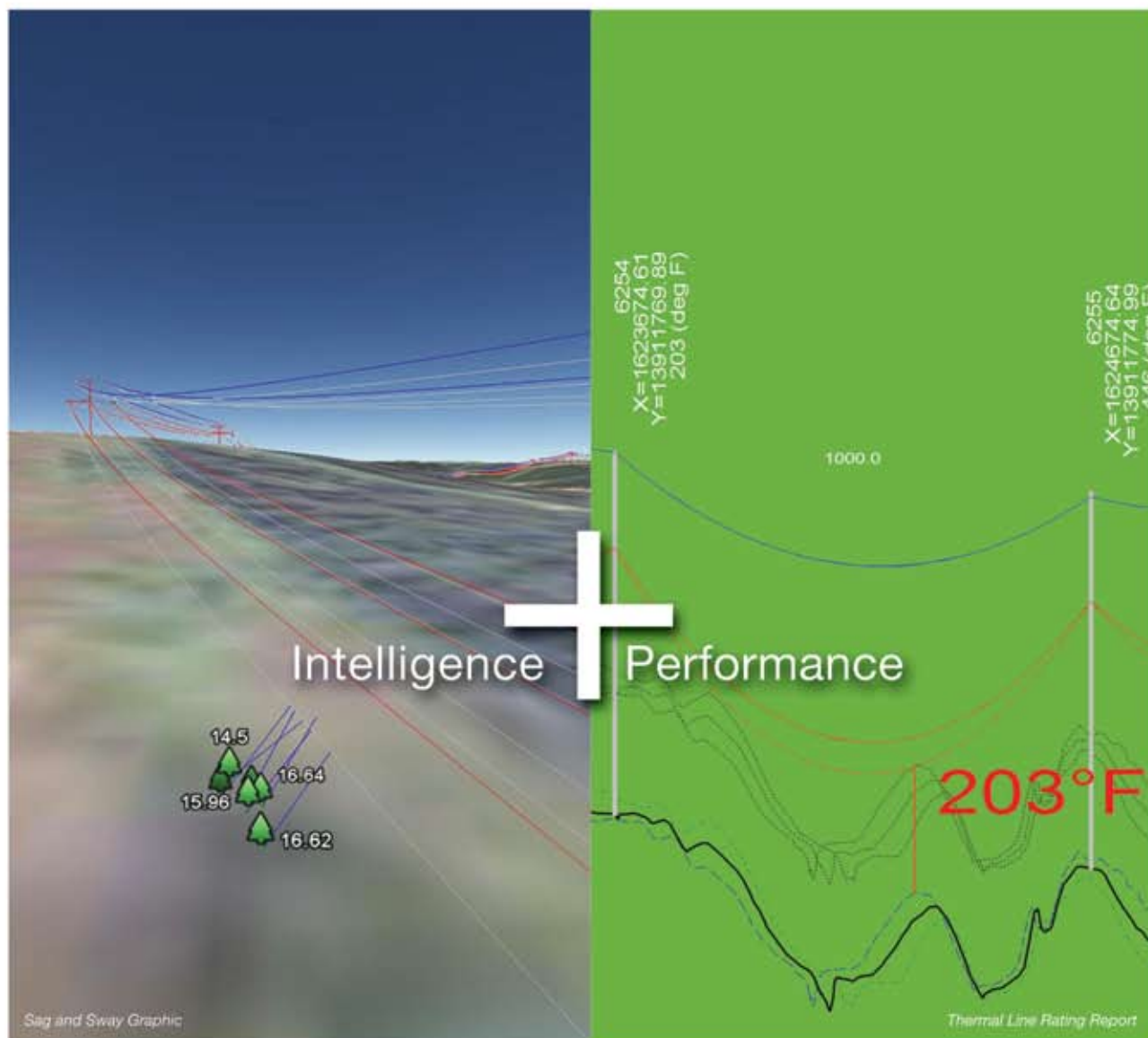
PROUDLY MADE IN THE USA 

Call 508-829-6361
for more information
or to request a sample.

INNER-TITE
110 Industrial Drive
Holden, Massachusetts 01520
www.inner-tite.com
security@inner-tite.com



INSTALLS WITHOUT A KEY OR TOOLS!



Optimizing infrastructure for operational excellence. As energy demand continues to increase, utility managers are under greater pressure to deliver more value from their current assets. URM, through an exclusive partnership with ArborMetrics Solutions, can help you achieve these goals. Our turnkey vegetation management solutions are designed to improve operational performance, enhance compliance, and increase the value of your current transmission assets.

And now, we're uniquely positioned to improve a utility's engineering with state-of-the-art Thermal Line Rating and Sag and Sway Analyses. Through a strategic alliance with Power Line Systems, utility managers can use industry standard PLS-CADD software to gain deep management insight into their T&D infrastructure in order to:

- Fully comply with new NERC requirements.
- Model and evaluate risks, loads and capacity using sophisticated 3-D modeling of conductors and vegetation for weather, temperature, and sag and sway.
- Reduce the chance of outages through simulations that identify threats and risks to improve decision-making.
- Unlock the power of the grid to maximize electric throughput and make informed decisions on how to invest in infrastructure improvements.

Call us at **1-866-931-8762** for a free demonstration.

U | R | M | C
utilityrisk.com

ArborMetrics
Solutions, Inc.

arbormetricssolutions.com

This separation allows utilities more powerful user-driven configurability and dynamic screens that minimize the need for code changes when generating an updated user interface. This service orientation also provides for a composite approach, enabling a single user interface to more easily incorporate services from multiple applications while further expanding and enhancing the value of the CIS across the enterprise.

EET&D: During our initial discussions in San Antonio we talked about the importance of re-tooling business processes as an important step toward improving the operational efficiency of the utility. Perhaps you could share some examples of specific steps utilities can take to realize those improvements with our readers...

Warrington: Given that a leading cause of CIS project failure is significant modification and customizations, standardized business processes and preconfigured environments are designed to minimize customization to reduce the cost, risk and time of software implementation and operation. This not only reduces the initial replacement barrier, but also addresses subsequent upgrades.

In answer to your question, business process standardization also offers ongoing benefits. Best practice processes are designed to maximize the potential of CIS automation and functionality, which leads to improved efficiency and ultimately, cost savings. Moreover, by standardizing processes that are common across utilities, resources can be focused on improving and developing business processes that truly differentiate.

These benefits of business process standardization are further enhanced through the use of SOA technologies and methods. Separating the business process layer from other application layers facilitates the user configuration of a CIS with a business process focus, rather than focusing solely on functional capabilities.

Although companies in every industry believe that what they do is unique, there are core similarities. Adopting standardized business processes provides major benefits at virtually all operational stages and processes.

EET&D: Before we tackle “componentization” perhaps you should define exactly what you mean by that term.

Taylor: CIS systems have been marketed as being “componentized” for some time. These so called components were primarily conceptual delineations for breaking down the broad application footprint of a CIS into individual functional modules. Some may also refer to it as modularity, but underneath the hood, the CIS was still a monolithic ‘black box’ that required significant effort, cost and time to replace and upgrade.

Service-oriented componentization at both the business and architecture level spells the end of the large, disruptive upgrades and replacements. Instead, modern CIS architecture allows utilities to take advantage of more frequent and less-disruptive component-based improvements and upgrades. This strategy also allows options for phased conversion of legacy systems, reducing the business risk associated with legacy system replacement.

EET&D: We hear the term SOA quite a bit these days, especially in the context of CIS. What do you see as the role of SOA in next-generation CIS designs?

Taylor: While the benefits of utilizing Service-Oriented Architecture (SOA) and ‘web-wrappers’ as a way to improve integration have been well publicized, the true benefits of SOA are still not fully understood. Perhaps the single biggest driver towards SOA has been its possibilities for integration.

While the ‘web-wrapper’ strategies of many CIS applications have been successful, a CIS fully re-architected using SOA will allow utilities to maximize the value of enterprise-wide IT systems through interoperability that leverages valuable functionality across many applications. This means that in addition to improved integration, other enterprise software incorporating SOA or web services will be able to call functionality from the CIS as required, and vice-versa; thus, improving the value of CIS across the enterprise.

EET&D: What does all of this say about your ongoing role in the marketplace? Should we

be expecting more big moves like the Peace acquisition?

Warrington: Peace has always been, and will continue to be, a trendsetter. For example, we are widely credited as being the first to pioneer the browser user interface for utility CIS. With PeaceX, Peace is once again delivering innovation. This latest version is designed to take advantage of Service-Oriented Architecture, User Interface re-engineering and optimized business processes.

Taylor: From a technology perspective, we employ leading new technologies such as Google Web Toolkit, Java Server Faces and AJAX, to deploy the best user experience possible for large-scale, browser-based systems. Users will also be able to take advantage of the First Data Utilities Optimized Business Process suite. These business processes are driven by market driven requirements based on twenty years of utility experience. They have been reviewed by leading utilities and industry experts, and optimized at a functional level for the CIS. The business process suite reduces the cost, risk and time of CIS replacement, and improves ongoing efficiency.

The convergence of these trends enables utilities to readdress the business case for CIS replacement within any of three deployment models: licensed for installation at a utility's own facility; deployed using managed services, which allows utility IT teams to focus on issues other than the day-to-day management of the CIS; or in the service-with-software outsourcing model which includes implementation, application management, and regular upgrades for a predictable cost.

EET&D: Fiona, Chris; thank you both for sharing your time and insights with our readers. It will certainly be interesting to see which of these models – if any – becomes the CIS platform of choice in the years ahead. With so many changes going on in the industry from both a staffing and operational standpoint, it will be hard to predict, but you seem to have all the bases covered, whatever turns the market might take. ■



State Game Lands 33 Research and Demonstration Area: 55 Years of Integrated Vegetation Management at Work

By Jim Orr, Vice President, Technical Services, Asplundh Tree Expert Co.

In 1953, a five-year herbicide research project was initiated that has managed to maintain its relevance for more than five decades. Several partners embarked on this journey, including Pennsylvania Electric Company (now FirstEnergy Corp.), the Pennsylvania Game Commission, Penn State University's School of Forestry and Conservation, DuPont (no longer involved), Amchem (now Dow AgroSciences) and Asplundh Tree Expert Co.

If this does not seem important, consider that the nation's electric utilities' rights-of-way (ROWs) equal an area the size of New England. That's a great deal of land – and vegetation – to manage. Fifty-five years ago, they were seeking scientific validation of whether herbicides were a safe and effective way to manage vegetation along electric utilities' power lines, or ROWs. They knew then that encroachment of trees and other vegetation on power lines posed a threat to the reliable delivery of electricity. This partnership wanted to make sure that utilities had every possible tool to manage their ROWs. This still stands true today -- perhaps more so, due to new FERC regulations regarding vegetation management on transmission lines.

Traditional methods in the late 1940s and 50s were labor intensive. Manpower was employed, using brush scythes, hand axes and cross-cut saws. Keeping vegetation away from power lines was expensive, dangerous and arduous work.

Seeking more cost-effective and safer methods, Asplundh began using some of

the new herbicides being developed by the post-war chemical industry. While vegetation management using herbicides was appealing in terms of labor and cost, there were many people with concerns about its potential impact on the environment. Hunters and sportsmen, bird-watchers and gardeners, farmers and utility personnel would have to be convinced.



In 1955, two years after the research project began, invited guests and members of the cooperating companies and agencies gathered on the Game Lands 33 ROW to tour the demonstration plots and review the initial data on herbicide use and wildlife.

There were concerns about the potential for "drift" and the volatility of the products, as well as harmful effects the chemicals might have on wildlife and livestock. Even some utility companies expressed their concern, forbidding the use of what they referred to as "poisons" in some ROW clearance contracts.

A means to test the environmental effects of ROW maintenance methods was clearly needed. With so much hinging on the results, the testing needed to be scientific with credible results. Dr. William Bramble,



In June 2008, members of the Utility Arborist Association and other participants, totalling over 140, broke into smaller groups to view the Game Lands 33 demonstration plots and receive the latest data gathered.

then of Penn State's School of Forestry and Conservation, was approached by Ralph Kaufman and Hyland Johns of Asplundh along with Bob Beatty and Bill Allen of Amchem. He consented to take up the challenge.

Pennsylvania Electric Company offered the use of a one-year old, newly cleared two-mile stretch of 230kV ROW, which crossed the Pennsylvania State Game Lands 33. DuPont and Amchem supplied the herbicides (Dow AgroSciences took up this role in 1986). Asplundh Tree Expert Co. supplied funding, equipment, tools, manpower, and ROW management expertise.

Under the guidance of Dr. Bramble and his then graduate student Dr. Richard Byrnes, multiple methods of vegetation management would be evaluated side by side. Manual (and later, mechanical) brush cutting would be compared to the use of herbicides. Different types of herbicides and various means of application would also be evaluated. The data was expected to yield valuable insight

into the efficacy, cost, efficiency and safety of each vegetation management method, as well as the environmental impact.

The data that was — and still is — generated was vital and practical. The Game Lands 33 project continues to produce new and valuable research results, and is still regularly toured by vegetation management professionals, environmentalists, foresters, policy makers and students. On June 25, 2008, the Utility Arborist Association hosted a gathering at the Game Lands.

“The tour of the Game Lands 33 research project was a huge success, bringing together over 140 utility industry peers, as well as state and local land management agencies,” said Rebecca Spach, Director of Vegetation Management for FirstEnergy. “The advantage of doing a tour is seeing and actually experiencing the bio-diversity in plant communities and secondary benefits to wildlife that utility integrated vegetation

management practices cultivate, while still meeting the objective of maintaining safe and reliable operation of the bulk transmission system.”

FirstEnergy utilizes the valuable research results this 55-year project has provided and is proud to be one of the many partners.



A tour of the State Game Lands 33 Research and Demonstration Area was part of a recent conference hosted by the Utility Arborist Association. Hyland Johns (left), retired Asplundh Senior Vice President and an originator of the 55-year-old project, is shown here with Rebecca Spach (center), Director of Vegetation Management for FirstEnergy, and Randall H. Miller (right), Director of Vegetation Management for PacifiCorp. One of the transmission lines that Rebecca is responsible for runs through Game Lands 33 and Randall gave a presentation on the ISA's recent **Best Management Practices: Integrated Vegetation Management**, which uses research gathered from this ongoing project.

taking advantage of the cleared ground and were thriving. Furthermore, the plant and animal communities themselves were shown to be unknowing helpers in resisting the invasion of unwanted woody plants — through plant competition and by animal feeding behaviors.

“The area contains an impressive array of species of plants, numbering at least 120, and relatively unknown wildlife, such as about 30 kinds of butterflies, numerous birds, mammals, amphibians, and reptiles,” says Dr. Richard Yahner, Professor of Wildlife Conservation at Penn State University, who carries on the research today.

There was another added benefit to vegetation management with herbicides — safety. With the manual and mechanical methods of clearing ROWs, so many sharp edged tools, even in the hands of a well-trained workforce, were bound to lead to injuries. And they did. Herbicides, applied properly, eliminated many of the personal injuries in ROW clearance.



Past worries about the impact of herbicides on the wildlife around Gamelands 33 were proven quite unfounded when a bear and her cub showed up at the UAA conference to sample the blueberries (while everyone else used their Blackberries).

Intriguing Results

Fifty-five years of this ‘five-year’ project have yielded some fascinating results. The conservationists’ and sportsmen’s concerns about the harmful impact that herbicides might have on the flora and fauna on or near the ROW proved unfounded. In fact, the data showed a positive impact. While meeting the objective of keeping trees away from the power lines on the right-of-way, vegetation management with herbicides actually created a habitat in which plants and animals flourished.

The reason for this is that herbicides applied on the ROW target woody plants like trees. The resulting shrubs, grasses and wildflowers supply food and shelter not found in the dense forests for a wide range of animals. The study found that deer, small mammals, birds, reptiles, and even butterflies — considered a true test of environmental impact — were

Additionally, the project has encouraged the evolution of both herbicides and their delivery methods. Compared to the first attempts of the late 40s, herbicide application has become a fine art, its techniques practiced and honed at Game Lands 33. Lower and lower volumes of herbicides have been tested, yielding effective results. Precisely prescribed treatment methods ensure optimal performance with reduced expense and environmental impact.



- Transformers
- Generators
- Switchgear
- Turbines
- Circuit Breakers
- Motors
- Control Panels
- Boilers
- Complete Substations
- Complete Power Plants

P: 610.515.8775 F: 610.258.1230
2200 Northwood Avenue, Easton, PA 18045
sales@belyeapower.com

www.belyeapower.com

The project has shown the entire nation a better way to manage vegetation on ROWs. The more than 200 published papers (written by Drs. Bramble, Byrnes and most recently, Richard Yahner) have proven to be a valuable resource to the vegetation management industry. The Game Lands 33 Project has become a successful example for ROW maintenance everywhere.

"Progressive utilities throughout North America and the world are benefiting from applying integrated vegetation management best management practices on their rights-of-way to improve safety and comply with requirements such as the North American Electric Reliability Corporation's vegetation standard," says Randall H. Miller, Director of Vegetation Management for PacifiCorp and author of the ISA's recent *Best Management Practices: Integrated Vegetation Management*. "Ultimately, they are working with nature rather than against it, effectively reducing risk and saving money, while creating havens for many types of animals, including songbirds, butterflies, reptiles and other creatures. That is the legacy of the 55 years of research at Game Lands 33, with more benefits to come as the study continues."

As retired Asplundh Senior Vice President Hyland Johns noted, "Things are changing. There are changes in herbicides, equipment, and plant succession. We need to continue to study all our ecosystems. Not only does nature change, but so do the people that deal with vegetation management. There are those who do not know about Game Lands 33 and we need to make sure this knowledge is passed on and used."

Additionally, the industry acknowledges that similar projects need to be established in different geographical regions and different ecosystems to "fine tune" best practices for specific locations. In doing so, Game Lands 33 will surely serve as a baseline and model for future research.


There are approximately a million miles of electric transmission right-of-way in North America, and that's in addition to highways, railroads, pipelines and other rights-of-way. With this tremendously valuable resource of open space available for multiple-use, the Game Lands 33 research clearly shows that it can be managed (and not just 'maintained') for the benefit of people and wildlife in perpetuity for future generations. ■

About the Author

James W. Orr is currently the Vice President, Technical Services – Vegetation Management for the Asplundh Tree Expert Co. and is responsible for coordinating technical information on line clearance, trees and vegetation management for Asplundh field personnel and utility customers.


THE POWER OF PHENIX:

The Power of Performance




PHENIX


TECHNOLOGIES




DC Hipots




Liquid Dielectric Test Set



Recloser Test Sets



AC Hipots



100A Digital Microhmmeter

- PORTABLE
- GIS
- SWITCHGEAR
- GENERATOR
- CIRCUIT BREAKER
- TRANSFORMER
- RECLOSER
- CABLE
- MOTOR
- INSULATION MATERIALS

Manufacturer & Global Supplier for:

- Electrical Utilities
- Manufacturers
- Transformer Repair
- Service Contractors
- Electrical Apparatus Repair

- Electrical Equipment
- Transformer Manufacturers
- Cable Manufacturers
- Quality Control Areas

ISO 9001



www.PhenixTech.com

+1 301.746.8118

75 Spelcher Drive, Accident, MD 21520 USA

HIGH VOLTAGE
HIGH CURRENT
HIGH POWER



Storm and Hurricane Preparedness

Florida Power & Lights' Efforts to Stay One Step Ahead of Mother Nature

By Rich Wilson, DTN/Meteorlogix

Mike Biichle, Florida Power & Light Company



Weather, particularly severe weather, can substantially impact the operations of utility companies. Lightning can strike substations; high winds can bring down power lines; ice can snap lines; and hurricanes can prove to be catastrophic. All of these have the potential to leave many tens of thousands of customers without power.

In the power industry, utility companies are defined by their ability to provide uninterrupted service. And in the case of catastrophic weather, they are remembered for how quickly they can react and respond to restore power. To quickly re-coup power after a disastrous weather event, such as severe thunderstorms and hurricanes, power companies need accurate and strategic weather information that enable them to make informed business decisions.

The 'lightning capital' of the United States

Surrounded on three sides by water, with a propensity to experience differential heating during the day, Florida experiences tropical-like weather conditions. Due to its unique geographical footprint, the state of Florida is conducive to receiving more lightning strikes than any other state. Central Florida even carries the nickname, "lightning capital" of the United States, with July being the most active period for lightning strikes.

Florida Power & Light Company (FPL) is the largest investor-owned electric utility in Florida, serving an estimated 4.5 million customer accounts. For FPL, one of the largest and fastest-growing electric utilities in the United States, severe thunderstorms, high heat, lightning and hurricanes are all realistic weather considerations the company routinely faces.

FPL is a subsidiary of FPL Group, Inc., one of the country's premier power companies with annual revenues of over \$15 billion and a growing presence in 27 states.

FPL relies on DTN/Meteorlogix MxVision WeatherSentry Online™ *Utilities Edition* and expert consultations to prepare for inclement weather. An advanced predictive meteorological service, DTN/Meteorlogix offers the combination of advanced model data technology and experienced meteorologists to provide localized forecast

information with special emphasis on lightning information, storm tracking, and radar. By anticipating weather conditions in advance, FPL can strategically place repair crews and better anticipate ahead of time exactly where and when a storm is going to hit — right down to a specific roadway. With comprehensive weather information, FPL can accurately pin-point the direction of local sea breezes coming in from the coast and predict precisely how a storm will track and when and where it will hit.

According to Florida Power and Light network operator Mike Biichle, lightning poses a big threat for all utilities — especially his. With the looming possibility that lightning may strike a substation or knock out a transformer, a lot of preemptive planning must occur to ready and schedule repair crews prior to the storm to ensure they are prepared to restore service in a worst-case scenario.

Weather Watching

"In my day-to-day operations, weather is the first thing I look at when I walk into work in the morning. I start looking two to three days out to see if any storms are headed our way, and if so, where the lightning strikes are occurring," said Mike Biichle. "Using the advanced radar, I can zoom in, start planning and see if the storm will intensify or degrade. We're heavily populated down here in Florida and would be like shooting blind if we didn't have radar assistance.



With DTN/Meteorlogix's radar, FPL can also view lightning strikes, wind, and other weather to stay on top of conditions affecting their territory.

"Industry-specific weather information tells me wind flow, speed and the temperature along with the humidity – which down here is everything," continues Biichle. Extremely high temperatures, for example, put pressure on the system. "The advance notice of what type of weather is coming around the corner helps me anticipate what is next, and enables me to beef-up repair crews in any area that might have affected service as a result of the storm."

When a big storm hits in an area where FPL provides power, getting the residents' power back on in a safe and timely manner is the top priority. In the back of the utility company's mind of course, is the scored performance of the Customer Average Interruption Duration Index (CAIDI) – which FPL reports to the Florida Public Service Commission. FPL calculates CAIDI by dividing the sum of all customer interruption durations by the total number of customers served. Utilities are well-aware of their rank in the CAIDI ratings and which utilities are at the top of the rankings list. Power companies also worry about a poor rating because it is also likely that a story about its poor performance will appear in the media, alerting customers.

Hurricane-Ready

Because of its unique geographical location that shares expansive coastlines with both the Gulf of Mexico and the southern Atlantic Ocean, FPL also must keep a vigilant and watchful eye for weather disasters during hurricane season. Even the most informal or novice weather-watcher knows that in the blink of an eye a hurricane can quickly turn treacherous wiping out entire power grids and requiring significant utility man-power to repair.

Between Hurricane Wilma in 2005, which affected the Southern portion of Florida, and Hurricane Andrew, which hit Homestead, Florida, in 1992, FPL is no stranger to the potential impact and devastation a hurricane can cause.

As a readiness precaution to stay prepared for the challenges of severe weather — especially hurricane season — FPL annually simulates a hurricane hitting land within the company's service area. For four days, FPL employees practice initiating the company's emergency plan, which includes tracking outages, assessing damage, communicating with customers and employees as well as working with contractors and suppliers to restore service once it is safe to do so. The idea being that in the event of a real hurricane, the utility is practiced and well-prepared.



Photo courtesy of Florida Power & Light Company

"Safety is our top priority and the yearly hurricane simulation helps keep everyone sharp," said Mike Biichle. "Each employee is assigned a job to do. If employees are new to the company they are partnered with someone with more experience, which enables them to learn quicker, get on board and be prepared."

As an additional precaution, FPL utilizes the most advanced weather technology to track all possible hurricane activity off the coast of Florida. FPL tracks each hurricane's path and receives a steady flow of updated information from an external weather information provider. In FPL's case, the utility takes it one step further and receives daily updates in the form of phone calls from the weather system on possible weather scenarios.

A Band of Brothers


When weather turns disastrous, utility companies set aside competitiveness and band together to help get the power back on. Typically, utilities from across the country will

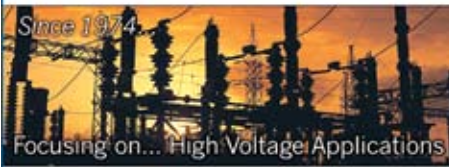
travel great lengths to help fellow workers restore power when a storm's damage is too great for any one company to handle. But before playing the role of the good neighbor, utilities' first have to make sure their own service territory is going to be out of harms way when crews are away extending needed assistance to other providers customers.

It is important to remember that when crews from out of state are needed there is a sizable price tag attached to the help. Utility companies take precautionary measures to ensure the extra helping hands are used in the most efficient way possible.

Why the National Weather Service and Internet Weather Won't Cut It

As a trusted utilities company, millions of people rely on FPL to provide energy to their homes every day. Facing daily weather-related threats, FPL needs more advanced and comprehensive weather information than





Hamby Young has been packaging high voltage materials (15kv - 765kv) for the Electric Utility market for over 30 years. With expertise in Substation, Transmission, Overhead and Underground Distribution, Hamby Young is able to provide support for the numerous applications necessary to complete your project. With an efficient and cost effective approach, Hamby Young provides support to meet your proposal deadlines and coordinated project management to meet your construction milestones.

CONTACT INFORMATION
Greg Blunt
 800-726-8444 ext.142
gcbblunt@hambyyoung.com
www.hambyyoung.com

the general public. The National Weather Service and other free weather services rely on unrefined computer models that may or may not be complete in scope, or do not include time-sensitive information. These free services fail to offer the needed industry customization or expert consultation with meteorologists and climatologists.

While the National Weather Service provides weather information to help the general public and alert citizens when they are in the path of severe weather, FPL needs to rely on utility-specific weather information pertaining to its specific service areas and locations of interest.

To receive the most accurate weather information tailored to its specific needs, FPL holds daily conference calls with DTN meteorologists assessing any possible threats from accumulating weather conditions. If a situation forms during the day, FPL employees also utilize live online consulting technology

to send quick questions to meteorologists and receive responses within 15 minutes. Having advanced industry-specific weather information assists FPL in making minute-to-minute decisions based on a storm's severity, potential path, anticipated time of arrival and precise location of impact.

For the majority of utilities companies, weather conditions will always be an uncontrollable liability. For companies such as FPL where weather is a daily concern, it is important to utilize the most advanced strategic weather information available to successfully prepare for whatever Mother Nature may bring their way. To ensure customers receive the best possible service, utilities companies must take as many preemptive precautions as needed.

About DTN

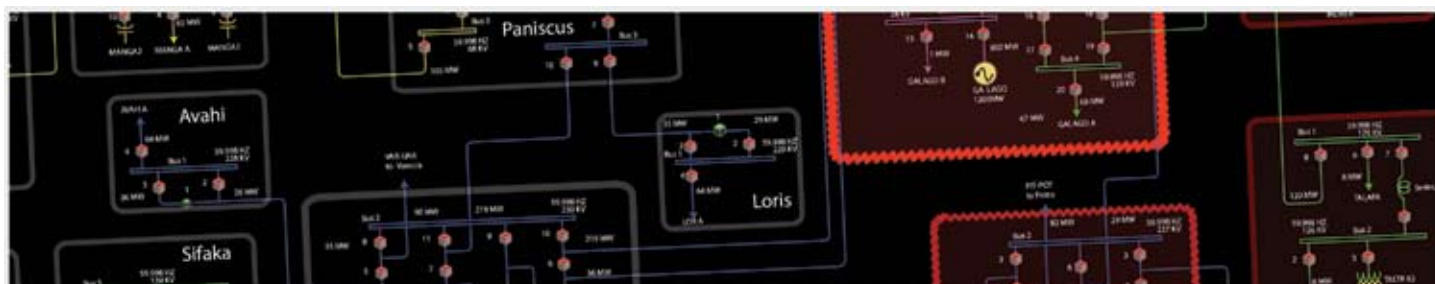
DTN, a private company based in Omaha, Neb., is the leading business information services company focused on agricultural,

energy and weather business markets. The company delivers business critical information to more than 700,000 subscribers across its vertical markets. For more information about DTN visit www.dtnmeteorlogix.com or call 952.851.7216. ■

About the Authors

Rich Wilson is the Director of Energy Services at DTN/Meteorlogix, the commercial weather division of DTN which focuses on providing industry specific weather to more than 900 energy and utility customers. Wilson holds degrees in Physics and Meteorology, and in his fifteen year career with DTN has also held positions in Meteorological Operations and Product Management.

Mike Biichle is a Network Operator at the South Florida Dispatch center of Florida Power & Light Company. He has worked in various positions at the company since 1980.



Improve Situational Awareness with
Enterprise Visualization Solutions

PRIMATE
TECHNOLOGIES

(321)-821-2227

www.primate-tech.com

2008 CIGRÉ Canada

CONFERENCE ON POWER SYSTEMS

Technology and Innovation for the
Canadian Power Grids
of the Future

October 19 - 21, 2008
Winnipeg Convention Centre,
Winnipeg, MB

For more information
and to register, please visit
www.cigre2008.ece.umanitoba.ca

WINNIPEG



Hosted by:



Corporate Sponsors:



Presented by:



Official Magazine:





Do Video Display Walls Improve Situational Awareness in Control Rooms?

By Bill Snavelly, Vice-President, and Rita Patterson, Vice-President of Sales and Marketing, Primate Technologies, Inc.



Introduction

In the past several years, many organizations have made significant investments in their control room infrastructure, with the goal of improved situational awareness for control room staff. The most significant projects often include large video display walls. Many of these projects have been extremely successful; operators have access to new information that supports rapid decision-making in changing situations. Unfortunately, other projects have fallen short of their objectives. This article investigates how one might ensure that a display wall project will be successful. We'll start investigating this by reviewing what situational awareness is.

What is Situational Awareness?

Situational awareness, as defined by Wikipedia, is the knowledge and understanding of the environment that is critical to those who need to make decisions in complex areas. The definition continues by saying, "...situation awareness (SA) involves being aware of what is happening around you to understand how information, events, and your own actions will impact your goals and objectives, both now and in the near future. Lacking SA or having inadequate SA has been identified as one of the primary factors in accidents attributed to human error."

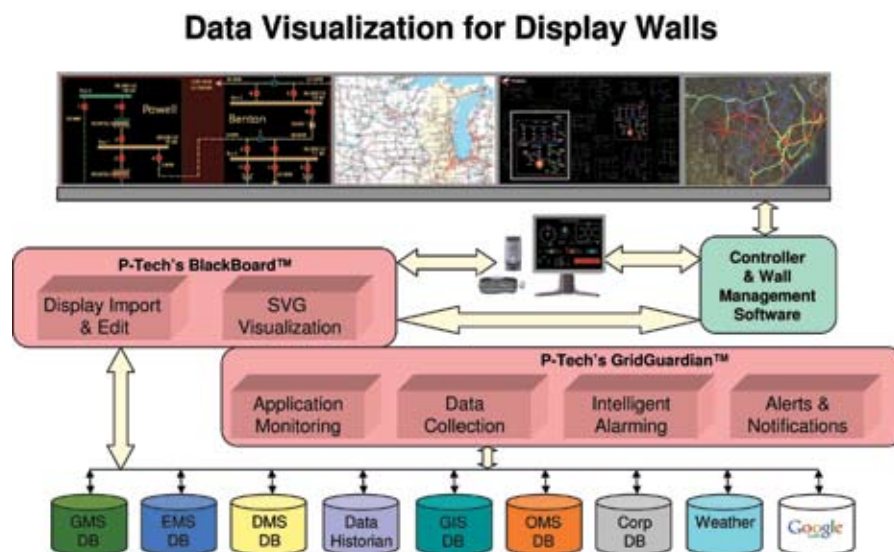
Clearly, control room operators must have a thorough understanding of what is happening to support complex decision making. We believe they accomplish this by assimilating information from diverse sources; monitoring the health of critical systems to understand the quality of available data, and receiving timely notifications of important information.

How do various types of display walls contribute to situational awareness?

Display walls are common in control rooms. Current display walls range from large paper drawings and maps, metal or mosaic tile walls (with or without indicator lights), LCD or plasma panels, front projectors, and rear projection displays. Hybrid solutions that combine several of these methods are also available.

When considering the potential approaches from the situational awareness perspective, we categorize them as 1) Static display walls, 2) Static display walls, augmented with dynamic content, and 3) Video display walls. Each is explored in the following paragraphs.

Static display walls include paper, metal, and mosaic walls. They are much less expensive than their dynamic counterparts and typically present a schematic view of the user's service territory. It is beneficial to have a comprehensive view of the electric system, and their comparatively low cost is attractive; however, they make only a marginal improvement to situational awareness. Operators must capture an understanding of the real-time conditions of the system from one source, and then mentally transpose that image to the view on the display wall. The control room staff retains the burden of gathering the data from disparate sources and aggregating the information in their minds.



™BlackBoard & GridGuardian are trademarks of Primate Technologies, Inc.

™Google Earth mapping service is a trademark of Google Inc.

Static display walls are often augmented with dynamic content. This includes the static walls described above, supplemented with LED lights or digital displays. Walls in this category can begin to improve situational awareness. With the addition of dynamic content, the control room staff has a schematic view as described above, combined with indications of the current condition of the electric system. This provides operators with integrated information that gives them a better understanding of the current condition of the entire system. However, there are several drawbacks. First, a very small percentage of the surface area is dynamic, and the dynamic elements often serve a rigid, pre-defined purpose. Operators cannot alter their view of the system as conditions change. Additionally, with many of the hybrid solutions, your staff is still forced to mentally combine the video content with the information on the static display wall. Based upon the design of the hybrid, some significant steps toward improving situational awareness can be achieved.

The final category is display walls built entirely of video displays. Studies show that visual representations can accelerate insight into complex data by taking advantage of the human eye's high-bandwidth pathway into the brain, allowing operators to see, analyze, and understand large volumes of information quickly. Given this, video display walls seem like the perfect technology for a control room. Video display walls can present a comprehensive view to operators and allow them to discriminate between important and unimportant situations. These displays are typically built with front projection or rear projection systems, but may also include tiled LCD or plasma panels. Video display walls are a great approach for viewing different displays, viewing a schematic or geographic view of the service territory, and swapping between the schematic and geographic views. With the right software, video displays can integrate data from different sources, and the content may be changed or sectionalized for independent operator viewing. The major drawback is cost, as video display walls are the most expensive solution discussed.

How do you ensure that your video display wall project will be successful?

Many pitfalls could prevent you from having a successful display wall project. A successful project requires an educated buyer, good architects and design engineers, audio-visual experts, and knowledgeable software engineers. Many times an unprepared buyer faces budget overruns due to surprises with the complexity of the process, the mistaken belief that a display wall is a commodity purchase, or limited experience in the specific requirements for control rooms that operate 24 hours a day, 7 days a week. Recognizing the complexity, and keeping in mind the ultimate purpose, can result in a significant improvement to control room operations.

We'll continue by looking at the primary components of the display wall: hardware, display wall management software, and data visualization. The effective interoperation

of these components provides an ideal environment for fast and effective decision-making.

Hardware

Some utilities consider tiling many commodity LCD or plasma panels together to create a large video wall, which is far less expensive than a front-projection or rear-projection system. However, commodity panels are not necessarily built for 24x7 operations, which can result in frequent replacement. Additionally, if the content on the panel is of a display that is relatively static, such as an overview of a portion of the system or an alarm summary, the panel is subject to shadows from the continuous concentration of the same data and color at the same location – a condition frequently (if imprecisely) called “burn-in.” Another drawback is that the distance from the operators' consoles to the panel may reduce the readability of the panels, making them an ineffective investment. Additionally, this



Well Grounded

Portable-Protective Ground Mats

The new Hastings Ground Mats provide a method for workers to establish an equal potential zone for multiple grounding applications.

- Anti-Skid material offers application in all weather conditions
- Mats easily bond together to create the appropriate size for your work area
- Mats can be cleaned easily with hose pressure or power washer
- Mats work with your own pre-assembled grounds to create equal-potential zone



HASTINGS

A WORLDWIDE SUPPLIER OF
Hot Line Tools & Equipment

For more information call 269.945.9541 or visit
www.hfgpgrounding.com

Circle 18 on Reader Service Card

approach leads to disturbances in the visualization of graphics due to the mullions between panels; a mental leap is needed to view a single line that is separated by space.

Front projectors similar to those commonly used in conference rooms may not be an attractive alternative. Front projectors are a great solution for viewing different displays, viewing a schematic or geographic view of the service territory, swapping between the schematic and geographic views, and taking advantage of updates that are made to systems without the mess of tape and scissors. Front projectors may be "tiled" together to provide a somewhat scalable display wall size. As with commodity panels, not all front projectors are rated for 24x7 operations. The constant cooling fan noise can become annoying, especially during stressful conditions. Front projectors are not a bad option, if several are tiled together and the fan noise is tolerable.

A true display wall consists of a set of video cubes tiled together. A diverse set of manufacturers offer a wide range of features, but most offer a solution for light and color management; reduction in seam widths between cubes, expansion to accommodate the addition of new audio visual equipment; and the inclusion of live video feeds for security cameras, news, and weather. Without a doubt, video display walls are the most expensive hardware alternative, but provide a nearly ideal solution for improving situational awareness.

Display Wall Management Software

The first type of software required for video display walls is wall management software. It is part of the controller for the display wall and supports the content being displayed.

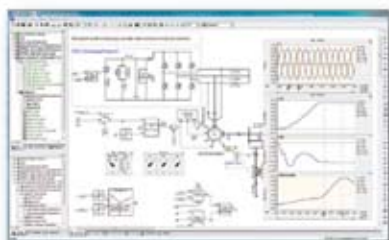
Wall management software is typically provided by the display wall controller manufacturers. Standard features include the ability to place content on the video

display wall. Wall management software has to interoperate with sources of content. Additionally, wall management software also controls the location of feeds from cameras and other sources. Optional features may include the ability to assign areas of the display wall to specific operator consoles, perform screen scraping of displays on other systems, or allow notes to be written upon a wall and captured in print. Good wall management software will have a well defined application program interface (API) to allow the user or other parties to send information to the wall management software for display on the wall using standardized programming techniques.

Choosing the wall management software that best fits the team's needs is a critical part of improving situational awareness with a display wall.



The World's **First Choice** in Power System Simulation



Applications for PSCAD® (Power Systems Computer-Aided Design) simulation software include:

- Power electronic design including HVDC and FACTS
- Transient studies including TOV, TRV and lightning
- Wind energy system design and integration
- Power quality studies showing the full frequency response of the system including harmonics
- Control and Protection systems design, optimization and validation studies
- Power systems training

Test-drive PSCAD®/EMTDC™
at www.pscad.com

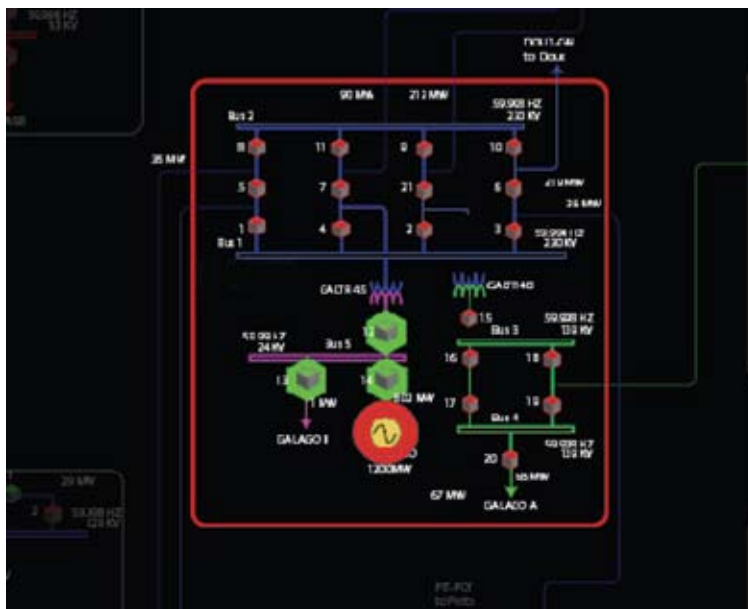


Data Visualization

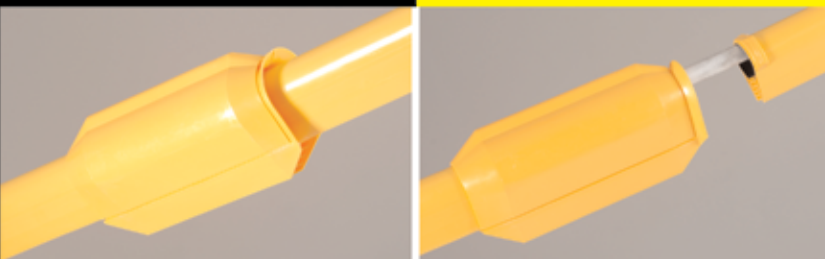
Although hardware and wall management software are important, it is the data visualization, that is, the content, that helps operators make decisions. This is the primary factor in determining if a display wall improves situational awareness. Significant improvements in situational awareness are made possible when the data visualization software, combined with the wall management software, is inter-operable; thus, eliminating mundane operator interactions with the video walls and providing more effective ways to review critical conditions.

As anyone who has upgraded home video equipment will understand, it takes more than a great hardware infrastructure to deliver spectacular results. A large format, high definition television is a good start, but it needs to be fed with high quality content to provide the desired image. The same is true with a control room. The investment in a video display wall cannot be justified if the same content available on the desktop is merely scaled up to fill a larger display surface. Given that, many organizations elect to build an overview display specifically for the display wall. This can be a good approach, but the customer needs to determine if the control system is capable of rendering a single display with the quantity and quality of dynamic content that is required for a truly informative system-wide display. Careful analysis may provide insight that the control system must have user interface refresh rates significantly lower than data scan rates on the telemetry to support a large video wall. Also, one does not want to inhibit the performance of control applications with heavy network loading that may be imposed when the data visualization solution resides on the same network as the control system. Control systems are complex and run intensive applications that must take precedence over data visualization; however, slower data visualization significantly inhibits situational awareness for operations. Optimal situational awareness demands dynamic content that is separate from that of the control system.

An overlooked issue is that display walls are often smaller than the tile mapboard they replace. Advanced visualization techniques are required to put an equal or greater amount




The data visualization above shows a portion of a schematic overview diagram using shading and brightness (high opacity) to indicate areas of a system that are in abnormal and alarm situations.



New! 25 KV Line Guard

The Polyethylene Line Guard, rated at 15.3 KV Phase to Ground and 26.4 KV Phase to Phase is incredibly light weight - less than 1/2 the weight of similar rubber hoses and is the most cost effective in the industry.

- Rated at 15.3 KV Phase to Ground and 26.4 KV Phase to Phase (Brush Contact Only)
- Light weight - less than 1/2 the weight of similar rubber hoses
- Features larger I.D. than traditional rubber hoses - 1.77" compared to 1.5"
- Meets both ASTM F712 and F968, class 3, electrical requirements
- Snap together feature with male and female connecting ends
- Available in two lengths - 5' and 6' models
- Also available in 15 KV models



HASTINGS

A WORLDWIDE SUPPLIER OF
Hot Line Tools & Equipment

For more information call 269.945.9541 or visit
www.hfgpgrounding.com

of content on a display wall with less real estate than the original tiled mapboard.

Installation of a video display wall as part of a control room renovation is a complex project. Work will occur in the confines of a mission critical facility, so new equipment must be introduced without jeopardizing the operator's ability to control the electric grid. Operators must be trained to use new technologies as effectively as they use the legacy equipment, the instant that it is deployed. Like the static wall that often precedes it, a video display wall must be reliable. In fact, an up-to-date visual representation of the electric system on the display wall is arguably most critical when the complementary control system has failed. This is a particularly critical concern when both systems reside on a common technology platform. As previously stated, the data visualization solution delivers the best value and reliability when implemented


on a hardware platform that is completely independent from that of the control system itself.

While searching for a data visualization solution, be sure it provides interoperability with the wall management software and that it can integrate data from all relevant control room data sources, including all the quality and tagging information from the control systems. For operators to make the best decisions and reach the best conclusions, all information relevant to the decision needs to be immediately available, so it's important that the visualization solution elegantly provide a single real-time view of all field and processing equipment, the real-time values of all telemetered data, the quality of all information, the location of personnel that may be impacted by any decisions, weather and weather impacts, etc. This requires the integration of information from multiple systems and sources into one display.



The data visualization above reflects data automatically built from GIS data and shows real-time updates from the SCADA system in KML files overlaying Google Earth.



Another important criterion in the search for a suitable visualization solution is ease of maintenance. The staff that supports the control center is often overloaded, and only rarely has access to additional staff to support new projects. Although maintaining tile mapboards and other legacy display walls is often labor-intensive, the level of



WHO TURNED OUT THE LIGHTS?

ACTUALLY, WE DID. Not in the real system of course, but modeled in the RTDS® Simulator. We're RTDS Technologies. We specialize in simulating disastrous situations to help our clients avoid the real ones. Our innovative team of engineers have created the world standard in real time power system simulation by designing and implementing computer hardware and software based on detailed electromagnetic transient simulation. We can provide simulators to represent systems with more than 1000 three-phase buses and include closed-loop connection to physical protection and control. Real time simulation allows our clients to test their own systems under realistic conditions, helping them to avoid disaster and build the confidence that comes from knowing you're ready for anything.

For more information contact us at:
300-137 Innovation Drive
Winnipeg, Manitoba
Canada R3T 6B6
Tel: 204.989.9700
E-mail: rtids@rtids.com
Web: www.rtids.com



REAL TIME DIGITAL SIMULATION FOR THE POWER INDUSTRY

effort is known and can be worked into the staff's routine schedule. By contrast, the level of effort required to properly support a new video wall is initially unknown and should be researched in advance.

The visualization solution should include a standard or customizable interfaces to many different systems and data sources (EMS, DMS, OMS, etc.), including redundant sources of similar data (when available).

The visualization solution should integrate the data into a single real-time repository. Additionally, the solution should be able to monitor the status of operational equipment (servers, communication equipment, field devices, etc.) in order to quickly detect any failures or questionable data sources. When concerns arise, the data visualization solution should be able to generate personalized notifications (i.e., text messages, text to voice, email, etc.) for management and support organizations, while also annotating the data with any quality or integrity concerns.

A visualization solution should provide robust calculation tools that allow sophisticated processing of data. This will allow for better animation to be deployed on the video wall enhancing operators' awareness of potential or pending situations, especially those resulting from the integration of information from multiple and sometimes variable sources. This should also provide some form of enhanced alarm management for operators. The solution should provide the highest quality text, symbols, and graphics available. Virtually every aspect of the solution should be dynamically controllable, including color, scaling, opacity, and animation, while retaining connectivity and aspect ratio with all the devices and symbols on the displays. The results should provide visually appealing, eye-catching, and informative displays.

Lastly, to reduce maintenance impacts while also improving situational awareness, the data visualization solution should support the efficient extraction of display information, not just from the existing control systems, but also from many of the most prominent systems used in control rooms.

Conclusion

Control rooms are very critical to retaining reliability of the grid. Due to the risks of blackouts, cyber threats, and terrorist activities, there are many recommendations and requirements that are being driven by public service commissions, NERC and FERC to improve situational awareness. The introduction of a video display wall with flexible wall management software running on a dedicated platform, and a high-quality data visualization solution can substantially improve the operators' ability to assimilate large volumes of information; thus, allowing them to focus on interpreting and acting on the information rather than having to tediously navigate through large amounts of data before appropriate control actions can be taken.

About Primate Technologies

P-Tech is a privately held company headquartered in Melbourne, FL, providing enterprise visualization solutions that epitomize the concepts discussed in this article. More information is available at www.primate-tech.com. ■

About the Authors

Bill Snavelly is a founder and Vice-President of Primate Technologies, Inc., with 25 years experience designing and deploying real-time control systems. Bill's professional career has been focused on communication technologies and SCADA systems utilized by electric utility companies.

Rita Patterson is a founder and Vice-President of Sales and Marketing for Primate Technologies, Inc. Involved in the energy industry since 1983, Rita worked for several utility companies and SCADA/EMS vendors prior to launching P-Tech in 2001.



Portable Grounding with the Truck Grounding Reel

Hastings truck grounding reels offer a rugged design for long life, easy storage and quick and reliable grounding method for all types of utility vehicles.

- Enclosed rewind spring offers protection from the environment and contamination
- Grounding reels are sold complete with cable and clamp for easy installation
- Designed and tested to a max of 43,000 amps fault current

HASTINGS
A WORLDWIDE SUPPLIER OF
Hot Line Tools & Equipment

For more information call 269.945.9541 or visit
www.hfgpgrounding.com

Circle 18 on Reader Service Card



Power Utilities... It's A Whole **NEW** Ballgame

New Challenges – New Line of Thinking

The nuts and bolts of power transmission and distribution may be similar, but nearly everything else has changed. The business environment is more competitive than ever and the stakes higher. Maintenance costs now affect everything from installation to operation. Theft of copper for scrap resale is suddenly one of the industry's biggest concerns. You're facing completely new challenges and, at CommScope BiMetals, we're responding with an entirely new line of thinking.

Get more reliability and profitability from all your grounding applications. Available in a variety of gauges, engineered as single or stranded wire, CommScope BiMetals' copper clad steel ground wire is ideal for all your grounding applications.

 **CommScope®**
BIMETALS
www.commscope.com
704.883.8015

360 GENERATORS

8830 Business Park Dr., Suite 200
Austin, TX, U.S.A 78759
Tel: (888) 259-6598
Web: www.360generators.com
E-Mail: robin@360partners.com

360 MOBILE OFFICE

8830 Business Park Dr., Suite 200
Austin, TX, U.S.A 78759
Tel: (512) 342-8800
Web: www.360mobileoffice.com
E-Mail: robin@360partners.com

3M CANADA COMPANY

P.O. Box 5757
London, ON, CA N6A 4T1
Tel: (800) 937-0042
Web: www.3m.com
E-Mail: krarnott@mmm.com

A

A.I. ORLOFF ELECTRICAL ENGINEER

1820 E. Garry Ave. Suite 117
Santa Ana, CA, U.S.A 92705
Tel: (949) 261-5491 • Fax: (949) 261-6541
Web: www.members.aol.com/ocsee
E-Mail: ocsoft@aol.com

ABB INC. (CORPORATE-CANADA)

8585 route transcanadienne
Montreal, QC, CA H4S 1Z6
Tel: (514) 856-6266 • Fax: (514) 856-6299
Web: www.abb.ca
E-Mail: susan.a.gromak@ca.abb.com

ABSOPULSE ELECTRONICS LTD.

110 Walgreen Road
Carp (Ottawa), ON, CA K0A 1L0
Tel: (613) 836-3511 • Fax: (613) 836-7488
Web: www.absopulse.com
E-Mail: absopulse@absopulse.com

ACA CONDUCTOR ACCESSORIES

260 Parkway East
Duncan, SC, U.S.A 29334
Tel: (864) 433-0333 • Fax: (864) 433-5328
Web: www.acasolutions.com
E-Mail: sales@aftele.com

ACCURATE CONTROLS INC

346 Washington Street
Braintree, MA, U.S.A 02184
Tel: (617) 872-2510 • Fax: (781) 843-7053
Web: wwwaccuratecontrolsinc.com
E-Mail: info@accuratecontrolsinc.com

ACLARA

945 Horner Drive
Hazelwood, MO, U.S.A 63042
Tel: (800) 297-2728 • Fax: (314) 895-6415
Web: www.aclaratech.com
E-Mail: info@aclartech.com

ADVANCED CONTROL SYSTEMS

2755 Northwoods Parkway
Norcross, GA, U.S.A 30071
Tel: (770) 446-8854
Web: www.acsatlanta.com
E-Mail: sales@acsatlanta.com

ADVANCED SPECIALTY GASES

135 Catron Dr.
Reno, NV, U.S.A 89512
Tel: (775) 356-5500 • Fax: (775) 356-5571
Web: www.advancedspecialtygases.com
E-Mail: asg@advancedspecialtygases.com

ADVANTICA INC.

Suite 100, 600 Bent Creek Blvd.
Mechanicsburg, PA, U.S.A 17050
Tel: (717) 724-1900 • Fax: (717) 724-1901
Web: www.advanticaelectric.com
E-Mail: info.us@advanticagroup.com

ADWEL INTERNATIONAL LTD.

3110 American Drive
Mississauga (Toronto), ON, CA L4V 1T2
Tel: (416) 321-1988 • (800) 463-9371
Fax: (416) 321-1991
Web: www.adwel.com
E-Mail: info@adwel.com



AEGIS TECHNOLOGIES

2020 North Central Avenue Suite 200
Phoenix, AZ, U.S.A. 85004
Tel: (602) 443-5000 • Fax: (602) 889-6117
Web: www.aegistech.us
See ad page 1

Aegis Technologies has the only tested, accepted, and deployed solution that integrates industrial-strength security for your existing Serial or IP based Control System. Only Odyssey extends the life of legacy systems; improves speed, efficiency and diagnostics; provides NERC compliance; and retrofits seamlessly into existing architecture to protect your business and your customers.

AEMC INSTRUMENTS

200 Foxboro Blvd.
Foxboro, MA, U.S.A 02035
Tel: (508) 698-2115 • Fax: (508) 698-2118
Web: www.aemc.com
E-Mail: sales@aemc.com

AFL TELECOMMUNICATIONS

PO Box 3127
Spartanburg, SC, U.S.A 29304
Tel: (864) 433-0333 • Fax: (864) 433-5560
Web: www.aftele.com
E-Mail: sales@aftele.com

ALBER

3103 N Andrews Ave Ext
Pompano Beach, FL, U.S.A 33064
Tel: (954) 623-6660 • Fax: (954) 623-6671
Web: www.alber.com
E-Mail: sales@alber.com

ALCAN CABLE

3 Ravinia Drive Suite 1600
Atlanta, GA, U.S.A 30346
Tel: (770) 394-9886
Web: www.cable.alcan.com
E-Mail: alcancable@alcan.com

ALLIANCE EQUIPMENT CO.,INC

1000 North Union Ave.
Alliance, OH, U.S.A 44601
Tel: (800) 383-2290 • Fax: (330) 821-8375
Web: www.alliance-equipment.com
E-Mail: debbie@alliance-equipment.com

ALMETEK INDUSTRIES, INC.

2 Joy Drive
Hackettstown, NJ, U.S.A 07840
Tel: (908) 850-9700 • Fax: (908) 850-9618
Web: www.almetek.com
E-Mail: csr@almetek.com



ALPHA TECHNOLOGIES

3767 Alpha Way
Bellingham, WA, U.S.A. 98226
Tel: (360) 392-2263 • Fax: (360) 671-4936
Web: www.alpha.com

Alpha Industrial Power, a member of The Alpha Group and a division of Alpha Technologies, provides innovative, industrial-grade powering solutions through a diverse product line of large-scale battery systems, chargers, and uninterruptible power supplies (UPS). Applications include power generation facilities, substations, electrical utilities, transportation systems, communication networks and other enterprises with unique powering.



ALTEC INDUSTRIES, INC.

210 Inverness Center Drive
Birmingham, AL, U.S.A. 35242
Tel: (205) 991-7733 • Fax: (205) 981-2522
Web: www.altec.com
See ad page 17

Altec Industries, Inc. is the world's leading manufacturer of aerial lifts, digger derricks, specialty equipment and truck mounted cranes for the utility and construction markets. Altec has manufacturing, sales and service facilities located throughout North America and sells and services equipment in over 120 countries. Altec offers operator training, equipment financing, used and rental equipment, and fleet management.

AMERICA ASIA GROUP CO.

2485 Roanoke Rd
San Marino, CA, U.S.A 91108
Tel: (626) 309-0198 • Fax: (626) 309-0185
Web: www.aagcusa.com
E-Mail: aagc888@aol.com

AMERICAN POLYWATER CORP.

P.O. Box 53
Stillwater, MN, U.S.A 55082
Tel: (651) 430-2270 • Fax: (651) 430-3634
Web: www.polywater.com
E-Mail: custserv@polywater.com

AMERICAN SUPERCONDUCTOR (DEVENS)

64 Jackson Road
 Devens, MA, U.S.A 01434
 Tel: (978) 842-3000 • Fax: (978) 842-3024
 Web: www.amsc.com
 E-Mail: info@amsc.com

**AMERICAN WIRE GROUP, INC.**

1920 E. Hallandale Beach Blvd., Suite PH8
 Hallandale, FL, U.S.A. 33009
 Tel: (954) 455-3050 • (800) 342-7215
 Fax: (954) 455-9886
 Web: www.buyawg.com
 E-Mail: sakes@buyawg.com
 See ad page 139

American Wire Group offers a complete solution of Transmission and Distribution Cables.

We maintain substantial inventories and our focus is to supply immediate requirements- «like a short order cook.»

ACSR Bare Aluminum Conductors, Substation Control Cables, Primary 15KV - 35KV, Service Drop Cables, Fiber Optic Cables, Guy Wire- Static Wire, URD Cables, Bare Copper Ground Wire, Line Wire - weatherproof Cables, Copperweld / Alumoweld Cables.

ANALYTIC SYSTEMS

12448 82nd Avenue
 Surrey, BC, CA V3W 3E9
 Tel: (800) 668-3884 • Fax: (604) 543-7354
 Web: www.analyticssystem.com
 E-Mail: info@analyticssystem.com

ANDAX INDUSTRIES LLC

613 W Palmer
 Saint Marys, KS, U.S.A 66536
 Tel: (800) 999-1358 • Fax: (888) 443-4732
 Web: www.andax.com
 E-Mail: customerservice@andax.com

API-CAMILLE BAUER DIV. OF ABSOLUTE PROCESS INSTRUMENTS

1220 American Way
 Libertyville, IL, U.S.A 60048
 Tel: (847) 918-3510
 Web: www.apicb.com
 E-Mail: usa@apicb.com

**ARBORMETRICS SOLUTIONS LTD**

224 Thompson Street Unit 104
 Hendersonville, NC, U.S.A. 18792
 Tel: (407) 339-1733 • (866) 685-1880
 Web: www.arbormetricssolutions.com
 E-Mail: info@arbormetricssolutions.com
 See ad page 29

ArborMetrics Solutions, Inc. specializes in combining expertise, software, hardware and people into mobile workforce solutions that streamline your vegetation management program. Our customers include utilities, municipalities and other agencies who are interested in finding ways to maximize the efficiency and effectiveness of their vegetation management programs.

ARCADIAN NETWORKS

400 Columbus Avenue, Suite 210E
 Valhalla, NY, U.S.A 10595
 Tel: (914) 579-6380 • Fax: (914) 747-1270
 Web: www.arcadiannetworks.com
 E-Mail: info@arcadiannetworks.com

ARCH WOOD PROTECTION, INC.

1955 Lake Park Dr., Ste. 100
 Smyrna, GA, U.S.A 30080
 Tel: (770) 801-6600 • Fax: (770) 801-1990
 Web: www.wolmanizedwood.com
 E-Mail: ptwinfo@archchemicals.com

**AREVA T&D INC.**

One International Plaza Suite 300
 Philadelphia, PA, USA, CA 19113
 Tel: (484) 766-8100 • Fax: (484) 766-8650
 Web: www.areva-td.com
 E-Mail: customer.care.usa@areva-td.com

AREVA T&D CANADA INC.

1400 Industrial Street
 LaPrairie, QC, CA J5R 2E5
 Tel: (450) 659-8921 • Fax: (450) 659-3371
 Web: www.areva-td.com

AREVA T&D offers solutions to bring electricity from the source onto the power network.

We build high-and medium-voltage substations and develop technologies to manage power grids worldwide.

We are a full-fledged solution provider, offering safe, reliable and efficient power distribution.

ARNCO CORPORATION

860 Garden Street
 Elyria, OH, U.S.A 44035
 Tel: (800) 321-7914 • Fax: (440) 322-1001
 Web: www.arncocorp.com
 E-Mail: info@arncocorp.com

**ASAT SOLUTIONS INC.**

2121, 29th ST NE #8
 Calgary, AB, CA T14 7H8
 Tel: (403) 569-1680 • Fax: (403) 569-1620
 Web: www.asatsolutions.com
 E-Mail: audrey.moen@asatsolutions.com

ASAT Solutions Inc. specializes in data integration of substation IED devices such as protection relays, RTU and monitoring equipment. Our powerful DAPserver™ is the next generation platform for your SCADA gateway (Serial or IP-based), Substation HMI, and remote maintenance needs.

Contact us for information on our substation hardened, Linux based DAPserver™.

**ASPLUNDH TREE EXPERT CO.**

708 Blair Mill Road
 Willow Grove, PA, U.S.A. 19090
 Tel: 1-800-248-8733 • Fax: 215-784-4405
 Web: www.asplundh.com
 E-Mail: info@asplundh.com

Since 1928 the Asplundh Tree Expert Co. has been dedicated to efficient, safe, and cost-effective vegetation management services for the electric utility industry. These services include scheduled and emergency tree pruning and removals, right-of-way clearing and maintenance with specialized equipment, and vegetation management with herbicides.

ASSURX, INC.

18525 Sutter Blvd., Suite 150
 Morgan Hill, CA, U.S.A 95037
 Tel: (408) 778-1376
 Web: www.assurxenergy.com
 E-Mail: info@assurx.com

ASTRO-MED, INC.

600 East Greenwich Avenue
 West Warwick, RI, U.S.A 02893
 Tel: (401) 828-4000 • Fax: (401) 822-2430
 Web: www.astro-med.com/tmindex.html
 E-Mail: mtgroup@astromed.com

ATLAS BUSINESS SOLUTIONS, INC. (ABS)

3330 Fiechtner Drive SW
 Fargo, ND, U.S.A 58103
 Tel: (800) 874-8801
 Web: www.abs-usa.com
 E-Mail: info@abs-usa.com

AUTODESK INC.

111 McInnis Parkway
 San Rafael, CA, U.S.A 94903
 Tel: (415) 507-5000 • Fax: (415) 507-5100
 Web: www.autodesk.com

AUTOMATION PRODUCTS, INC. -**DYNATROL® DIVISION**

3030 Maxroy
Houston, TX, U.S.A 77008
Tel: (713) 869-0361 • (800) 231-2067
Fax: (713) 869-7332
Web: www.dynatrolusa.com
E-Mail: sales@dynatrolusa.com

AXIA SOFTWARE CORPORATION

Bentall Centre, PO BOX 48201
Vancouver, BC, CA V7X 1N8
Tel: (604) 683-2942 • Fax: (604) 683-3998
Web: www.searchsolvescore.com
E-Mail: sales@searchsolvescore.com

AXIOMATIC TECHNOLOGIES CORPORATION

5915 Wallace St.
Mississauga, ON, CA L4Z 1Z8
Tel: (905) 602-9270 • Fax: (905) 602-9279
Web: www.axiomatic.com
E-Mail: controls@axiomatic.com

AZTECH ASSOCIATES INC.

805 Bayridge Dr.
Kingston, ON, CA K7P1T5
Tel: (613) 384-9400 • Fax: (613) 384-7139
Web: www.aztechmeter.com
E-Mail: info@aztechinc.com

B**B.L. ROBINSON SURVEY AND ENGINEERING**

554 White Pond Drive, Suite F
Akron, OH, U.S.A 44320
Tel: (330) 836-8487 • Fax: (330) 836-8490
Web: www.blrobinson.com
E-Mail: brobinson@blrobinson.com

B+K PRECISION

22820 Savi Rnch Parkway
Yorba Linda, CA, U.S.A 92808
Tel: (714) 921-9095
Web: www.bkprecision.com
E-Mail: thesite@bkprecision.com

**BadgerMeter, Inc.****BADGER METER, INC.**

4545 W. Brown Deer Road Box 245036
Milwaukee, WI, U.S.A. 53224-9536
Tel: (800) 876-3837 • Fax: (414) 371-5932
Web: www.badgermeter.com
E-Mail: infocentral@badgemeter.com

Badger Meter, Inc., a leader in innovative AMR systems, offers a range of technology solutions providing utilities with the right solution – BadgerTouch® proximity reading, ORION® or Itron® mobile radio reading, GALAXY® fixed network AMR. Use Badger's ORION technology to transmit meter readings and other data to various network connectivity solutions.

BARON USA, INC.

350 Baron Circle
Cookeville, TN, U.S.A 38501
Tel: (931) 528-8476 • Fax: (931) 526-2219
Web: www.baronusa.com
E-Mail: derek@baronusa.com

BAY METAL INC.

4100 Congress Pkwy W
Richfield, OH, U.S.A 44286
Tel: (330) 523-0087
Web: www.baymetal.com
E-Mail: ryan@baymetal.com

BEARINGPOINT, INC.

1676 International Drive
McLean, VA, U.S.A 22102
Tel: 1-866-BRNGPNT • +1 508 216 2523
Web: www.bearingpoint.com
E-Mail: info@bearingpoint.com

**BELYEA COMPANY, INC.**

2200 Northwood Avenue
Easton, PA, U.S.A. 18045-2239
Tel: (610) 515-8775 • Fax: (610) 515-1263
Web: www.belyeapower.com
E-Mail: sales@belyeapower.com
See ad page 32

Belyea Company, Inc., has been in business since 1908. We are proud of the number of generator sets, circuit breakers and transformers that we have sold over the last few years. We have provided used surplus electrical power equipment to countries around the world, including the Bahamas, Iraq and India.

BETA ENGINEERING

4725 Hwy 28 E
Pineville, LA, U.S.A 71360
Tel: (318) 767-5564 • Fax: (318) 442-1741
Web: www.betaengineering.com
E-Mail: michelle.toms@betaengineering.com

BIRD-X

300 N. Elizabeth St.
Chicago, IL, U.S.A 60607
Tel: (312) 226-2473 • Fax: (312) 226-2480
Web: www.bird-x.com
E-Mail: sales@bird-x.com

BISMARCK STATE COLLEGE NATIONAL ENERGY CENTER OF EXCELLENCE

1815 Schafer St
Bismarck, ND, U.S.A ND
Tel: (701) 224-2445 • Fax: (701) 224-5777
Web: www.bismarckstate.edu/energy
E-Mail: bsc.energy@bsc.nodak.edu

BLACK & VEATCH

10950 Grandview Drive
Overland Park, KS, U.S.A 66210
Tel: (913) 458-4626 • Fax: (913) 458-8136
Web: www.bvtelecom.com
E-Mail: hillcd@bv.com

BOLD TECHNOLOGIES LTD

421 Windchime Place
Colorado Springs, CO, U.S.A 80919
Tel: (847) 867-9400
Web: www.boldgroup.com
E-Mail: jerry@boldgroup.com

BOREAS GROUP LLC

730 S. Elizabeth St.
Denver, CO, U.S.A 80209
Tel: (303) 744-2108 • Fax: (303) 744-2128
Web: www.boreasgroup.us
E-Mail: info@boreasgroup.us

BPL GLOBAL

1603 Carmody Court Suite 400
Sewickley, PA, U.S.A 15143
Tel: (724) 933-7700 • Fax: (724) 933-7715
Web: www.bplglobal.net
E-Mail: info@bplglobal.net

BRAYDEN AUTOMATION CORP.

6230 Aviation Circle
Loveland, CO, U.S.A 80538
Tel: 1.888.BRAYDEN (272.9336)
Fax: (970) 461-9605
Web: www.brayden.com
E-Mail: support@brayden.com

BRIM ELECTRONICS, INC.

120 HOME PLACE
LODI, NJ, U.S.A 07644
Tel: (201) 796-2886 • Fax: (973) 778-2792
Web: www.brimelectronics.com
E-Mail: info@brimelectronics.com

BROCKTON EQUIPMENT - SPILLDAM INC.

P.O. Box 960
Brockton, MA, U.S.A. 02303
Tel: (508) 583-7850 • Fax: (508) 583-5231
Web: www.spilldam.com
E-Mail: info@spilldam.com

**UTILITY PRODUCTS GROUP**

BROOKS SECURITY PRODUCTS
BROOKS EKSTROM
BROOKS METER DEVICES

BROOKS UTILITY PRODUCTS GROUP (BROOKS EKSTROM, BROOKS METER DEVICES, BROOKS SECURITY PRODUCTS)

23847 Industrial Park Drive
Farmington Hills, MI, U.S.A. 48335-2880
Tel: 248-477-0250 • 888-687-3008
Fax: 248-477-2583
Web: www.brooksutility.com
E-Mail: mike.lewis@brooksupg.com

Brooks Utility Products Group has the most complete line of AMI / Smart Metering deployment products ranging from conversion adapters, seals and locking hardware to meter warm-up boards for programming and testing. They also manufacture galvanized and aluminum Sectionalizers and Primary Enclosures for a utility's underground distribution deployment.



BULWARK PROTECTIVE APPAREL

A DIVISION OF VF IMAGEWEAR INC.
545 Marriott Dr., Nashville, TN, U.S.A 37214-0995
Tel: (615) 565-5000 • Fax: (615) 882-2481
Web: www.bulwark.com
E-Mail: shana_witherow@vfc.com

Bulwark saves lives with a thirty year history as one of the leading suppliers of secondary flame-resistant apparel to the North American industrial market, primarily serving the electric utility and petrochemical segments through the innovative designs, manufacturing, and marketing of the broadest range of apparel products, as well as through superior technical service.

BYERS ENGINEERING COMPANY

6285 Barfield Road
Atlanta, GA, U.S.A 30328
Tel: (404) 497-1550 • Fax: (404) 843-2000
Web: www.byers.com
E-Mail: info@byers.com

C



C.I.AGENT SOLUTIONS

11760 Commonwealth Drive
Louisville, KY, U.S.A. 40299
Tel: (502) 267-0101 • (866) CIAGENT
Fax: (502) 267-0181
Web: www.ciagent.com
E-Mail: terry@ciagent.com

C.I.Agent Solutions of Louisville, Ky is helping Electrical Companies throughout the United States meet EPA Regulation 40 CFR 112.1 and our products also meet EPA Phase II storm water requirements. C.I.Agent is a non-hazardous, environmentally friendly blend of polymers that immobilizes hydrocarbons (oil, gasoline, diesel fuels) on land and water.

CABLELAN PRODUCTS

PO Box 196
Norfolk, MA, U.S.A 02056
Tel: (800) 840-6655 • Fax: (508) 384-8554
Web: www.cablelan.com
E-Mail: sales@cablelan.com

CALAMP CORP.

1401 N. Rice Avenue
Oxnard, CA, U.S.A 93030
Tel: (805) 987-9000 • Fax: (805) 987-8359
Web: www.calamp.com
E-Mail: sales@calamp.com

CALIFORNIA TURBO

10721 Business Drive
Fontana, CA, U.S.A 92337-8233
Tel: (909) 854-2800 • Fax: (909) 854-2801
Web: www.californiaturbo.com
E-Mail: info@californiaturbo.com

CAMCODE DIVISION OF HORIZONS INC

18531 South Miles Road
Cleveland, OH, U.S.A 44128
Tel: (800) 627-3917 • Fax: (216) 587-4719
Web: www.camcod.com/utility/utility.asp
E-Mail: customer_service@camcod.com

CANADIAN DRIVES INC.

242 Applewood Cresent
Concord, ON, CA L4K 4E5
Tel: (905) 660-2766 • Fax: (905) 660-0901
Web: www.canadiandrives.com
E-Mail: sales@canadiandrives.com



CANNON TECHNOLOGIES/COOPER POWER SYSTEMS

505 Highway 169 North Suite 1200
Minneapolis, MN, U.S.A. 55441
Tel: (763) 543-7772 • Fax: (763) 543-7777
Web: www.cannontech.com
E-Mail: info@cannontech.com
See ad Inside Front Cover

Cannon Technologies, part of Cooper Power Systems Energy Automation Solutions group offers comprehensive solutions that extend from the meter to the control room, enabling the smart grid. Utilizing the Yukon® Advanced Energy Services Platform we offer AMR/AMI, demand response, distribution automation and substation integration and monitoring.

CARHARTT, INC.

5750 Mercury Drive
Dearborn, MI, U.S.A. 48126
Tel: (313)749-6612 • 1-800-217-2895
Fax: (313) 271-6428
Web: www.carharttfr.com
E-Mail: industrial_sales@carhartt.com

CARLON

25701 Science Park Drive
Cleveland, OH, U.S.A 44122
Tel: (800) 322-7566 • Fax: (216) 831-5579
Web: www.carlon.com
E-Mail: carlonsales@carlon.com

CARLTON

CARLTON INDUSTRIES INC.

4225 West State Hwy 71 PO Box 280
La Grange, TX, U.S.A. 78945
Tel: 1-800-231-5988 • Fax: 1-800-231-5934
Web: www.carltonusa.com
E-Mail: sales@carltonusa.com

Carlton Industries manufactures and markets all types of tags, tapes, decals, signs, and security seals. We offer thousands of stock items, low pricing, and same day shipping on many products. We also have low minimums on your custom printed needs and an in-house graphics department to assist you.

CEA TECHNOLOGIES

1155 Metcalfe, Suite 1120
Montreal, QC, CA H3B 2V6
Tel: (514) 866-5377 • Fax: (514) 904-5038
Web: www.ceatech.ca
E-Mail: info@ceatech.ca

CEELOX

13976 Lynmar Blvd.
Tampa, FL, U.S.A 33626
Tel: (813) 769-0918 • Fax: (813) 769-0919
Web: www.ceelox.com
E-Mail: sales@ceelox.com

CENTURION, INC.

2825 S Moorland Rd
New Berlin, WI, U.S.A 53151
Tel: (262) 317-5635 • Fax: (262) 784-0687
Web: www.centonline.com
E-Mail: info@centonline.com

CHAMPION FIBERGLASS, INC.

6400 Spring Stuebner Rd.
Spring, TX, U.S.A 77389
Tel: (281) 655-8900 • Fax: (281) 257-2523
Web: www.championfiberglass.com
E-Mail: info@championfiberglass.com

CICAME ENERGIE INC.

1390-H rue Newton
Boucherville, QC, CA J4B 5H2
Tel: (450) 679-7778 • Fax: (450) 679-9432
Web: www.cicame.ca
E-Mail: info@cicame-energie.ca



CIRCUIT BREAKER SALES CO. INC.

PO Box 1098
Gainesville, TX, U.S.A. 76241
Tel: (940) 665-4444 • Fax: (940) 665-4681
Web: www.cbsales.com
E-Mail: info@cbsales.com

Sale and service of low to medium voltage circuit breakers, motor controls, switchgear, transformers and related equipment. Our specialty is obsolete and discontinued equipment as well as «life extension» services (vacuum retrofit and solid state upgrading). Solutions for everything made in the United States since WWII.

CIRRONET INC.

3079 Premiere Parkway #140
Duluth, GA, U.S.A. 30097
Tel: (678) 684-2000 • Fax: (678) 684-2001
Web: www.cirronet.com
E-Mail: info@cirronet.com

CITEL SURGE PROTECTION

1515 NW 167th Street, Suite 6-303
Miami, FL, U.S.A. 33169
Tel: (305) 621-0022 • Fax: (305) 621-0766
Web: www.citelprotection.com
E-Mail: citel@citelprotection.com

CK COMPOSITES INC.

361 Bridgeport St.
Mount Pleasant, PA, U.S.A. 15666
Tel: (724) 547-4581 • Fax: (724) 547-2890
Web: www.ckcomposites.com
E-Mail: info@ckcomposites.com

COLT ATLANTIC SERVICES

1845 S. Lee CT. Unit C
Buford, GA, U.S.A. 30518
Tel: (770) 831-8135 • (800) 229-2658
Fax: (770) 831-8631
Web: www.coltonline.com
E-Mail: sales@coltonline.com

COMMONWEALTH ASSOCIATES, INC.

P.O. Box 1124, 2700 W. Argyle Street
Jackson, MI, U.S.A. 49204-1124
Tel: (517) 788-3000 • Fax: (517) 788-3003
Web: www.cai-engr.com
E-Mail: caiinfo@cai-engr.com

**COMMSCOPE BIMETALS**

125 Commscope way
Statesville, NC, U.S.A. 28625
Tel: (704) 883-8015 • (800) 982-1708
Fax: (704) 832-7548
Web: www.commscope.com
E-Mail: bimetals@commscope.com
See ad page 44

Commscope BiMetals is one of the world's largest producers of copper clad steel and the single largest volume manufacturer of copper clad aluminum. Available in a variety of gauges, single end or stranded wire, CommScope BiMetals' copper clad steel ground wire is ideal for all your grounding applications.

**COMVERGE, INC.**

120 Eagle Rock Ave, Suite 190
East Hanover, NJ, U.S.A. 07936
Tel: (888) 565-5525 • Fax: (973) 884-3504
Web: www.comverge.com
E-Mail: sales@comverge.com
See ad page 9

Comverge is a leading CLEAN ENERGY company providing innovative solutions to peak challenges through Demand Response. With over 500 utility clients and 4.5 million devices installed, Comverge "smart megawatts" technology is in use across North America. Our "pay-for-performance" programs provide capacity that can reduce emissions, increase reliability, and reduce costs.

**CONCAST INC.**

1010 North Star Drive
Zumbrota, MN, U.S.A. 55992-0069
Tel: (507) 732-4095 • Fax: (507) 732-4094
Web: www.concastinc.com
E-Mail: info@concast.com

Concast Inc. has specialized in precast concrete products for the electrical industry since 1969. Products include cable distribution trench (for below ground substation control, communication/power cables, waste water recovery systems and industrial piping) Box pads, flat pad, ground sleeves, and vaults (which are ideal for pad mount electrical equipment).

CONTROL CENTER LLC A GTE COMPANY

300 Sunport Lane
Orlando, FL, U.S.A. 32809
Tel: (407) 304-5200 • Fax: (407) 304-5201
Web: www.controlcenter.net
E-Mail: mthomas@controlcenter.net

**COOPER POWER SYSTEMS**

1045 Hickory Street
Pewaukee, WI, U.S.A. 53072
Web: www.cooperpower.com

Cooper Power Systems manufactures equipment, components and delivers automated distribution solutions providing customers with comprehensive energy automation solutions – from the meter to the control room.

**COOPER POWER SYSTEMS - CYBECTEC**

730, Commerciale St. Suite 200
St-Jean-Chrysostome, QC, CA G6Z 2C5
Tel: (418) 834-0009 • Fax: (514) 227-5256
Web: www.cybertec.com

Cybertec is a business unit, part of Cooper Power System's Energy Automation Solutions group. The company provides solutions that meet the most demanding real-time and reliability requirements in a number of areas of the power industry. The Cybertec SMP Gateway family of products are specially designed to assist utilities in modernizing their automation systems and integrating new intelligent electronic devices.

CSS GROUP

1400 E. Waterman Street
Wichita, KS, U.S.A. 67211
Tel: (316) 269-9090 • Fax: (316) 269-2650
Web: www.translore.com
E-Mail: info@translore.com

**CURRENT GROUP LLC**

20420 Century Blvd.
Germantown, MD, U.S.A. 20874
Tel: (301) 944-2727 • Fax: (301) 944-2701
Web: www.currentgroup.com
E-Mail: info@currentgroup.com
See ad page 23

CURRENT provides electric utilities a Smart Grid solution that increases the efficiency and reliability of the electric grid while reducing the environmental impact of electric usage. Our integrated solution combines advanced sensing technology, two-way high-speed communications, 24/7 monitoring and enterprise analysis software and related services to provide location-specific, real-time actionable data.

**CXR LARUS CORPORATION**

894 Faulstich Court
San Jose, CA, U.S.A. 95112
Tel: (408) 573-2700 • 1-800-999-9946
Fax: (408) 573-2708
Web: www.cxrlarus.com
E-Mail: mritiz@cxrlarus.com

CXR Larus Corporation is a recognized leader in supplying sophisticated network timing and synchronization products, datacom test equipment, and wireline and fiber optic network access products for utility, governmental, private and public networks. Because of the breadth of products available CXR Larus can be a one-stop supplier for your telecom communications equipment needs.

D**DACA VISION**

6915 Jean-Paul-Lemieux
Laval, QC, CA H7L 5P7
Tel: (514) 347-9499 • Fax: (450) 562-0581
Web: www.dacavision.com
E-Mail: info@dacavision.com

DAFFRON & ASSOCIATES, INC.

1310 South Business 61
Bowling Green, MO, U.S.A. 63334
Tel: (800) 325-0208 • Fax: (314) 569-9679
Web: www.daffron.com
E-Mail: marketing@daffron.com

DATA COMM FOR BUSINESS INC.

2949 County Road 1000 East
Dewey, IL, U.S.A. 61840
Tel: (217) 897-6600 • Fax: (217) 897-1331
Web: www.dcbnet.com
E-Mail: info@dcbnet.com

DAVEY TREE EXPERT COMPANY (THE)

1500 North Mantua Street
Kent, OH, U.S.A. 44240
Tel: (330) 673-9511 • 1-800-447-1667
Fax: (330) 673-0702
Web: www.davey.com
E-Mail: steve.marshall@davey.com

DC SYSTEMS

6900 Koll Center Parkway, Suite 414
Pleasanton, CA, U.S.A. 94566
Tel: (925) 485-0200 • Fax: (925) 485-9284
Web: www.dcsystems.com
E-Mail: sales@dcsystems.com

DCS ENERGY

PO Box 320
South Glastonbury, CT, U.S.A. 06073
Tel: (860) 781-6666
Web: www.dcsenergy.com
E-Mail: info@dcsenergy.com

DEJANA TRUCK & UTILITY EQUIPMENT

490 Pulaski Road
Kings Park, NY, U.S.A. 11754
Tel: (631) 544-9000 x1141 • Fax: (631) 544-0942
E-Mail: ridtensohn@dejana.com

**DELTA STAR, INC.**

3550 Mayflower Drive
Lynchburg, VA, U.S.A. 24501
Tel: 1-800-368-3017 Web: www.deltastar.com
E-Mail: info@deltastar.com
See ad page 131

Delta Star manufactures custom-made quality, medium-power transformers, mobile transformers and substations in the United States.

We are celebrating 100 years of service by investing tens of millions in plant improvements in our Virginia and California locations.

Our Delta/ZTR partnership enables us to be the world leader in large power transformers.

DENT INSTRUMENTS

64 NW Franklin Avenue
Bend, OR, U.S.A. 97701
Tel: (541) 388-4774 • Fax: (541) 385-9333
Web: www.dentinstruments.com
E-Mail: info@dentinstruments.com

DIGILOG INSTRUMENTS, INC

1030 Oak View Drive
Oak Point, TX, U.S.A. 75068-3079
Tel: (972) 294-0033 • Fax: (972) 292-0033
Web: www.framitononline.com
E-Mail: starlogic@pixie.co.za

DIMAT

C/Biscaia 383
Barcelona, IL, Spain 08027
Tel: +34933490700 • Fax: +34933492258
Web: www.dimat.com
E-Mail: info@dimat.com

**DIS-TRAN**

4725 Highway 28 E.
Pineville, LA, U.S.A. 71360
Tel: (318) 448-0274 • Fax: (318) 445-7240
Web: www.distran.com
E-Mail: wendy.gintz@distran.com
See ad page 87

High Voltage Specialist who is the premiere designer and supplier of complete Packaged Substations, tapered tubular steel poles and fabricated steel structures for transmission and substation projects. DIS-TRAN also manufactures and treats Douglas Fir and Southern Yellow Pine distribution wood crossarms and transmission timbers and is FSC Certified.

DMC

14800 S. Figueroa St.
Gardena, CA, U.S.A. 90248
Tel: (310) 323-6200
Web: www.dmcusa.com
E-Mail: customerservice@dmcusa.com

DOMINIC DROLET INSTRUMENTATION INC.

(DDINS)
174 Roland-Jeanneau
Montréal, QC, CA H3E 1R4
Tel: (514) 768-7676 • Fax: (514) 765-7474
Web: www.ddins.com
E-Mail: info@ddins.com

**DOW CORNING CORPORATION**

P.O. Box 994
Midland, MI, U.S.A. 48686-0994
Tel: (989) 496-4400 • Fax: (989) 496-6731
Web: www.dowcorning.com/power

Dow Corning Engineered Elastomers Industry's performance-enhancing solutions meet technical and regulatory requirements of power utilities worldwide, providing standard or specialized high voltage insulator coatings, silicone rubber for composite insulators, cable enhancement fluids, resins and varnishes or high performance transformer fluids. With global manufacturing, distribution, customer service resources and local market presence, Dow Corning is able to tailor solutions that meet customer's needs.

DUECO, INC.

N4 W22610 Bluemound Road
Waukesha, WI, U.S.A. 53186
Tel: (262) 547-8500 • Fax: (262) 547-8407
Web: www.dueco.com
E-Mail: info@dueco.com

DUNCAN INSTRUMENTS CANADA LTD

121 Milvan Drive
Toronto, ON, CA M9L 1Z8
Tel: (416) 742-4448 • (877) 742-4448
Fax: (416) 749-5053
Web: www.duncaninstr.com
E-Mail: info@duncaninstr.com

DUPONT PERSONAL PROTECTION

P.O. Box 2200 Streetsville
Mississauga, ON, CA L5M 2H3
Tel: (800) 387-2122
Web: www.personalprotection.dupont.ca
E-Mail: information@can.dupont.com

DYNAMIC RATINGS, INC.

1275 E. Wisconsin Ave. Unit E
Pewaukee, WI, U.S.A. 53072
Tel: (262) 746-1230 • Fax: (262) 746-1232
Web: www.dynamicratings.com
E-Mail: sales@dynamicratings.com

E**ECOLOGIC ANALYTICS (FORMERLY WACS)**

8011 34th Ave. S., Ste. 205
Bloomington, MN, U.S.A. 55425
Tel: (952) 843-6000 • Fax: (612) 395-5535
Web: www.ecologicanalytics.com
E-Mail: contact@ecologicanalytics.com

EKA SYSTEMS, INC.

20201 Century Blvd, Suite 250
Germantown, MD, U.S.A. 20874
Tel: 301-515-7118
Web: www.ekasystems.com
E-Mail: info@ekasystems.com

ELECTRICAL WORLD INDUSTRIAL SALES CORP.

Box 2536
North Canton, OH, U.S.A. 44720
Tel: (800) 422-0089 • Fax: (330) 494-0306
Web: www.elecworld.com
E-Mail: sales@elecworld.com

ELECTROMAGNETIC CORP

202 William Leigh Drive
Tullytown, PA, U.S.A. 19007
Tel: (215) 949-1900 • Fax: (215) 949-8373
Web: www.electrictestingcorp.com
E-Mail: salesatemc@msn.com

ELECTROMARK CO.

6188 West Port Bay Road P.O. Box 25
Wolcott, NY, U.S.A. 14590
Tel: (315) 594-8085 • (800) 295-8247
Fax: (315) 594-9622
Web: www.electromark.com
E-Mail: customerservice@electromark.com

ELLIOTT EQUIPMENT COMPANY

4427 South 76th Circle
Omaha, NE, U.S.A. 68127
Tel: (402) 592-4500 • Fax: (402) 592-4553
Web: www.elliottequip.com
E-Mail: info@elliottequip.com

**ELSTER**

208 South Rogers Lane
Raleigh, NC, U.S.A. 27610
Tel: (919) 212-4800 • Fax: (919) 212-4801
Web: www.elster-eis.com
See ad page 5

Elster, a global leader in smart metering/smart grid system solutions, has delivered over 2.3 million smart metering devices worldwide. Elster systems allow utilities to implement energy and water conservation measures, demand response and smart grid initiatives, and smart home solutions. Elster helps utilities achieve operational efficiencies resulting in significant value creation across gas/ electricity/water utilities.

ELUMINATION | ENERGY EFFICIENT LED LIGHTING SOLUTIONS

1750 Plummer Street, Unit 15
Pickering, ON, CA L1W 3L7
Tel: Toll Free - 1.866.558.8270
Web: www.elumination.com
E-Mail: info@elumination.com

ENERGATE

2415 Holly Lane, Suite 210
Ottawa, ON, CA K1V 7P1
Tel: (613) 482-7928
Web: www.energateinc.com
E-Mail: info@energateinc.com

ENERTECH CONSULTANTS

494 Salmar Avenue Suite 200
Campbell, CA, U.S.A. 95008
Tel: (408) 866-7266 ext:21 • Fax: (408) 866-7279
Web: www.enertech.net
E-Mail: etcsales@enertech.net

ENETICS, INC.

830 Canning Pkwy
Victor, NY, U.S.A. 14564
Tel: (585) 924-5010 • Fax: (585) 924-7271
Web: www.enetics.com
E-Mail: sales@enetics.com

ENOSERV LLC.

5630 S. Memorial Suite 100
Tulsa, OK, U.S.A. 74145
Tel: (918) 622-4530 • Fax: (918) 622-6569
Web: www.enoserv.com
E-Mail: sales@enoserv.com

**ENSPIRIA SOLUTIONS INC.**

6560 South Greenwood Plaza Boulevard Suite 500
Greenwood Village, CO, U.S.A. 80111-7100
Tel: (303) 520-2513 • Fax: (303) 799-6766

Enspira Solutions is an IT services company providing T&D consulting and systems integration for GIS, Advanced Metering Infrastructure/ Meter Data Management, Outage, Mobile, Work Management, and Automation. Enspira is backed by parent company Osmose Holdings, Inc., with \$550M annual revenue. Enspira's subsidiaries include Convergent Group Corporation and Convergent Group LTD (Canada).

ENVIRONMENTAL PROTECTION SERVICES

4 Industrial Park Drive
Wheeling, WV, U.S.A. 26003
Tel: (304) 232-1590 • Fax: (304) 232-1599
Web: www.envprotsvcs.com
E-Mail: sdreed@epsonline.com

ENVISION

2204 Brothers Road
Santa Fe, NM, U.S.A. 87505
Tel: (512) 353-6000
Web: www.eusc.com
E-Mail: sales@eusc.com

ENXERGY

2336 Preston
West Dundee, IL, U.S.A. 60118
Tel: (608) 565-6290 • Fax: (608) 565-6296
Web: www.enxergy.com
E-Mail: info@enxergy.com

**ESUNTECH, INC.**

17800 Woodward Suite 225
Detroit, MI, U.S.A. 48203
Tel: (519) 341-3586

eSUNTech offers solutions utilizing bleeding edge technologies such as Mobile Computing, Wireless, m2m and RFID for applications in Electrical Utilities, Manufacturing and Distribution/ Warehousing companies.

EXCEL THRU LEARNING

8500 Torbram Road Unit #55
Brampton, ON, CA L6T 5C6
Tel: (905) 789-1467
Web: www.excelthrulearning.com
E-Mail: ebadura@excelthrulearning.com

EXCELERON SOFTWARE (DALLAS**HEADQUARTERS)**

7167 Colleyville Blvd Suite 101
Colleyville, TX, U.S.A. 76034
Tel: (972) 852-2711 • Fax: (972) 346-6902

F**FALCON STEEL COMPANY**

PO Box 162689
Fort Worth, TX, U.S.A. 76161
Tel: (817) 581-9500 • Fax: (817) 581-6898
Web: www.falconsteel.com
E-Mail: sales@falconsteelco.com

FILNOR INC.

227 North Freedom Ave.
Alliance, OH, U.S.A. 44601
Tel: (330) 821-7667 • Fax: (330) 829-3175
Web: www.filnor.com
E-Mail: filnor@filnor.com

FILTRATION SOLUTIONS, INC.

4361 Charlotte Hwy, Suite 301
Lake Wylie, SC, U.S.A. 29710
Tel: (800) 598-1897 • Fax: (803) 831-8476
Web: www.filtrationsolutions.com
E-Mail: sales@filtrationsolutions.com

FIRST DATA UTILITIES: POWERED BY PEACE

6205 Blue Lagoon Drive
Miami, FL, U.S.A. 33126
Tel: (305) 341-2400
Web: www.firstdatautilities.com
E-Mail: information@firstdatautilities.com

**FISO TECHNOLOGIES**

500 St-Jean-Baptiste Avenue Suite 195
Quebec, QC, CA G2E 5R9
Tel: (418) 688-8065 X 241 • Fax: (418) 688-8067
Web: www.fiso.com
E-Mail: info@fiso.com

Fiso Technologies designs and markets fiber optic sensors and high-precision measuring instruments for challenging applications. Many years of experience in real-time winding hot spot temperature monitoring for oil-filled transformers, gives the company a leading position. Its proven technology allows Fiso to monitor temperature for all types of transformers.

FLEX-CORE

FLEX-CORE DIV.

6625 McVey Blvd.
Columbus, OH, U.S.A. 43235
Tel: (614) 889-6152 • Fax: (614) 876-8538
Web: www.flex-core.com
E-Mail: flexcore@msn.com

Flex-Core is a leading manufacturer of split-core and solid-core current transformers, potential transformers, electrical transducers for ac and dc applications, signal conditioners, panel meters, terminal blocks, isolating relays, shunts, and accessories.



FLIR SYSTEMS

16 Esquire Road
N. Billerica, MA, U.S.A. 01862
Tel: (978) 901-8000 • (800) 464-6372
Fax: (978) 901-8887
Web: www.goinfrared.com
E-Mail: moreinfo@flir.com
See ad page 13

Utility organizations are continually searching for ways to efficiently maintain electrical systems. FLIR Systems™ offers a range of infrared camera solutions that energy organizations are using to protect their investment.

Included in the FLIR Systems lineup is the ThermoCAM® GasFindIR™ LW infrared camera for inspecting electrical substation equipment.

FLUKE CORPORATION

P.O. Box 9090
Everett, WA, U.S.A. 98206
Tel: 800-443-5853 • Fax: 425-446-5116
Web: www.fluke.com
E-Mail: fluke-info@fluke.com

Fluke Corporation is the world leader in the design and manufacture of handheld test tools. With a full line of digital multimeters, power quality analyzers and recorders, as well as thermal imagers, the Fluke line of rugged, reliable and accurate tools are widely used in the utility market.

For more information visit www.fluke.com.

FWT INC.

5750 E I-20,
Fort Worth, TX, U.S.A. 76119
Tel: (817) 255-2998 • Fax: (817) 255-2957
Web: www.fwtinc.com

G

G&W ELECTRIC CO.

3500 West 127th Street
Blue Island, IL, U.S.A. 60406
Tel: (708) 388-5010 • Fax: (708) 388-0755
Web: www.gwelec.com
E-Mail: webmail@gwelec.com



GARRETTCOM INC.

213 Hammond Ave.
Fremont, CA, U.S.A. 94539
Tel: (510) 438-9071 • Fax: (510) 438-9072
Web: www.garrettcom.com
E-Mail: mktg@garrettcom.com
See ad page 8

Contact GarrettCom for information on substation-hardened networking products. Ask us about NERC CIP cyber-security compliance in substation networks with the Magnum Secure Networking Framework (MSNF): Secure WAN perimeter, serial and Ethernet port security, access control, video surveillance, network reliability, legacy non-routable protocol solutions, and more.



GDS Associates, Inc.
Engineers and Consultants

GDS ASSOCIATES, INC.

1850 Parkway Place Suite 800
Marietta, GA, U.S.A. 30067
Tel: (770) 425-8100 • Fax: (770) 426-0303
Web: www.gdsassociates.com
E-Mail: lori.staucet@gdsassociates.com

GDS is a multi-service consulting/engineering firm with a broad range of expertise focused on electric/gas/water utilities including power supply planning, transmission, energy efficiency, forecasting, rate services, etc. Other GDS companies include Hi-Line Engineering, specializing in system planning/design and GreenLine Environmental, specializing in ROW vegetation & environmental assessments. Offices in GA, TX, AL, WI, NH, and IN.

GE

4200 Wildwood Parkway
Atlanta, GA USA, U.S.A.
Tel: (678) 844-5476 • Fax: (770) 859-6941
Web: www.ge.com

GE MDS LLC

175 Science Parkway
Rochester, NY, U.S.A. 14620
Tel: (585) 242-9600 • Fax: (585) 242-9620
Web: www.gemds.com

GE MULTILIN

215 Anderson Avenue
Markham, ON, CA L6E 1B3
Tel: (905) 294-6222 • Fax: (905) 201-2098
Web: www.gemultilin.com
E-Mail: gemultilin@ge.com

GENERAL CABLE

4 Executive Boulevard
Suffern, NY, U.S.A. 10901
Tel: (800) 237-2726 • (800) 237-2726
Fax: (845) 369-2529
Web: www.generalcable.com
E-Mail: info@generalcable.com

GENERAL ELECTRIC - CONSUMER & INDUSTRIAL

2300 Meadowvale Blvd
Mississauga, ON, CA L5N 5P9
Tel: (800) 431-7867 • Fax: (905) 858-5793
Web: www.geindustrial.com
E-Mail: kim.clair@ge.com



GEORGE M. FRASER LTD (LACHUTE)

CP 55
Lachute, QC, CA J8H 3X2
Tel: (450) 562-0771 • Fax: (450) 562-0441
Web: www.gmfraser.com
E-Mail: ralph@gmfraser.com

GEORGE M FRASER LTD. is a manufacturers agent/distributor for ELECTROSWITCH switches and relays, ALBRIGHT DC Contactors, SECUCONTROL test interface/test-block/switch, VAMP protection Relays, MARSHBELLO FRAM products such as ATC - DIGITEC and - DIVERSIFIED PHENIX TECHNOLOGIES high voltage/current test equipment, POWERMETRIX power analyzers, SILVERTRONIC test leads and RAPID Portable plating for Silver/copper/Tin etc.

GEORGE M. FRASER LTD (PICKERING)

1815 Ironstone manoir Unit #11
Pickering, ON, CA L1W 3W9
Tel: (905) 420-6555 • Fax: (905) 420-4333
Web: www.gmfraser.com
E-Mail: sales@gmfraser.com

GEOTEK INC.

1421 Second Ave. N.W.
Stewartville, MN USA, CA 55976
Tel: (800) 533-1680 • Fax: (507) 533-4784
Web: www.geotekinc.com
E-Mail: rhylland@geotekinc.com

GLOBAL INSULATOR GROUP

98, Khokhryakov Str.
Ekaterinburg, Ural Region, Russia 620144
Tel: 7-343-2163577 • Fax: 7-343-2163578
Web: www.gig-group.com
E-Mail: gig@gig-group.com

GLP HI-TECH POWER PRODUCTS

505 Grand Bernier Nord
St-Jean-sur-Richelieu, QC, CA J3B 8H9
Tel: (450) 347-0177 • (877) 348-4918
Fax: (450) 347-8077
Web: www.glppower.com
E-Mail: glp@glppower.com

**GOLIGHT INC**

37146 Old Highway 17
Culbertson, NE, U.S.A. 69024
Tel: (308) 278-3131 • Fax: (308) 278-2525
Web: www.golight.com
E-Mail: cbunstock@golight.com

Golight, Inc. manufactures remote control spotlights that are durable, versatile and powerful with three remote options including wireless hand-held, wired, and dash mounted and three mounting options including permanent, magnetic, and suction cup and backed with an industry leading warranty. Contact us at (800) 557-0098.

GR POWER SWITCHGEAR LTD

27/B, 4th Phase, I Da Jeedimetla
Hyderabad, Andhra Pradesh, India 500055
Tel: 91-040-23095589 • Fax: 91-040-23191355
Web: www.grpsl.net
E-Mail: info@grpsl.net

GREENBERG ENGINEERING CO.

PO Box 451
Bala Cynwyd, PA, U.S.A. 19004-0451
Tel: (610) 660-0655
E-Mail: billg19004@yahoo.com

GREEN-PORT ENVIRONMENTAL MANAGERS (ONTARIO)

4 Melanie Drive Unit 23
Brampton, ON, CA L6T 4L1
Tel: (905) 799-2777 • Fax: (905) 458-1702
Web: www.green-port.com
E-Mail: mitt@green-port.com

GROUPE UNI-SPEC

1350 rue Manouane
Chicoutimi, QC, CA G7K 1H6
Tel: (418) 690-0454 • (800) 567-7732
Fax: (418) 690-0269
Web: www.uni-spec.com
E-Mail: info@uni-spec.com

H

HALL'S SAFETY EQUIPMENT CORP

139 Gasper Rd PO Box 230
Grove City, PA, U.S.A. 16127
Tel: (800) 227-4255 • Fax: (724) 458-0592
Web: www.hallssafety.com
E-Mail: hallssafety@hallssafety.com

**HAMBY YOUNG**

1245 Danner Drive
Aurora, OH, U.S.A. 44202
Tel: (330) 562-8444 • (800) 726-8444
Fax: (330) 562-4018
Web: www.hambyyoung.com
E-Mail: gcblunt@hambyyoung.com
See ad page 35

HAMBY YOUNG has been in the material supply business since 1974, focusing on High Voltage applications. In 1980, we began to offer design and supply Substation packages while continuing to support the Transmission and Distribution Line material needs of our customers across the country. Though the bulk of our business is now found in the design and supply of Substations (5kv - 500kv), we continue to support our customer's High Voltage material needs throughout the Industry.



Hammond Power Solutions Inc.

HAMMOND POWER SOLUTIONS INC.

595 Southgate Drive
Guelph, ON, CA N1G 3W6
Tel: (519) 822-2441 • Fax: (519) 822-9701
Web: www.hammondpowersolutions.com

Established in 1917, HPS continues as an industry leader in magnetic transformer design and development. With four plants located throughout North America, we have expanded our manufacturing and product base to offer you the broadest ranges of both standard and special reactors, control and dry-type transformers available anywhere.

HARTING NORTH AMERICA

1370 Bowes Road
Elgin, IL, U.S.A. 60618
Tel: (847) 741-1500 • Fax: (847) 717-9420
Web: www.harting-usa.com
E-Mail: more.info@harting.com



HASTINGS
A WORLDWIDE SUPPLIER OF
Hot Line Tools & Equipment

HASTINGS FIBERGLASS PRODUCTS INC.

770 Cook Road P.O. Box 218
Hastings, MI, U.S.A. 49058-0218
Tel: (269) 945-9541 • Fax: (269) 945-4623
Web: www.hfgp.com
E-Mail: hastings@hfgp.com
See ad pages 39, 41 & 43

Since 1959, Hastings has pioneered design and fabrication of fiber glass products and tools for the electrical power and communications industries.

HAWK IR INTERNATIONAL INC

5309 Monroe Road
Charlotte, NC, CA 28205
Tel: 1-877-4-hawkir • Fax: (336) 217-7957
Web: www.hawk-ir.com
E-Mail: sales@hawk-ir.com

HAZ-MAT RESPONSE TECHNOLOGIES INC.

4626 Santa Fe St.
San Diego, CA, U.S.A. 92109
Tel: (858) 274-4585 • Fax: (858) 274-4589
Web: www.rubberizer.com
E-Mail: russ@rubberizer.com

HD ELECTRIC COMPANY

1475 Lakeside Drive
Waukegan, IL, U.S.A. 60085
Tel: (847) 473-4980 • Fax: (847) 473-4981
Web: www.hdelectriccompany.com
E-Mail: khuggins@hdelectriccompany.com

HEARTLAND SOLUTIONS, INC.

630 Brooker Creek Blvd, Suite 345
Oldsmar, FL, U.S.A. 34677
Tel: (800) 957-3493 • Fax: (877) 779-4567
Web: www.heartlandsolutionsinc.com
E-Mail: info@hland.com

HEATREX INC.

PO Box 515 P.O. Box 515
Meadville, PA, U.S.A. 16335
Tel: (814) 724-1800
Web: www.heatrex.com
E-Mail: sales@heatrex.com

HELIX UNIFORMED LTD

2905 Louis-Amos
Montreal, QC, CA H8T 1C3
Tel: (514) 828-0057 • Fax: (514) 828-0070
Web: www.helix-uni.ca
E-Mail: info@helix-uni.ca

HENAN KOSEN CABLE CO., LTD

Huaihe Road
Zhengzhou, Henan, China 450006
Tel: 0086-371-65318810
Web: www.hnkosen.com
E-Mail: info@hknkosen.com

**HERCULES INDUSTRIES INC.**

P.O. Box 197
Prospect, OH, U.S.A. 43342
Tel: 1-800-345-2590 • Fax: (740) 494-2274
Web: www.herculock.com
E-Mail: dhook@herculock.com

Hercules Industries brings you the complete line of HERCULOCK all brass padlocks. Crafted out of solid brass to withstand harsh environments. Locks can be keyed alike, different, master or grand master.

Also can be keyed to most other popular manufacturers.

**HIGH VOLTAGE INC.**

31 County Rt. 7A
Copake, NY, U.S.A. 12516
Tel: (518) 329-3275 • Fax: (518) 329-3271
Web: www.hvinc.com
E-Mail: sales@hvinc.com
See ad page 117

Manufacturer of portable VLF .1Hz Sinewave AC hipots for cable testing from 28kV to 200kV; AC 50/60Hz. portable hipots to 200kV; dc hipots to 300kV dC; cable fault locators and combination VLF/Thumper to 36kV with controlled energy outputs; aerial lift testers to 200kV AC; oil dielectric testers to 100kV and Tan delta bridge for diagnostic cable tests.

**HIGH VOLTAGE SUPPLY**

Division of Waukesha Electric Systems
9011 Governors Row, Dallas, TX, U.S.A. 75247
Tel: (214) 637-4434 • (800) 338-5526
Fax: (214) 637-1157
Web: www.highvoltagesupply.com
E-Mail: hvsinfo@waukesha.spk.com

Leading manufacturer of transformer, LTC and breaker components including a line of Transformer Health Products®. Valued supplier of LTC services including maintenance training, failure analysis reporting and complete overhauls. In addition, HVS has built a strong reputation as an industry leader in reverse-engineering and design enhancement.

HIGHLAND TECHNOLOGY, INC.

18 Otis Street
San Francisco, CA, U.S.A. 94103
Tel: (415) 551-1700 • Fax: (415) 551-5129
Web: www.highlandtechnology.com
E-Mail: info@highlandtechnology.com

HIGHLINE PRODUCTS

131 Hartwell Ave
Lexington, MA, U.S.A. 02421
Tel: (787)328-3220 • Fax: (781)-861-0675
Web: www.highlineproducts.com
E-Mail: jsullivan@highlineproducts.com

**HIPOTRONICS INC.**

P.O. Box 414, 1650 Route 22 North
Brewster, NY, U.S.A. 10509
Tel: (845) 279-3644 • Fax: (845) 279-2467
Web: www.hipotronics.com
E-Mail: sales@hipotronics.com
See ad page 118

For over 35 years, Hipotronics has been providing the most advanced solutions for your high voltage test & measurement needs. Partnered with Haefely & Tettex, we offer the widest range of test equipment from simple AC/DC Hipots to high end Tan Delta Measurement, IG's and Resonant Test systems.

**HOLOPHANE**

3825, Columbus Road SW Building A
Granville, OH, U.S.A. 43023
Tel: (740) 345-9631 • Fax: (740) 349-4426
Web: www.holophane.com
E-Mail: vkniiffin@holophane.com

Holophane, a leader in lighting solutions for more than a century, is a vertically integrated international manufacturer and marketer of premium quality, highly engineered; lighting systems targeted for the industrial, commercial, emergency and outdoor markets.

**HUBBELL POWER SYSTEMS INC.**

210 North Allen
Centralia, MO, U.S.A. 65240-1395
Tel: (573)-682-5521 • Fax: (573) 682-8714
Web: www.hubbellpowersystems.com
E-Mail: hpsliterature@hps.hubbell.com

Hubbell Power Systems, Inc. manufactures a wide variety of transmission, distribution and substation products including construction, switching and protection products, insulators, arresters, connectors, hot line tools, pole line hardware, cable accessories and underground enclosures. Brands include Anderson, Chance, Fargo, Hubbell, Ohio Brass and Quazite.



Transmission & Distribution Materials • Aslan FRP • Timber Bridges

HUGHES BROTHERS INC.

210 North 13th Street
Seward, NE, U.S.A. 68434
Tel: (402) 643-2991 • Fax: (402) 643-2149
Web: www.hughesbros.com
E-Mail: tim@hughesbros.com
See ad page 121

Since 1921, Hughes Brothers, Inc. has been a leading manufacturer of distribution and transmission framing and pole line hardware. Wood, steel or fiberglass material up to 345kv. Custom manufacturing and engineering available

HUIHONG INTERNATIONAL LIMITED

Shangxue Industrial Area
Shenzhen, China CN518000
Tel: 86-755-21863622
Web: www.sunrisephotonics.com
E-Mail: sara@sunrisephotonics.com

**HV TECHNOLOGIES INC.**

8515 Rixlew Lane
Manassas, VA, U.S.A. 20109
Tel: (703) 365-2330 • Fax: (703) 365-2331
Web: www.hvtechnologies.com
E-Mail: hvsales@hvtechnologies.com

HV TECHNOLOGIES, Inc., the USA subsidiary of LDIC Group, a manufacturer of products for dielectric diagnostics and on-line monitoring instruments for electrical power systems, apparatus and HV components.

HVB AE POWER SYSTEMS INC.

7250 McGinnis Ferry Road
Suwanee, GA, U.S.A. 30024
Tel: (770) 495-1755 • Fax: (770) 623-9214
Web: www.hvbi.com
E-Mail: sales@hvbi.com

IHDEA

215 Lexington Drive
Austin, TX, U.S.A. 78737
Tel: (512) 553-0898
Web: www.ihdea.com
E-Mail: sales@ihdea.com

IMCORP-POWER CABLE RELIABILITY

179 Middle Turnpike
Storrs, CT, U.S.A. 06268
Tel: (860) 427-7620
Web: www.imcorpotech.com
E-Mail: sales@imcorpotech.com

IMMAJ HOLDINGS PVT LTD

Intercan House, 18 KM Main Ferozpur Road
Lahore, Pakistan 53000
Tel: +92-42-581-1222 • Fax: +92-42-581-1666
Web: www.immaj.com
E-Mail: info@immaj.com

IMPACT POWER, INC.

18218 East McDermott, Suite E
Irvine, CA, U.S.A 92614
Tel: (949) 477-9198 • Fax: (949) 477-9195
Web: www.impactpwr.com
E-Mail: sales@impactpwr.com

**IMPLO TECHNOLOGIES**

7030 Woodbine Ave. Suite 500
Markham, ON, CA L3R 6G2
Tel: (905) 513-9084 • Fax: (905) 513-9083
Web: www.implotech.ca
E-Mail: info@implotech.ca

IMPLO manufactures and markets a full line of implosive connectors for high voltage transmission lines and substations. IMPLO is recognized as the world leader in implosive splicing technology, and as an innovator of composite metal connectors, such as grounding pads and copper aluminum connectors, for the electrical utilities industry.

**INCON POWER RELIABILITY PRODUCTS**

P.O. Box 638, 92 Industrial Park Road
Saco, ME, U.S.A. 04072
Tel: (207) 283-0156 • 1-800-872-3455
Fax: (207) 283-0158
Web: www.incon.com
E-Mail: twagner@incon.com

INCON provides intelligent on-line monitors for Electric Utility and Water Utility equipment. Our product line includes transformer load tap changer position monitors, an on-line wear and condition monitor for Electric Power Circuit Breakers, and a group of precision programmable panel instruments used to indicate mechanical position or liquid level in many industrial control systems.

INDUCTIVE COMPONENTS MFG. INC.

P.O. Box 188
Amelia, OH, U.S.A. 45102
Tel: (513) 752-4731 • Fax: (513) 752-4738
Web: www.icmlinc.com

INDUSTRIAL SCIENTIFIC CORPORATION (CANADA)

14845-6 Yonge Street
Aurora, ON, CA L4G 6H8
Tel: (905) 727-5595 • Fax: (905) 727-1594
Web: www.indsci.com
E-Mail: shayzelden@indsci.com

INDUSTRIAL SCIENTIFIC CORPORATION (USA)

1001 Oakdale Road
Oakdale, PA, U.S.A 15071
Tel: (412) 788-4353 • Fax: (412) 488-8353
Web: www.indsci.com
E-Mail: info@indsci.com

INFONETRIX

P.O. Box 640698
Kenner, LA, U.S.A. 70064
Tel: (504) 466-2220 • Fax: (504) 466-2230
Web: www.infonetrix.com

INIVEN

5 Colombia Road
Somerville, NJ, U.S.A 08876
Tel: (908) 722-3770 • Fax: (908) 722-5461
Web: www.iniven.com
E-Mail: iniven@iniven.com

**INNER-TITE CORP.**

110 Industrial Drive
Holden, MA, U.S.A. 01520
Tel: (508) 829-6361 • Fax: (508) 829-4469
Web: www.inner-tite.com
E-Mail: security@inner-tite.com
See ad page 28

Inner-Tite Corp. is the leading manufacturer of security devices sold exclusively to electric, gas, water and telecommunications utility companies. Our comprehensive line of Locking Devices, Meter Seals and Mechanical Accessories are regarded as the highest quality and are used worldwide to secure a variety of meters and enclosures.

INNOVATIVE UTILITY PRODUCTS CORP.

PO Box 1667
Van Buren, AR, U.S.A 72957
Tel: (479) 410-2098 • Fax: (479) 410-3260
Web: www.iupcorp.com
E-Mail: iupcorp@ipa.net

INSULBOOT A DIV. OF PLASTIC DIP MOLDINGS

PO Box 450
Plumsteadville, PA, U.S.A 18949
Tel: (215) 766-2020 • Fax: (215) 766-2222
Web: www.insulboot.com
E-Mail: sales@insulboot.com

**INTERGRAPH CORPORATION**

61 Inverness Drive East 102
Englewood, CO, U.S.A. 80112
Tel: (303) 785-9835 • Fax: (303) 799-8159
Web: www.intergraph.com
E-Mail: linda.bischoff@intergraph.com

Intergraph supplies end-to-end solutions for operations and engineering to the electric industry. Intergraph's utility-specific geographic information systems (GIS) and geospatial resource management (GRM) applications support critical workflow processes for market analysis; facilities design, analysis, and security; operations and maintenance, trouble call and outage management, automated dispatching, and mobile workforce management.

J**J & Y ENGINEERING SERVICES INC.**

6777-B Engle Road
Cleveland, OH, U.S.A. 44130
Tel: (440) 891-1130 • Fax: (440) 891-1131
Web: www.jyengineering.com
E-Mail: gjohnston@jyengineering.com

Company provides structural engineering and steel detailing for electrical substation (15 KV to 500 KV) and transmission projects. We design and detail structures (steel, aluminum, tubular, wide flanged, latticed, and tapered tubular), transmission towers and industrial structures and foundations. Our company has been providing design services since 1981.

JARRAFF INDUSTRIES

1730 Gault Street
St. Peter, MN, U.S.A 56082
Tel: (800) 767-7112 • Fax: (507) 934-8690
Web: www.jarraff.com
E-Mail: jarraff@jarraff.com

K**K & H INDUSTRIES INC.**

8656 Delameter Road
Angola, NY, U.S.A. 14006
Tel: (716) 549-0135 • Fax: (716) 549-2725
Web: www.khindustries.com
E-Mail: khind@msn.com

K&H Industries Inc. is a U.S. manufacturer of extremely durable temporary lighting and electrical power solutions for utilities service. Working closely with customers to design solutions that meet their unique needs, K&H improves worker safety and productivity with products like the StarBeam® and NightRay® remote-controlled vehicle-mounted lighting systems.

KEMA INC.

67 South Bedford Street Suite 201 East,
Burlington, MA, U.S.A. 01803-5177
Tel: (781) 273-5700 • Fax: (781) 229-4867
Web: www.kema.com
E-Mail: info@kemaconsulting.com

KERSHAW

P. O. Box 244100
Montgomery, AL, U.S.A 36124
Tel: (866) 537-7429 • Fax: (334) 387-9375
Web: www.kershawusa.com
E-Mail: info@kershawusa.com

**K-LINE INSULATORS LIMITED**

50 Passmore Avenue
Toronto, ON, CA M1V 4T1
Tel: (416) 292-2008 • Fax: (416) 292-2094
Web: www.k-line.net
E-Mail: insulators@k-line.net

Celebrating our 25th Anniversary, K-LINE INSULATORS LIMITED (KLI) manufactures premium quality, silicone rubber insulators for T&D applications 15 kV - 400 kV. Our proprietary silicone rubber formulation, innovative designs, advanced manufacturing processes, rigorous quality control and specialized Customer service position KLI as the logical choice for your insulator needs. Trust the field proven durability and superior performance of KLI products to enhance system reliability

K-LINE INSULATORS USA INC

200 Buell Road C-11
Rochester, NY, CA 14624
Tel: (585) 235-2870 • Fax: (585) 235-3292
Web: www.k-line.net
E-Mail: k-lineusa@k-line.net

KONČAR D&ST INC.

Josipa Mokrovića 8.
Zagreb, Croatia (Hrvatska) 10000
Tel: +385-1-3783732 • Fax: +385-1-3794050
Web: www.koncar-dst.hr
E-Mail: sales@koncar-dst.hr

**KRENZ & COMPANY INCORPORATED**

P.O. Box 187
Germantown, WI, U.S.A. 53022
Tel: (262) 255-2310 • Fax: (262) 255-2904
Web: www.krenzvent.com
E-Mail: krenz@krenzvent.com

For over 75 years, Krenz & Company has been the industry leader for Transformer Cooling Fans and Accessories.

Krenz & Company maintains an extensive inventory in order to provide superior service to our customers. All of our products are quality engineered and performance tested to assure you of dependable service.

Krenz products are made in the U.S.A.

K-TEK ELECTRO SERVICES LTD

37 Sandiford Drive
Stouffville, ON, CA L4A 7X5
Tel: (905) 640-0660 • Fax: (905) 640-8566
Web: www.k-line.ca
E-Mail: kramnarine@k-line.ca

KUNZ GLOVE CO.

339 North Oakley Blvd.
Chicago, IL, U.S.A 60612
Tel: (312) 733-8780 • Fax: (312) 733-5474
Web: www.kunzglove.com
E-Mail: info@kunzglove.com

L**LAKEPORT EQUIPMENT LTD**

169 Industrial Park Rd
Colborne, ON, CA K0K 1S0
Tel: (866) 525-7678 • Fax: (905) 355-3336
Web: www.lakeportequip.com
E-Mail: sweatherby@lakeportequip.com

LAKEPORT POWER LTD

169 Industrial Park Rd. RR#2
Colborne, ON, CA K0K 1S0
Tel: (905) 355-3281 • Fax: (800) 293-1909
Fax: (905) 355-3336
Web: www.lakeportpower.com
E-Mail: info@lakeportpower.com

**LANDIS+GYR INC.**

2800 Duncan Road
Lafayette, IN, U.S.A. 47904-5012
Tel: (765) 742-1001 • Fax: (765) 429-2667
Web: www.landisgyr.us
E-Mail: salesinfo@us.landisgyr.com

Landis+Gyr is a leading supplier of metering devices and innovative AMI metering systems and solutions for the electric utility market. A complete electric metering product portfolio including Residential, Commercial & Industrial, and Grid meter platforms are available that offers a highly flexible approach to Advanced Metering Infrastructure (AMI) and strategic third-party AMI Technologies.

LAUREL HILL GIS, INC

307 Gross Street
Longmont, CO, U.S.A 80501
Tel: (303) 772-6856 • Fax: (303) 772-7591
Web: www.laurelhillgis.com
E-Mail: info@laurelhillgis.com

LEHMAN ENGINEERING COMPANY

P. O. Box 29160
Richmond, VA, U.S.A 23242
Tel: (804) 360-9288
Web: www.lehmanengineering.com
E-Mail: info@lehmanengineering.com

LIFT-ALL, DIVISION OF HYDRA-TECH, INC.

3020 Commercial Road
Fort Wayne, IN, U.S.A 46809
Tel: (260) 747-0526 • Fax: (260) 747-1724
Web: www.lift-all.net
E-Mail: sales@lift-all.net

**LOCWELD INC.**

50 Iberville
Candiac, QC, CA J5R 1J5
Tel: (450) 659-9661 • Fax: (450) 444-3111
Web: www.locweld.com
E-Mail: info@locweld.com

LOCWELD INC celebrates 60 years of transmission tower design and fabrication experience of both lattice steel structures and tubular pole configurations. Throughout LOCWELD's history, we have made every effort to pull together all the key elements to take care of a project from beginning to end at one location.

LOR MANUFACTURING CO., INC.

7131 W. Drew Rd.
Weidman, MI, U.S.A 48893
Tel: (989) 644-2581 • Fax: (989) 644-6157
Web: www.lormfg.com
E-Mail: info@lormfg.com

LPS LABORATORIES/PT TECHNOLOGIES

4647 Hugh Howell Road
Tucker, GA, U.S.A 30085
Tel: (800) 241-8334 • Fax: (800) 543-1563
Web: www.lpslabs.com
E-Mail: bbowers@lpslabs.com

LUCAS-MILHAUPT, INC., A HANDY & HARMAN CO.

5656 S. Pennsylvania Ave.
Cudahy, WI, U.S.A 53110
Tel: (414) 769-6000 • Fax: (414) 769-1093
Web: www.lucasmilhaupt.com
E-Mail: info@lucasmilhaupt.com

LUG-ALL CORPORATION

604 Hemlock Road
Morgantown, PA, U.S.A 19543
Tel: (877) 658-4255 • Fax: (610) 286-9661
Web: www.lug-all.com
E-Mail: sales@lug-all.com

LUMASENSE TECHNOLOGIES

3033 Scott Blvd.
Santa Clara, CA, U.S.A. 95054
Tel: (408) 727-1600 • Fax: (408) 727-1677
Web: www.lumasenseinc.com
E-Mail: info@lumasenseinc.com

M**MAGNETIC SHIELD CORP.**

740 N Thomas Dr.
Bensenville, IL, U.S.A. 60106
Tel: (630) 766-7800 • 1-800-304-5665
Fax: (630) 766-2813
Web: www.magnetic-shield.com
E-Mail: rdasso@magnetic-shield.com

MAJORPOWER CORPORATION

7011 Industrial Drive
Mebane, NC, U.S.A 27302
Tel: (919) 563-6610 • Fax: (919) 563-6620
Web: www.majorpower.com
E-Mail: sales@majorpower.com



MANITOBA HVDC RESEARCH CENTRE INC.

244 Cree Crescent
Winnipeg, MB, CA R3J 3W1
Tel: (204) 989-1240 • Fax: (204) 989-1277
Web: www.pscad.com
E-Mail: info@pscad.com
See ad page 40

The Manitoba HVDC Research Centre provides PSCAD® (Power Systems Computer-Aided Design) software for electromagnetic transient simulation of a wide range of applications including wind, power electronics, power quality, controls, and protection. Engineering services for PSCAD simulation and model development, training, and studies are also available.

Visit www.hvdc.ca for more information.

MAPFRAME CORPORATION

5420 LBJ Freeway Suite 1250
Dallas, TX, U.S.A. 75240
Tel: (214) 741-2264
Web: www.mapframe.com
E-Mail: info@mapframe.com

MATROX GRAPHICS INC.

1055 Saint-Regis Blvd.
Dorval, QC, CA H9P 2T4
Tel: (514) 822-6000, ext. 2638 • Fax: (514) 822-6363
Web: www.matrox.com/graphics
E-Mail: technicalsales@matrox.com

MAYSTEEL LLC

P.O. Box 1240
N89 W14700 Patritia Drive,
Menomonee Falls WI, U.S.A. 53052-1240
Tel: (262) 251-1632 • (800) 255-1247
Fax: (262) 251-8307
Web: www.maysteel.com

MEASUREMENT SYSTEMS INTERNATIONAL (MSI)

14240 Interurban Avenue South, STE 200
Seattle, WA, U.S.A. 98168-4661
Tel: (206) 433-0199 • Fax: (206) 244-8470
Web: www.msiscals.com
E-Mail: info@msiscals.com

MEASUREMENTS INTERNATIONAL INC. (U.S.A)

812 Proctor Ave
Ogdensburg, NY, U.S.A. 13669
Tel: (760) 798-2535 • Fax: (760) 452-7800
Web: www.mintl.com
E-Mail: miusa@mintl.com

MEDIC FIRST AID INTERNATIONAL

1450 Westec Dr.
Eugene, OR, U.S.A. 97402
Tel: (800) 800-7099 • Fax: (541) 344-7429
Web: www.medicfirstaid.com
E-Mail: response@medicfirstaid.com

METALPOL

Santiago Papasquiaro #158, Parque Industrial Lagunero
Gómez Palacio, Durango, Mexico 35070
Tel: 52-871-750-0300
Web: www.metalpol.com.mx
E-Mail: utilitysales@metalpol.com.mx

MeterSmart

METERSMART

2212 Arlington Downs Road Suite 204
Arlington, TX, U.S.A. 76011
Tel: (817) 652-1933 • (866) 944-4868
Fax: (817) 652-1935
Web: www.metersmart.com

MeterSmart offers a portfolio of business and system integration solutions to utilities and their customers that reduce costs, improve operating efficiencies, and increase customer satisfaction. MeterSmart's suite of advanced metering and energy services include meter data management, settlement services, turnkey AMR/AMI project management, demand response, time-based pricing, and customer energy information services.



METER-TREATER INC.

1349 South Killian Drive
Lake Park, FL, U.S.A. 33403
Tel: (561) 845-2007 • 1-800-638-3788
Fax: (561) 848-2372
Web: www.metertreater.com
E-Mail: sales@metertreater.com

Over twenty years ago, the Meter-Treater® brand received recognition for being the first Meterbase Surge Protector in the Industry. Since then Meter-Treater's product line has evolved to include a vast array of AC Power and Communications Protectors. A New Generation of State-of-the-Art Modular Meterbase Protection will be available soon!

METRO POWER COMPANY

S4/1020 Wellington Street
West Perth, Western Australia 6005
Tel: +61 8 9485 1121 • Fax: +61 8 9485 1119
Web: www.metropower.com.au
E-Mail: admin@metropower.com.au

MICROSOL

92 Cogwheel Lane
Seymour, CT, U.S.A. 06483
Tel: (203) 888-3002 • Fax: (203) 888-7640
Web: www.microsol.com
E-Mail: sales@microsol.com

MICROTUX ELECTRONICS

2929 N. Central Expressway, Suite 250
Richardson, TX, U.S.A. 75080
Tel: (972) 479-1011 • Fax: (972) 479-1015
Web: www.microtuxelectronics.com
E-Mail: sales@microtuxelectronics.com

MIDAL CABLES

4 Robert Speck Parkway, Suite 1500
Mississauga, ON, CA L5A4C3
Tel: (905) 896-6953 • Fax: (905) 896-6954
Web: www.midalcable.com
E-Mail: rohit@midalinternational.com

MILLER FALL PROTECTION

1345 15th St.
Franklin, PA, U.S.A. 16323
Tel: (800) 873-5242 • Fax: (800) 982-4078
Web: www.millerfallprotection.com
E-Mail: tstein@bacou-dalloz.com

MILLERBERND MANUFACTURING COMPANY

622 6th St. S
Winsted, MN, U.S.A. 55395
Tel: (320) 485-2111
Web: www.millerberndmfg.com
E-Mail: dclark@millerberndmfg.com

MILSOFT UTILITY SOLUTIONS

4400 Buffalo Gap Road Suite 5150
Abilene, TX, U.S.A. 79606
Tel: (325) 695-1642 • 1-800-344-5647
Fax: (325) 690-0338
Web: www.milsoft.com
E-Mail: info@milsoft.com



MINCOM INC.

6455 S Yosemite St. Suite 800
Greenwood Village, CO, U.S.A. 80111
Tel: (303) 446-9000 • Fax: (303) 446-8664
Web: www.mincom.com
E-Mail: lori.bennett@mincom.com

Mincom Customer Watch and Smart Billing combine advanced SOA technology with industry best practices to deliver a flexible CIS and AMI solution with low TCO.

The solution enables any utility to optimize customer information and billing operations for both regulated and non-regulated products and services. For further information: www.mincom.com.

MOLONEY ELECTRIC INC.

MOLONEY ELECTRIC, INC.

213 Sterling Road
Toronto, ON, CA M6R 2B4
Tel: (416) 534-9226 • Fax: (416) 534-6906
Web: www.moloney-electric.com
E-Mail: sales@moloney-electric.com

Moloney Electric has a century long tradition of excellence and innovation in the design and manufacture of reliable, high quality transformers. In that time we've provided cost effective solutions for thousands of different transformer applications. Now, as part of the UPT Group of Companies, we have expanded our product range up to 30 MVA.

MSE POWER SYSTEMS, INC.

403 New Karner Road
Albany, NY, U.S.A. 12205
Tel: (518) 452-7718 • Fax: (518) 452-7716
Web: www.msepower.com
E-Mail: info@msepower.com

MVA POWER INC.

1, Holly Road
Montreal, QC, CA H3X 3K6
Tel: (450) 589-0445 • Fax: (450) 589-0733
Web: www.mvapower.qc.ca
E-Mail: info@mvapower.qc.ca

N

NAES POWER CONTRACTORS

1180 NW Maple St., Suite 200
Issaquah, WA, U.S.A 98027
Tel: (425) 961-4700 • Fax: (425) 961-4646
Web: www.naes.com/npc
E-Mail: steve.muchlinski@naes.com

NASCO INDUSTRIES INC.

3 North East 21st Street
Washington, IN, U.S.A 47501
Tel: (800) 767-4288 • (812) 254-6476
Fax: (812) 254-6476
Web: www.nascocinc.com
E-Mail: sales@nascocinc.com

NATIONAL BRONZE & METALS, INC.

PO Box 800818
Houston, TX, U.S.A 77280
Tel: (713) 869-9600 • Fax: (713) 869-9600
Web: www.nbmmetals.com
E-Mail: sales@nbmmetals.com

N-DIMENSION SOLUTIONS INC.

9030 Leslie Street, Unit 300
Richmond Hill, ON, CA L4B 1G2
Tel: (905) 707-8884 • Fax: (905) 707-0886
Web: www.n-dimension.ca
E-Mail: sales@n-dimension.ca

**NEOPTIX FIBER OPTIC SENSORS**

1415 Boul. Charest Ouest Suite 220
Quebec, QC, CA G1N 4N7
Tel: (418) 687-2500 • Fax: (418) 687-2425
Web: www.neoptix.com
E-Mail: info@neoptix.com
See ad on Front Cover

Neoptix Fiber Optic Sensors provides a complete range of fiber optic monitoring equipment for true and direct winding temperature monitoring of dry and oil-filled transformers. Neoptix temperature probes are ruggedized and designed to withstand manufacturing (procedures) tough environments, heat run tests and long term measurement reliability.

Monitoring systems are available with 1 to 512 channels, with most common communication protocols including serial, Ethernet, MODBUS, DNP 3.0 and IEC 61850.

**NESCO INC.**

3112 East State Road 124
Bluffton, IN, U.S.A. 46714
Tel: (260) 824-6340 • 1-800-252-0043
Fax: (260) 824-6350
Web: www.nescosales.com
E-Mail: nesco@nescosales.com
See ad page 138

Nesco Sales & Rentals has over 1,000 new & used Bucket Trucks, Digger Derricks, Truck Cranes, Pressure Diggers, Aerial Platforms, Sign Trucks, Pullers/Tensioners, Reel Trailers, Pole Trailers, Underground Equipment, Cable Rodders, Cable Pullers, Mini Diggers, Service Trucks, Utility Trucks, Augers and More. We not only sell and rent this equipment, but offer leasing & rent to purchase options.

**NEXANS**

140 Allstate Pkwy
Markham, ON, CA L3R 0Z7
Tel: (905) 944-4300 • (800) 268-9473
Fax: (905) 944-4330
Web: www.nexansenergy.com
E-Mail: rick.vascotto@nexans.com

Nexans is a diversified wire and cable manufacturer of Power and Equipment cables in North America.

Nexans has been designing, manufacturing and delivering cables to customers in North America and around the world since 1911. Major utilities, distributors, and contractors recognize us a quality supplier and a technology leader.

NORAM-SMC, INC.

4530 S. Sheridan Suite 118
Tulsa, OK, U.S.A 74145
Tel: (918) 622-5725 • Fax: (918) 664-2073
Web: www.noramsmc.com
E-Mail: sales@noramsmc.com

**NOVINIUM**

22019 70th Avenue South
Kent, WA, U.S.A. 98032
Tel: (206) 529-4828 • Fax: (206) 774-9754
Web: www.novinium.com
E-Mail: rich.brinton@novinium.com
See ad page 21

Novinium, the technology leader in cable restoration, has developed a second generation product for cable injection, which is safer to use, extends buried cable life 40-years, and does not leave any soak bottles behind. The installation takes less time, the fluid acts faster, and you get a 40-year warranty.

NURI TELECOM CO., LTD.

B-10F Woolim Lion's Valley, 371-28, Gasan-dong, Geumcheon-gu
Seoul, Korea 153-786
Tel: +82-2-78-0741 • Fax: +82-2-78-0704
Web: www.nuritelecom.com
E-Mail: kylakim@nuritelecom.com

NXTPHASE T&D CORPORATION

2635 Lilloet St.
Vancouver, BC, CA V5M 4P7
Tel: (604) 215-9822 x 343 • Fax: (604) 215-9833
Web: www.nxtphase.com
E-Mail: info@nxtphase.com

NYNAS CANADA INC.

201 City Centre Drive Suite 610
Mississauga, ON, CA L5B 2T4
Tel: (905) 804-8540 • Fax: (905) 804-8543
Web: www.nynas.com
E-Mail: pierre.barras@nynas.com

O

OFIL LTD

13a Einstein Street, P.O. Box 4016
Nes-Ziona, Israel, Brazil 74140
Tel: +972-8 9 407 953 • 1-866-279-8672
Fax: +972-8 9 407 873
Web: www.ofilsystems.com
E-Mail: ofil@ofilsystems.com

OHIO SEMITRONICS INC.

4242 Reynolds Drive
Hilliard, OH, U.S.A. 43026
Tel: (614) 777-1005 • 1-800-537-0277
Fax: (614) 777-4511
Web: www.ohiosemi.com
E-Mail: sales@ohiosemitronics.com

OIL BARRIERS AUSTRALASIA

737 Tauwhare Rd., RD4
Hamilton, Waikato, New Zealand 3284
Tel: 006478295829
Web: www.oilbarriers.co.nz
E-Mail: info@oilbarriers.co.nz

**OLAMETER INC.**

300 Industrial Parkway South
Aurora, ON, CA L4G 3T9
Tel: (905) 841-1167 • (800) 903-7003
Fax: (905) 841-1288
Web: www.olameter.com
E-Mail: info@olameter.com

As an independent metering specialist, Olameter offers comprehensive outsourcing solutions to more than 70 clients across North America, supporting over 3.2 million meters. Olameter serves electric, gas, and water utilities with the principle focus on the design, procurement, installation and operation of metering infrastructures and their related data management systems.

OMICRON ELECTRONICS CORP. USA

12 Greenway Plaza Suite 1510
Houston, TX, U.S.A. 77046
Tel: 1-800-omicron
Web: www.omicronusa.com
E-Mail: info@omicronusa.com



OPAL-RT

1751 Richardson, Suite 2525
Montreal, QC, CA H3K 1G6
Tel: (514) 935-2323 • Fax: (514) 935-4994
Web: www.opal-rt.com
E-Mail: info@opal-rt.com
See ad page 93

Opal-RT develops Real-Time Digital Simulators and Hardware-in-the-Loop testing equipment for electrical, power electronic, and mechanical systems. Companies like ABB, DENSO, General Electric, Hitachi, Mitsubishi Electric and Toyota use Opal-RT products to conduct rapid control prototyping, high fidelity real-time simulation, and HIL testing of electric drives, power electronics and power distribution networks used in manufacturing, transportation, and by electrical utilities. Opal-RT's products are also used by universities and research centres worldwide.



OPEN SYSTEMS INTERNATIONAL INC.

3600 Holly Lane North Suite 40
Minneapolis, MN, U.S.A. 55447-1286
Tel: (763) 551-0559 • Fax: (763) 551-0750
Web: www.osii.com
E-Mail: sales@osii.com
See ad page 25

Open Systems International, Inc. (OSI) is the leading supplier of open automation solutions for real-time control and network management for utilities worldwide, consistently delivering unmatched product openness, price, functionality and total customer satisfaction. OSI's innovative, industry-leading solutions include SCADA, EMS, DMS, GMS, RTUs and Substation Automation.



OPSSENS FIBER OPTIC SENSORS

2014 Cyrille Duquet Bureau 125
Sainte-Foy, QC, CA G1N 4N6
Tel: (418) 682-9996 • Fax: (418) 682-9939
Web: www.opsens.com
E-Mail: francis.raveneau@opsens.com

Opsens provides robust, innovative and comprehensive fiber optic sensing solutions for accurate, direct, real-time transformer winding hot-spot temperature monitoring. Our fiber optic sensors and signal conditioners address the critical issues encountered by transformer manufacturers and electric utilities managers: robust products, easy to install, reliable on the long run and easily integrated.

OPTIMAL GEOMATICS INC.

100 - 625 West Kent Avenue
Vancouver, BC, CA V6P 6T7
Tel: (604) 654-1850 • Fax: (604) 654-1880
Web: www.optimalgeo.com
E-Mail: info@optimalgeo.com

OPTIMIZED DEVICES

220 Marble Ave
Pleasantville, NY, U.S.A. 10570
Tel: (914) 769-6100 • Fax: (914) 769-6102
Web: www.optdev.com
E-Mail: sales@optdev.com

ORBIS TRADE INC

1110 Brickell Ave., Suite 800
Key Biscayne, FL, U.S.A. 33131
Tel: (305) 358-9032 • Fax: (305) 416-5889
Web: www.orbistradeinc.com
E-Mail: sales@orbistradeinc.com

ORIGO CORPORATION

6225 E. Saguaro Vista Ct.
Cave Creek, AZ, U.S.A. 85331
Tel: (480) 473-1995
Web: www.origocorp.com
E-Mail: origocorp@origocorp.com



OSMOSE UTILITIES SERVICES, INC.

980 Ellicott St.
Buffalo, NY, U.S.A. 14209
Tel: (716) 319-3460 • Fax: (716) 882-7822
Web: www.osmoseutilities.com
E-Mail: kwalker@osmose.com

Osmose® provides T&D asset inspection, maintenance repair services and utility data systems solutions. Services include pole inspection & restoration; field surveys for network connectivity & GIS quality; on-site support for engineering and systems support. FastGate® data solutions connect you to the location and condition of network assets from your desktop.

OX CREEK ENERGY

P.O. Box 600
Montebello, WI, U.S.A. 53949
Tel: (608) 589-5513 • (800) 531-6232
Fax: (608) 589-5509
Web: www.ox-creek-energy.com
E-Mail: oxcreek@maqs.net

P

PATELMECH INDIA

C-1, 292, G.I.D.C. Phase-2, Dared By Pass Road,
Jamnagar, GU, India 361004
Tel: +91-288-2730199 • Fax: +91-288-2730399
Web: www.patelmech.com
E-Mail: sanket@patelmech.com



PAUWELS CANADA INC.

101 Rockman Street
Winnipeg, MB, CA R3T 0L7
Tel: (204) 452-7446 • (800) 665-9450
Fax: (204) 284-2696
Web: www.pauwels.com
E-Mail: info@pauwels.com
See ad page 130

Pauwels is a wholly-owned subsidiary of Crompton Greaves Ltd. and is one of the world's leading manufacturers of three-phase transformers. At Pauwels Canada in Winnipeg we design and manufacture generator step-up transformers, autotransformers, power station step-down transformers, HVDC converter transformers, and mobile substations for numerous customers in the Canadian and American markets.



PCORE ELECTRIC COMPANY, INC.

135 Gilbert Street
LeRoy, NY, U.S.A. 14482
Tel: (585) 768-1200 • Fax: (585) 768-1212
Web: www.pcoreelectric.com
E-Mail: info@pcoreelectric.com

PCORE Electric, North America's only company 100% focused on the manufacturing of capacitance graded bushings, and related components, offers a wide range of products: 15kV-69kV PRC® Bushings, 25kV-500kV POC® Bushings, and 25kV GSU Bushings. Our time and cost-saving products include PCORE® Test Terminals, Bushing Repair, and the patented Quick Link Bushing™.

PELSUE COMPANY

2500 South Tejon Street
Englewood, CO, U.S.A. 80110
Tel: (800) 525-8460 Web: www.pelsue.com
E-Mail: sales@pelsue.com

PENN SEPARATOR CORP

P.O. Box 340
Brookville, PA, U.S.A. 15825
Tel: (814) 849-7328 • Fax: (814) 849-4510
Web: www.pennseparator.com
E-Mail: info@pennseparator.com

PENN-UNION

229 Waterford Street
Edinboro, PA, U.S.A. 16412
Tel: (814) 734-1631 • Fax: (814) 734-4946
Web: www.penn-union.com
E-Mail: info@penn-union.com

**PHENIX TECHNOLOGIES INC.**

75 Speicher Drive
Accident, MD, U.S.A. 21520
Tel: (301) 746-8118 • Fax: (301) 895-5570
Web: www.phenixtech.com
E-Mail: info@phenixtech.com
See ad page 33

Phenix Technologies is a leading manufacturer and global supplier of high voltage, high current and high power test systems and components. Our test systems are in operation around the world. Our 70,000 sq. foot headquarters is a modern manufacturing facility where all the major components of our systems are produced.

PHOENIX CONTACT LTD.

235 Watline Avenue
Mississauga, ON, CA L4Z 1P3
Tel: (905) 890-2820 • Fax: (905) 890-0180
Web: www.phoenixcontact.ca
E-Mail: info@phoenixcontact.ca

PHOTON CONTROL INC.

200-8363 Lougheed Hwy
Burnaby, BC, CA V5A 1X3
Tel: (604) 422-8861 • Fax: (604) 422-8409
Web: www.photon-control.com
E-Mail: info@photon-control.com

PHYSICAL ACOUSTICS CORPORATION

195 Clarksville Road
Princeton Junction, NJ, Algeria 08550
Tel: (609) 716-4000 • Fax: (609) 716-0706
Web: www.pacndt.com
E-Mail: sales@pacndt.com

PLANAR SYSTEMS, INC.

1195 NW Compton Drive
Beaverton, OR, U.S.A. 97006
Tel: (503) 748-1100 • Fax: (503) 582-8570
Web: www.planarcontrolroom.com
E-Mail: controlroom@planar.com

PLASTIC TECHNIQUES, INC.

P.O. BOX 250
Goffstown, NH, U.S.A. 03045
Tel: (603) 645-6800 • Fax: (603) 623-0918
Web: www.plastictechniques.com
E-Mail: sales@plastictechniques.com

POLYBRITE INTERNATIONAL

1751 W. Diehl Road, Suite 110
Naperville, IL, U.S.A. 60563
Tel: (800) 320-3801 • Fax: (630) 717-5646
Web: www.polybrite.com
E-Mail: salesinfo@polybrite.com

**POLYCAST INTERNATIONAL**

965 Sherwin Road
Winnipeg, MB, CA R3H 0T8
Tel: (204) 632-5428 • (800) 665-7445
Fax: (204) 697-0314
Web: www.polycastinternational.com

Since 1972, Polycast has focused on becoming an industry leader in the design and manufacture of epoxy cast components for the hydro-electric industry. We have continually overcome the challenges, obstacles and stereotypes faced within the industry, to emerge as a supplier of quality engineered products for a variety of industries.

POSI-PLUS TECHNOLOGIES INC.

10 Artisan Blvd.
Victoriaville, QC, CA G6P 7E4
Tel: (800) 758-5717 • Fax: (819) 758-9529
Web: www.posi-plus.com
E-Mail: sales@posi-plus.com

POSITRONIC INDUSTRIES INC.

423 N. Campbell Ave
Springfield, MO, U.S.A. 65806
Tel: (417) 866-2322 • (800) 641-4054
Fax: (417) 866-4115
Web: www.connectpositronic.com
E-Mail: info@connectpositronic.com

POWEL INC.

930 Blue Gentian Road Suite 1300
St. Paul, MN, U.S.A. 55121
Tel: (651) 251-3005 • Fax: (651) 251-3006
Web: www.powelinc.com
E-Mail: frederik.tensythoff@powel.com

POWER CORE ENGINEERING, INC.

2821 North 4th Street; MEC Suite #223
Milwaukee, WI, U.S.A. 53212-2366
Tel: (414) 263-3455
E-Mail: ctisser-pce@juno.com

**POWER ENGINEERS, INC.**

3940 Glenbrook Dr. P.O. Box 1066
Hailey, ID, U.S.A. 83333
Tel: (208) 788-3456 • Fax: (208) 788-2082
Web: www.powereng.com
E-Mail: tandd@powereng.com
See ad page 19

POWER Engineers specializes in T&D services, including overhead, underground and substation design, system studies, SCADA, environmental compliance, routing and siting, GIS, construction management, and testing. Founded in 1976, POWER Engineers is an employee-owned company with offices throughout the United States and abroad.

POWER LINE HARDWARE LLC

245 N. Lane Avenue
Jacksonville, FL, U.S.A. 32254
Tel: (904) 695-9880 • Fax: (904) 695-9717
Web: www.powerlinehardware.com
E-Mail: sales@powerlinehardware.com

POWER SUBSTATION SERVICES

4 Industrial Park Drive
Wheeling, WV, U.S.A. 26003
Tel: (304) 232-1590 • Fax: (304) 232-1599
Web: www.powersubsvcs.com
E-Mail: sdreed@epsonline.com

POWER SURVEY

8025 route Transcanadienne
Saint-Laurent, QC, CA H4S 1S4
Tel: (514) 333-8392 • Fax: (514) 333-8395
Web: www.powersurvey.com
E-Mail: slanoue@powersurvey.com

POWERCOMM SOLUTIONS, LLC

15 minneakoning Rd., Suite 311
Flemington, NJ, U.S.A. 08822
Tel: (908) 806-7025 • Fax: (908) 806-4433
Web: www.powercommsolutions.com
E-Mail: sales@powercommsolutions.com

POWER-LITE INDUSTRIES INC

1155 Boul. Rene Levesque Ouest, suite 2500
Montreal, QC, CA H3B 2K4
Tel: (514) 875-1555 • Fax: (514) 875-8967
Web: www.power-lite.ca
E-Mail: info@power-lite.ca

POWERTRUSION PRODUCTS

214 Industrial Lane
Alum Bank, PA, U.S.A. 15521
Tel: (814) 839-4186 • Fax: (814) 839-4276
Web: www.powertrusion.com
E-Mail: dlonergan@pultitude.com

PREMAX, LP

825 Tower Drive
Medina, MN, U.S.A. 55340
Tel: (763) 478-9251 • Fax: (763) 478-9253
Web: www.premaxlp.com
E-Mail: info@premaxlp.com

**PRIMATE TECHNOLOGIES**

#184, 4100, N. Wickham Rd. Ste 102
Melbourne, FL, U.S.A. 32935
Tel: Tel.: 321-821-2227 • Fax: 912-231-1683
Web: www.primate-tech.com
E-Mail: rita.patterson@primare-tech.com
See ad page 36

Primate Technologies, Inc. is a privately held company in Melbourne, FL, providing enterprise visualization solutions for control rooms, improving situational awareness and operator effectiveness using animated data visualization for display walls, system health monitoring, notifications, cross system alarming, and data and display conversion services. More information is available at www.primate-tech.com.

PROBEWELL LAB INC.

4715, des Replats Suite 199
Québec, QC, CA G2J 1B8
Tel: (418) 626-1126 • Fax: (418) 626-1424
Web: www.probewell.com
E-Mail: info@probewell.com

PROCESS SENSORS CORPORATION

787 Susquehanna Ave
Franklin Lakes, NJ, U.S.A 07417
Tel: (201) 485-8772 • Fax: (201) 485-8770
Web: www.processsensors.com
E-Mail: irtemp@processsensors.com

PROGOS LTDA TRANSFORMADORES & EQUIPOS ELECTRICOS

Santa Adela 9540
Santiago, Chile 60Cerrillo
Tel: (569) 9872-7411
Web: www.progos.cl
E-Mail: progos@progos.cl

PROSOFT TECHNOLOGY

1675 Chester Ave., 4th Floor
Bakersfield, CA, U.S.A 93301
Tel: (661) 716-5100 • Fax: (661) 716-5101
Web: www.prosoft-technology.com
E-Mail: prosoft@prosoft-technology.com

**PSD, INC.**

130 Third Street NW
Canton, OH, U.S.A. 44702
Tel: (330) 452-4434 • Fax: (330) 453-5047
Web: www.psdohio.com
E-Mail: psdinfo@waukesha.spx.com

Provides detailed design, engineering, procurement, project management and construction services for high voltage substations and transmission lines for a variety of U.S. electric power customers. Our portfolio includes more than 600 successfully completed projects over the last 30 years ranging in voltage class through/including 500kV with unlimited MVA capacity.

PYCO INC

600 E. LINCOLN HWY
PENNDLE, PA, U.S.A 19047
Tel: (215) 757-3704 • Fax: (215) 757-3780
Web: www.pyco.com
E-Mail: salespyco@aol.com

Q**QUANTUM MARKETING GROUP**

P.O. Box 2848
Anaheim, CA, U.S.A 92804
Tel: (714) 563-9749 • Fax: (714) 776-6208
Web: www.quantummarkers.com
E-Mail: info@quantummarkers.com

QWIP TECHNOLOGIES INC.

499 Nibbus
Brea, CA, U.S.A 92821
Tel: (714) 529-7947 • Fax: (714) 529-7946
Web: www.qwip.com
E-Mail: mark@cantronic.com

R**R. E. UPTEGRAFF MANUFACTURING**

Uptegraff Drive P.O. Box 182
Scottsdale, PA, U.S.A 15683
Tel: (724) 887-7700 • Fax: (724) 887-4748
Web: www.uptegraff.com
E-Mail: info@uptegraff.com

Uptegraff Manufacturing Company, incorporated in 1929, designs and manufacturer liquid-filled small power, distribution and specialty transformers ranging from 10 kVA single phase through 15,000 kVA three phase up to 69kV. Uptegraff services the utility and industrial markets. Uptegraff also rewinds, refurbishes and rebuilds transformers.

RADAR ENGINEERS

9535 NE Colfax Street
Portland, OR, U.S.A 97220
Tel: (503) 256-3417 • Fax: (503) 256-1981
Web: radarengineers.com
E-Mail: sales@radarengineers.com

**RADIO IP SOFTWARE INC.**

740 Notre-Dame Street W. Suite 500
Montreal, QC, CA H3C 3X6
Tel: (514) 890-6070 • (877) 717-2242
Fax: (514) 890-1332
Web: www.radio-ip.com
E-Mail: sales@radio-ip.com

Radio IP MTG™ connectionware with RadioRoam® provides a secure mobile VPN solution for mobile workforce applications over private and/or public wireless data networks. Our products provide application persistence, data optimization and security using the TCP/IP standard. Applications can also roam seamlessly between multiple wireless network technologies (radio, cellular, satellite, wifi).

RADIODETECTION

154 Portland Road
Bridgton, ME, U.S.A 04009
Tel: (207) 647-9495 • Fax: (207) 647-9496
Web: www.radiodetection.com
E-Mail: bridgton@radiodetection.spx.com

RADIUS US, INC.

4833 Colt Road
Rockford, IL, U.S.A 61109
Tel: (414) 378-8491 • Fax: (815) 873-9108
Web: www.radius.net
E-Mail: administration.us@radius.net

RANPRO, INC.

620 Ireland Rd.
Simcoe, ON, CA N3Y 4L6
Tel: (519) 426-1094 • Fax: (519) 426-5313
Web: www.ranpro.com
E-Mail: ranpro@ranpro.com

**RCC ELECTRONICS**

1515 Matheson Blvd. Suite 210
Mississauga, ON, CA L4W 2P5
Tel: (905) 238-6848 • (800) 668-6053
Fax: (905) 238-6849
Web: www.rcce.com
E-Mail: rcce@rcce.com

RCC Electronics provides Test & Measurement solutions to the Canadian Power Utility Industry since 1978. Test equipment for Substation Maintenance, Cable Diagnostics, Power Measurement and Data Acquisition are at the core of the RCC business. Our talented staff look forward to working with you.

RCCS

53 Plain Street
Braintree, MA, U.S.A 02184
Tel: (781) 848-0155 • Fax: (781) 848-0540
Web: www.rcccontrols.com
E-Mail: rccs@aol.com

READING TRUCK BODY, LLC

PO Box 650
Shillington, PA, U.S.A 19607
Tel: (610) 775-3301 • Fax: (610) 775-3261
Web: www.readingbody.com
E-Mail: sales@readingbody.com

RED PLANET CONSULTING

4940 Pearl East Circle Suite 104
Boulder, CO, U.S.A 80301
Tel: 1-303-443-7447 ext 115 • Fax: 1-303-443-7447 ext 115
Web: www.redplanetconsulting.com
E-Mail: info@redplanetconsulting.com

RELIABILITY SERVICES, INC

2677 Redbird Drive
Cincinnati, OH, U.S.A 45036
Tel: (513) 265-1842
Web: www.reliabilityservices.com
E-Mail: reliabilityinc@roadrunner.com

RELIAPOLE SOLUTIONS, INC.

32624 Decker Prairie Road
Magnolia, TX, U.S.A 77355
Tel: (281) 290-8283 • Fax: (832) 533-2759
Web: www.reliapole.com
E-Mail: sales@reliapole.com

REPTAME EQUIPMENT INC.

2313 Tottenham Rd
Tottenham, ON, CA L0G 1W0
Tel: (905) 936-6979 • Fax: (905) 936-5696
Web: www.reptame.com
E-Mail: info@reptame.com

RFL ELECTRONICS INC.

353 Powerville Road
Boonton Township, NJ, U.S.A. 07005
Tel: (973) 334-3100 • Fax: (973) 334-3863
Web: www.rflect.com

RICHARDS MANUFACTURING CO. SALES INC.

517 Lyons Avenue
Irvington, NJ, U.S.A. 07111
Tel: (973) 371-1771 • Fax: (973) 371-9538
Web: www.richards-mfg.com
E-Mail: richardsales@richards-mfg.com

RIPLEY

46 Nooks Hill Road
Cromwell, CT, U.S.A. 06416
Tel: (860) 635-2200 • Fax: (860) 635-3631
Web: www.ripley-tools.com
E-Mail: info@ripley-tools.com

RIPLEY LIGHTING CONTROLS

PO Box 3229, 2023 Platt Springs Road
West Columbia, SC, U.S.A. 29171
Tel: (803) 939-4700 • Fax: (803) 939-4777
Web: www.ripleylc.com
E-Mail: sales@ripleylc.com

**ROHN PRODUCTS**

6718 W. Plank Road
Peoria, IL, U.S.A. 61604
Tel: (309) 697-4400 • Fax: (309) 697-5612
Web: www.radiancorp.com
E-Mail: rohnproducts@radiancorp.com

Rohn Products has been a leading manufacturer of custom engineered steel structures since 1948 for the utility and telecommunications industry. We offer a full line of tubular steel poles for the largest transmission projects to a single LD Series pole, lattice towers, substation structures, and wind energy towers.

ROLL-A-REEL (DE-SPOOLERS)

436 East Columbia Avenue
Cincinnati, OH, U.S.A. 45215
Tel: (513) 761-8500 • Fax: (513) 761-9997
Web: www.rollareel.com
E-Mail: sales@rollareel.com

ROLTA INTERNATIONAL INC.

5865 North Point Parkway
Alpharetta, GA, U.S.A. 30022
Tel: (678) 942-5000 • (888) 997-6582
Fax: (678) 942-5001
Web: www.rolta.com
E-Mail: info@roltus.com

ROMAC

7400 Bandini Blvd
Commerce, CA, U.S.A. 90040
Tel: (800) 843-5473 • Fax: (323) 722-9536
Web: www.romacsupply.com
E-Mail: info@romacsupply.com

**RTDS TECHNOLOGIES, INC.**

300 - 137 Innovation Drive
Winnipeg, MB, CA R3T 6B6
Tel: (204) 989-9700 • Fax: (204) 452-4303
Web: www.rtds.com
See ad page 42

RTDS Technologies is the pioneer of real time digital simulation and is the exclusive supplier of the RTDS® Simulator. Electric power utilities, equipment manufacturers, research institutes and universities around the world use the RTDS Simulator for power system studies and closed loop testing of protection and control equipment.

**RTK INSTRUMENTS LTD.**

1531 Stuyvesant Avenue
Union, NJ, U.S.A. 07083
Tel: (908) 688-6709 • Fax: (908) 688-9040
Web: www.rtkinstruments.com
E-Mail: sales@rtkinstruments.com

After 30 years of successful development, RTK Instruments is firmly established as the leading specialist in the design and manufacture of process alarm equipment, displays and interface products. Our products are used in all environments, including all hazardous areas, and across all process and utility sectors. RTK supplies alarm systems and associated instrumentation from a single sounder to a complete plant-wide alarm and monitoring system.

**RUGGED COM INC.**

30 Whitmore Road
Woodbridge, ON, CA L4L 7Z4
Tel: (905) 856-5288 • (888) 264-0006
Fax: (905) 856-1995
Web: www.ruggedcom.com
See ad page 7

Substation hardened Ethernet networking devices. Ethernet switches, network routers, wireless devices, serial servers, media converters. Exceeds IEC 61850-3 EMI Immunity, meets IEEE 1613 Class 2 error free performance, -40°C to +85°C, integrated dual redundant power supplies (no fans), <5ms network fault recovery, and Cyber Security features for NERC-CIP compliance.

S

**S&C ELECTRIC COMPANY**

Excellence Through Innovation

S & C ELECTRIC CANADA LTD

90 Belfield Road
Toronto, ON, CA M9W 1G4
Tel: (416) 249-9171 • Fax: (416) 249-6051
Web: www.sandc.com
E-Mail: sales@scelectric.ca

S&C ELECTRIC COMPANY

6601 North Ridge Blvd.
Chicago, IL, U.S.A. 60626
Tel: (773) 338-1000 • Fax: (773) 338-2562
Web: www.sandc.com

S&C Electric Company designs and manufactures switching and protection products for electric power transmission and distribution. S&C's power-electronic products can deliver uninterrupted power for an entire facility. S&C offers a wide range of engineering, laboratory, and testing services for electric utilities and commercial, industrial, and institutional power users.

S.D. MYERS, INC.

180 South Avenue
Tallmadge, OH, U.S.A. 44278
Tel: (330) 630-7000 • 800-444-9580
Fax: (330) 633-0756
Web: www.sdmyers.com

**SABRE TUBULAR STRUCTURES**

8653 E. Highway 67
Alvarado, TX, U.S.A. 76009
Tel: (817) 852-1700 • Fax: (817) 852-1703
Web: www.sabretubularstructures.com
E-Mail: utilitysales@sabrecom.com
See ad page 77

Sabre Tubular Structures manufactures tubular steel poles used in power delivery, telecommunications, sports and high mast lighting. Committed to customer service, every project is designed and manufactured with the customer's needs in mind. To find out how our team can work for you, call 866-254-3707 or email us at utilitysales@sabrecom.com.



SALISBURY ELECTRICAL SAFETY, LLC

7520 North Long Avenue
Stokie, IL, U.S.A. 60077
Tel: (847) 679-6700 • Fax: (847) 679-2401
Web: www.whsalisbury.com
E-Mail: info@whsalisbury.com

Salisbury is the world's largest manufacturer of flexible insulating equipment for electrical workers. Products include, rubber insulating gloves and sleeves, line hose, hoods and covers, insulating blankets, temporary grounding and bypass jumper equipment, dielectric footwear, protective eyewear, hard hats, polymeric insulators and Arc resistant clothing meeting NFPA 70E.

SAP AMERICAS

3999 West Chester Pike
Newtown Square, PA, U.S.A. 19073
Tel: (610) 661-1000
Web: www.sap.com
E-Mail: info.america@sap.com



SARGENT & LUNDY LLC

55 East Monroe Street
Chicago, IL, U.S.A. 60603
Tel: (312) 269-2000 • Fax: (312) 269-9697
Web: www.sargentlundy.com
E-Mail: thinkingpower@sargentlundy.com

Sargent & Lundy has provided comprehensive consulting, engineering, design, and analysis for electric power generation and power delivery projects worldwide. With a large, highly experienced staff solely dedicated to the energy business, we have the ability and know-how to take on the smallest tasks as well as the largest projects.

We reliably meet our clients' most complex challenges with strategic solutions that help define the power industry landscape of the future.

SATEC

10 Milltown Court
Union, NJ, U.S.A. 07083
Tel: (908) 686-9510 • Fax: (908) 686-9520
Web: www.oksatec.com
E-Mail: sales@oksatec.com



SBB TOWERS

211 rue Roy
St-Eustache, QC, CA J7R 5R5
Tel: (450) 473-4247 • Fax: (450) 473-4337
Web: www.sbb.ca
E-Mail: info@sbb.ca

SBB is the creator of the fast-mounting aluminum modular tower (ERS), used since 1989 by utility companies worldwide to help quickly restore power to T&D lines, as well as facilitate their maintenance.

SBB also manufactures steel poles, lattice towers and steel structures for power substations and is ISO 9001 certified.



SCHWEITZER ENGINEERING LABORATORIES INC.

2350 N.E. Hopkins Court
Pullman, WA, U.S.A. 99163-5603
Tel: (509) 332-1890 • Fax: (509) 332-7990
Web: www.selinc.com
E-Mail: info@selinc.com
See ad page 14

SEL serves the electric power industry worldwide through the design, manufacture, supply, and support of products and services for power system protection, monitoring, control, automation, and metering. SEL offers unmatched local technical support, a worldwide, ten-year product warranty, and a commitment to making electric power safer, more reliable, and more economical.

SEATEK CO. INC.

392 Pacific St.
Stamford, CT, U.S.A. 06902
Tel: (203) 324-0067 • Fax: (203) 324-7844
Web: www.seatekco.com
E-Mail: info@seatekco.com

SECUCONTROL, INC.

2873 Duke Street
Alexandria, VA, U.S.A. 22314
Tel: (703) 838-7677 • Fax: (703) 838-1661
Web: www.secucontrol.com
E-Mail: mail@secucontrol.com

SEDIVER CANADA INC.

172 rue Merizzi
St-Laurent, QC, CA H4T 1S4
Tel: (514) 739-3385 • Fax: (514) 739-3669
Web: www.sediver.fr
E-Mail: info.sediver@seves.ca

SEMIPLAS SECURITY SEALS

İmes san. E Blok 501.Sok. N.21 Ümraniye
Istanbul, Turkey 0090876978
Tel: +90 216 415 71 48 • Fax: +90 216 415 71 49
Web: www.semiplas.com
E-Mail: contact@semiplas.com

SENSORLINK CORPORATION

1975 Valley Highway #9 P.O. Box 301
Acme, WA, U.S.A. 98220
Tel: (360) 595-1000 • Fax: (360) 595-1001
Web: www.sensorlink.com
E-Mail: info@sensorlink.com



SENSUS METERING SYSTEMS

1501 Ardmore Blvd. 6th Floor
Pittsburgh, PA, U.S.A. 15221
Tel: (724) 430-3956
Web: www.sensus.com
E-Mail: askicon@sensus.com
See ad Inside Back Cover

Sensus delivers innovative technologies to clients around the world that are involved in the supply, measurement and demand of energy and water. Sensus provides solutions for gas, electric and water utilities to reduce costs, conserve resources and improve the quality, reliability and continuity of their energy supply. Sensus manufactures electric, gas and water meters and is a leading supplier of encoder-based solutions featuring TouchRead, RadioRead, PhonRead and the FlexNet fixed network AMI system.

SERVERON CORPORATION

3305 NW Alcock Drive
Hillsboro, OR, U.S.A. 97124
Tel: (503) 924-3200 • (800) 880-2552
Fax: (503) 924-3290
Web: www.serveron.com
E-Mail: info@serveron.com

SIEMENS POWER TRANSMISSION & DISTRIBUTION, INC.

4700 Falls of Neuse Road Suite 200
Raleigh, NC, U.S.A. 27609
Tel: (919) 325-7000 • Fax: (919) 325-7057
Web: www.usa.siemens.com

SIGNALCRAFTERS TECH, INC

57 Eagle Rock Ave
East Hanover, NJ, U.S.A. 07936
Tel: (800) 523-5815 • Fax: (973) 781-9044
Web: www.signalcrafters.com
E-Mail: sctgeneral@signalcrafters.com

SKYWIRE SOFTWARE

3000 Internet Blvd., Suite 200
Frisco, TX, U.S.A. 75034
Tel: (972) 377-1110
Web: www.skywiresoftware.com
E-Mail: contactus@skywiresoftware.com

SNC-LAVALIN TRANSMISSION & DISTRIBUTION

2425 Pitfield Blvd.
Montreal, QC, CA H4S 1W8
Tel: (514) 334-6780 • Fax: (514) 334-2610
Web: www.snc-lavalin.com/td
E-Mail: td@snc-lavalintd.com

SOLID STATE INSTRUMENTS

6230 Aviation Circle
Loveland, CO, U.S.A. 80538
Tel: (888) 272-9336 • Fax: (970) 461-9605
Web: www.solidstateinstruments.com
E-Mail: info@solidstateinstruments.com

solon manufacturing company

425 Center St.
Chardon, OH, U.S.A.
Tel: (440) 286-7149 • Fax: (440) 286-9047
Web: www.solonmfg.com
E-Mail: solon@solonmfg.com

SOUTHEASTERN REPROGRAPHICS, INC. SRI

2035 Grasslands Parkway
Alpharetta, GA, U.S.A. 30004
Tel: (770) 619-5545 • Fax: (770) 619-5282
Web: www.srimap.com
E-Mail: srimap@srimap.com

**SOUTHERN STATES, LLC.**

30 Georgia Avenue
Hampton, GA, U.S.A. 30228
Tel: (770) 946-4562 • Fax: (770) 946-8106
Web: www.southernstatesllc.com
E-Mail: sales@southernstatesllc.com

Southern States, LLC is a world leader in the design and manufacture of high voltage switching devices. Products offered include group operated disconnects, hookstick switches, motor operators, ground switches, horizontal and "candlestick" circuit switchers, load and line switchers, capacitor switches, reactor switchers, power fuses, and non-contact current transformers.

SPINWAVE SYSTEMS, INC.

235 Littleton Rd
Westford, MA, U.S.A. 01886
Tel: (978) 392-9000
Web: www.spinwavesystems.com
E-Mail: info@spinwavesystems.com

STARTCO ENGINEERING LTD.

406 Jessop Avenue
Saskatoon, SK, CA S7N2S5
Tel: (306) 373-5505 • Fax: (306) 374-2245
Web: www.startco.ca
E-Mail: info@startco.ca

**STORAGE BATTERY SYSTEMS INC.**

N56 W16665 Ridgewood Drive
Menomonee Falls, WI, U.S.A. 53051
Tel: (262) 703-5800 • 1-800-554-2243
Fax: (262) 703-3073
Web: www.sbsbattery.com
E-Mail: maxm@sbsbattery.com

SBS provides Flooded, VRLA & Ni-Cad Batteries to Utility & Telecom markets. With a stock of over \$2 Million in batteries, chargers, racks, spill containment systems, enclosures & test equipment - 24hr delivery is always available. At SBS we feature 20 yr flooded batteries, 55 thru 3992 AMP. Supplying quality products since 1915. ISO 9001 certified.

STRATOS

34 Glencoe Drive
Saint-Johns, NL, CA A1C 5X3
Tel: (888) 766-1313 • Fax: (709) 748-4396
Web: www.stratosglobal.com
E-Mail: info@stratosglobal.com

**SUBNET SOLUTIONS INC.**

4639 Manhattan Road SE, # 100
Calgary, AB, CA T2G 4B3
Tel: (403) 270-8885 • Fax: (403) 270-9631
Web: www.subnetsolutions.com
E-Mail: info@subnetsolutions.com

SUBNET provides substation and enterprise software solutions for electric utilities to implement a secure, intelligent grid.

SUBNET's products unify and secure the real time information exchange between the utility's many different intelligent field devices and its various utility business intelligence systems, even while connected by a mixture of data networks.

SUN-NET CONSULTING

6455 Almaden Expressway Suite 217
San Jose, CA, U.S.A. 95120
Tel: (408) 323-1318 • Fax: (408) 997-1698
Web: www.sncsw.com
E-Mail: daniel.sun@sncsw.com

SUPERPOWER, INC.

450 Duane Ave.
Schenectady, NY, U.S.A. 12304
Tel: (518) 346-1414 • Fax: (518) 346-6080
Web: www.superpower-inc.com
E-Mail: info@superpower-inc.com

SUPREME CORPORATION

2581 East Kercher Road
Elkhart, IN, U.S.A. 46528
Tel: (574) 642-4888
Web: www.supremecorp.com
E-Mail: sales@supremecorp.com

SUSI ADAPTERS

5660 Broxton Circle
Norcross, GA, U.S.A. 30092
Tel: (770) 448-6810
Web: www.susiadapters.com
E-Mail: info@susiadapters.com

SYNERGY ENERGY INC.

9-3182 Orlando Drive
Mississauga, ON, CA L4V 1R5
Tel: (866) 866-5822 • Fax: (866) 866-5716
Web: www.synergyenergyinc.com
E-Mail: info@synergyenergyinc.com

T**T & R ELECTRIC SUPPLY COMPANY INC.**

P.O. Box 180
Colman, SD, U.S.A. 57017
Tel: (605) 534-3555 • 1-800-843-7994
Fax: (605) 534-3861
Web: www.t-r.com
E-Mail: t-r@t-r.com
See ad page 132

«THE TRANSFORMER PEOPLE» - we buy, sell, rent, repair and deliver distribution and power transformers and related high voltage switchgear. Transformers include polemounts, padmounts and substations through 20 mVA, 69000 volt.

T.I. CHEN ASSOCIATES LLC.

1101 N. 5th St
Tacoma, WA, U.S.A. 98403+1610
Tel: (253) 678-2661 • Fax: (206) 350-6482
Web: www.tichenassociates.com/fl/
E-Mail: sales@tichenassociates.com

TANTALUS SYSTEMS CORP.

301 - 3480 Gilmore Way
Burnaby, BC, CA V5G 4Y1
Tel: (604) 299-0458 • Fax: (604) 451-4111
Web: www.tantalus.com
E-Mail: tantalusinfo@tantalus.com

TATMAN ASSOCIATES, INC.

29015 Solon Road
Solon, OH, U.S.A. 44139
Tel: (440) 248-0644 • Fax: (440) 248-0649
Web: www.tatmansubstations.com
E-Mail: tatmansubs@sbcglobal.net

**TAVRIDA ELECTRIC NORTH AMERICA INC.**

1105 Cliveden Ave. Annacis Island
Delta, BC, CA V3M 6G9
Tel: (604) 540-6600 • Fax: (604) 540-6604
Web: www.tavrida-na.com
E-Mail: deb@tavrida-na.com
See ad Outside Back Cover

Tavrida Electric manufactures reclosers, MV circuit breakers, upgrades and withdrawable units. Tavrida's products have a distinct advantage with our proven reliability, small dimensions, light-weight design, maintenance-free and exceptional product performance and are perfect for tightly integrating spaces. Tavrida offer's exceptionally competitive pricing with a 5 year warranty.

TC TECHNOLOGY

2231 Faraday Ave Suite 140
Carlsbad, CA, U.S.A. 92008
Tel: (760) 929-8345
Web: www.tctechnology.com
E-Mail: sales@tctechnology.com

TEC - INSTRUMENT TRANSFORMER**EQUIPMENT CORPORATION**

P.O. Box 23088
Charlotte, NC, U.S.A 28227
Tel: (704) 282-4331 • Fax: (704) 283-3017
Web: www.itec-ctvt.com
E-Mail: sales@itec-ctvt.com

TECHNICAL SYSTEMS 2002 INC.

436 Jacqueline Blvd.
Hamilton, ON, CA L9B 2R3
Tel: (905) 575-1941 • Fax: (905) 575-0386
Web: www.technical-sys.com
E-Mail: mreid@technical-sys.com

TECHNO-TEST INSTRUMENTS

2345 Michelin suite 100
Laval, QC, CA H7L5B9
Tel: (450) 681-5777 • Fax: (450) 681-3773
Web: www.techno-test.com
E-Mail: info@techno-test.com

TELEMETRIC CORPORATION

9941 West Emerald Street
Boise, ID, U.S.A 83704
Tel: (208) 658-1292 • Fax: (208) 323-5575
Web: www.telemetric.net
E-Mail: info@telemetric.net

TELEPATHX LTD

38/632 Clayton Rd
Clayton South, Victoria, Australia 3169
Tel: (61-3-955-111-55 • Fax: 61-3-955-118-55
Web: www.telepathx.com
E-Mail: info@telepathx.com

TELTON CORPORATION

P.O. Box 945
Bothell, WA, U.S.A 98041-0945
Tel: (425) 951-3006 • Fax: (425) 487-2288
Web: www.telton.com
E-Mail: info@telton.com

TELVENT**TELVENT**

7000 A Hollister Road
Houston, TX, U.S.A. 77040-5337
Tel: (713) 939-9399 • Fax: (713) 939-7424
Web: www.telvent.com
E-Mail: info.usa@telvent.abengoa.com

Telvent (Nasdaq: TLVT), the IT company for a sustainable and secure world, specializes in high value-added products, services and integrated solutions for the Energy, Transportation, Environment and Public Administration industry segments, as well as Global IT Services. Its innovative technology and client-proven expertise enable the efficient and secure real-time management of operational and business processes for industry-leading companies worldwide.

TELVENT MINER & MINER

4701 Royal Vista Cir
Fort Collins, CO, U.S.A 80528
Tel: (970) 223-1888 • Fax: (970) 223-5577
Web: www.telvent.com/miner
E-Mail: info@miner.com

TENSING

9900 Belward Campus Dr, Suite 225
Rockville, MD, U.S.A 20850
Tel: (240) 403-6001
Web: www.tensing.com
E-Mail: info@tensing.com

TEQAL INC.

CP 51 Succ La Prairie
La Prairie, QC, CA J5R 3Y1
Tel: (450) 659-4500 • Fax: (450) 659-6972
Web: www.teqal.com
E-Mail: andre@teqal.com

TEST EQUIPMENT CONNECTION

30 Skyline Drive
Lake Mary, FL, U.S.A 32746
Tel: (407) 804-1299 • Fax: (407) 804-1277
Web: www.testequipmentconnection.com
E-Mail: business@testequipmentconnection.com

TEXIM SOLUTIONS INTERNATIONAL (CANADA)

3250 Miquelon
Brossard, QC, CA J4Y 2T2
Tel: (450) 443-0450 • Fax: (450) 443-0450
Web: www.texim-solutions.com
E-Mail: sales@texim-solutions.com

THE ENERGY CONSORTIUM

PO Box 16186
St. Louis Park, MN, U.S.A 55416-0186
Tel: (612) 435-2177 • Fax: (612) 435-2179
Web: www.energy-consortium.com
E-Mail: jim@energy-consortium.com

THE OESER COMPANY

730 Marine Drive
Bellingham, WA, U.S.A 98225
Tel: (360) 734-1480 • Fax: (360) 671-8785
Web: oeserco.com
E-Mail: lindap@oeserco.com

THE STEADFAST GROUP

1911 SW Campus Drive, Suite 434
Federal Way, WA, U.S.A 98023-6473
Tel: (253) 269-6569
Web: www.thesteadfastgroup.com
E-Mail: info@thesteadfastgroup.com

THE STRESSCRETE GROUP

840 Walkers Line
Burlington, ON, CA L7R 3X9
Tel: (800) 268-7809 • Fax: (905) 632-8116
Web: www.stresscrete.com
E-Mail: sales@stresscrete.com

**THE VON CORPORATION**

P.O. Box 110096
Birmingham, AL, U.S.A. 35211
Tel: (205) 788-2437 • Fax: (205) 780-4015
Web: www.voncorp.com
E-Mail: voncorp@voncorp.com
See ad page 6

The Most Trusted Name in Underground Cable Fault Location and High Voltage Testing.

**THIES ELECTRICAL DISTRIBUTING CO.**

43 Hilltop Drive
Cambridge, ON, CA N1R 1T2
Tel: (519) 621-2524 • Fax: (519) 740-1203
Web: www.djinfo.com/TEDC
E-Mail: thiestedcca@aol.com

Thies Electrical Distributing Co. is specialized in safety devices related to the Electrical Power Distribution Systems. Our main product is a permanently mounted LIVE LINE VOLTAGE INDICATOR, 2 to 46kv. It is utilized for the safety of the end-users of electrical installations by electrical utilities and switchgear manufacturers.

**THOMAS & BETTS - STEEL STRUCTURES DIVISION**

8155 T&B Blvd.
Memphis, TN, U.S.A. 38125
Tel: (901) 252-8115 • Fax: 1-800-888-0690
Web: www.tnb.com
E-Mail: jim.palmer@tnb.com
See ad page 27

Thomas & Betts' Meyer Steel Structures is the industry leader for design, fabrication, and testing of tubular steel poles and steel lattice towers used in utility transmission applications. Our early involvement in project planning stages can help you determine the best structure solution for your needs, your timetable, and your budget.

Thomas & Betts**THOMAS & BETTS - UTILITY GROUP**

8155 T&B Blvd.
Memphis, TN, U.S.A. 38125
Tel: 901-252-8251
Web: www.tnb.com
E-Mail: ellen.vizzi@tnb.com

Thomas & Betts serves the electric utility market with a wide variety of products for overhead and underground transmission, substation and distribution applications. With market-leading products and brands like Elastimold, Homac™, Joslyn Hi-Voltage™, Fisher Pierce®, Hi-Tech® and Blackburn, you can count on Thomas & Betts to provide quality, reliability and performance.

TOOLHOUND

309 Legget Drive
Ottawa, ON, CA K2K 3A3
Tel: (800) 387-8665 • Fax: (613) 592-4296
Web: www.toolhound.com
E-Mail: toolhoundsales@verichipcorp.com

**TOWER SOLUTIONS INC.**

7030 Woodbine Ave., Suite 500
Markham, ON, CA L3R 6G2
Tel: (905) 946-8789 • Fax: (905) 913-9083
Web: www.implotech.ca
E-Mail: hsildva@implotech.ca

Tower Solutions manufactures and markets an emergency tower system to the electrical utility industry. This tower is considered the most advanced emergency tower structure in the world. It is lighter, stronger, faster to erect, easier to transport, more economical and more versatile than any other tower system in the world.

**TPC TRANSFORMER PROTECTOR CORP.**

P.O. Box 390
Porter, TX, U.S.A. 77365
Tel: (281) 358-9900 • Fax: (281) 358-1911
Web: www.transproco.com

Transformer Protector Corp manufactures and sales the TRANSFORMER PROTECTOR (TP), which avoids transformer explosions and fires.

During short-circuit, the TP activates within milliseconds with the dynamic pressure peak generated by the electrical fault before static pressure increases.

**TRANTECH RADIATOR PRODUCTS INC.**

P.O. Box 570
Edgefield, SC, U.S.A. 29824
Tel: (803) 637-3166 • Fax: (803) 637-3046
Web: www.trantechradiators.com
E-Mail: sblane@trantechradiators.com

Trantech Radiator Products is the largest manufacturer of transformer radiators in North America. We have been supplying radiators for 50 years. Products include 9", 12", 15" and 520mm. Trantech can replace any size panel type radiator, tube assembly, electric cooler or water cooler and provide technical recommendations on other cooling needs.

TRANZGRID SOLUTIONS

737 Tauwhare Rd
Hamilton, Waikato, New Zealand 3284
Tel: 006478295829
Web: www.tranzgrid.co.nz
E-Mail: info@tranzgrid.co.nz

**TRENCH****TRENCH LIMITED**

71 Maybrook Drive
Scarborough, ON, CA M1V 4B6
Tel: (416) 298-8108 • Fax: (416) 298-2209
Web: www.trenchgroup.com
E-Mail: tonyj@ca.trenchgroup.com
See ad page 10

Trench Limited is a specialized manufacturer of high voltage electrical equipment including Dry-Type Air Core Reactors, Instrument Transformers (including Current Transformers, Potential Transformers and Metering Transformers), Wave Traps, Relay Communication Equipment (a complete package for Power Line Carrier Systems), LV - HV Bushings (Power Transformer), Capacitor Voltage Transformers and Coupling Capacitors.

TRENWA, INC

1419 Alexandria Pike
Fort Thomas, KY, U.S.A. 41075
Tel: (859) 781-0831 • Fax: (859) 781-1085
Web: www.trenwa.com
E-Mail: info@trenwa.com

TRILLIANT NETWORKS INC.

1100 Island Drive
Redwood City, CA, U.S.A. 94065
Tel: (650) 204-5050 • Fax: (650) 508-8096
Web: www.trilliantnetworks.com
E-Mail: info@trilliantnetworks.com

TRIMBLE (TRIPOD DATA SYSTEMS, A DIVISION OF TRIMBLE)

345 SW Avery Avenue
Corvallis, OR, U.S.A. 97333
Tel: (541) 750-9200 • Fax: (541) 758-7248
Web: www.trimble.com
E-Mail: handhelds@trimble.com

TSTM

2900 Sencore Drive Suite 100
Sioux Falls, SD, U.S.A. 57107
Tel: (605) 334-2924 • Fax: (605) 334-4713
Web: www.ts-tm.com
E-Mail: info@ts-tm.com

TWISTED PAIR SOLUTIONS, INC.

3131 Elliott Avenue, Suite 200
Seattle, WA, U.S.A. 98121
Tel: (206) 442-2101 • Fax: (206) 812-0737
Web: www.twistpair.com
E-Mail: info@twistpair.com

TYNDALE COMPANY, INC.

5050 Applebutter Road
Pipersville, PA, U.S.A. 18947
Tel: (800) 356-3433 • Fax: (215) 766-5661
Web: www.tyndaleusa.com
E-Mail: sales@tyndaleusa.com

U**UBISENSE CONSULTING**

5445 DTC Parkway, #310
Greenwood Village, CO, U.S.A. 80111
Tel: (303) 539-6922 • Fax: (720) 221-3943
Web: www.ubisense.net/gis
E-Mail: info@ubisense.net

UESS BV. CANADA

Box 6088
Drayton Valley, AB, CA T7A-1R6
Tel: (780) 542-2122
Web: www.uessltd.com
E-Mail: h Morrison@telus.net

UNDERGROUND DEVICES INC.

3304 Commercial Drive
Northbrook, IL, U.S.A. 60062-1909
Tel: (847) 205-9000 • Fax: (847) 205-9004
Web: www.udevices.com
E-Mail: cgreene@udevices.com

**UNION METAL CORPORATION**

1432, Maple Ave. NE PO BOX 9920
Canton, OH, U.S.A. 44705
Tel: (330) 456-7653 • Fax: (330) 456-0628
Web: www.unionmetal.com
E-Mail: sales@unionmetal.com

Since 1906, Union Metal has been manufacturing tapered steel poles for the electric utility industry. Today, our steel poles respond to new needs: Distribution, Transmission, and Lighting. We offer steel utility poles in all wood pole equivalent sizes and classes as well as self-supporting steel transmission structures.

UTICOM SYSTEMS, INC.

109 Independence Way
Coatesville, PA, U.S.A. 19320
Tel: (800) 548-5321 • Fax: (610) 857-2986
E-Mail: chris@uticom.net

**UTILICON SOLUTIONS, LTD**

708 Blair Mill Rd
Willow Grove, PA, U.S.A. 19090
Tel: (215) 784-1406 • (877) 884-5426
Fax: (215) 784-4225
Web: www.utiliconltd.com

UtiliCon Solutions is a wholly owned subsidiary of Asplundh Tree Expert Co. and provides a wide array of services for the utility industry. Our companies include names that are well known throughout the industry (Utility Lines Construction Services, Asplundh Construction Corp., VSI Meter Services, Utility Meter Services, Central Locating Service, American Lighting and Signalization, Utility Pole Technologies, and Asplundh One Call).

UTILITY EQUIPMENT LEASING CORP.

N4W22610 Bluemound Rd.
Waukesha, WI, U.S.A 53186
Tel: (262) 547-1600 • Fax: (262) 544-8546
Web: www.uelc.com
E-Mail: rent@uelc.com

V**VALMONT INDUSTRIES**

7002 N 288th St
Valley, NE, U.S.A 68064
Tel: 1-800-VALMONT • Fax: (402) 359-6221
Web: www.valmontstructures.com
E-Mail: polesinfo@valmont.com

**VALMONT NEWMARK**

Two Perimeter Park South Suite 475 West
Birmingham, AL, U.S.A. 35243
Tel: (205) 968-7200 • Fax: (205) 968-7201
Web: www.valmont-newmark.com
E-Mail: cevans@valmont.com
See ad page 15

Valmont Newmark is your single source for: steel, concrete, hybrid, transmission, distribution, and substation power delivery structures. Our complete product line, combined with an experienced engineering staff, and dedicated customer service enables us to provide you the highest quality, most economical solutions that meet our industry's demanding requirements.

VENTYX

3301 Windy Ridge Parkway, Suite 200
Atlanta, GA, U.S.A 30339
Tel: (770) 952-8444 • (800) 868-0497
Fax: (770) 989-4231
Web: www.ventyx.com
E-Mail: sales@ventyx.com

VIDEX INC.

1105 Ne Circle Blvd
Corvallis, OR, U.S.A 97330
Tel: (541) 758-0521 • Fax: (541) 752-5285
Web: www.videx.com/lock21
E-Mail: sales@videx.com

VIRELEC LTD.

4020B Sladeview Crescent Unit 2
Mississauga, ON, CA L5L 6B1
Tel: (905) 569-8030 • Fax: (905) 569-6364
Web: www.virelec.com

VITALDRIVE LTD.

P.O.Box 41016
Larnaca, MN, Cyprus 6308
Tel: +357-24-821788 • Fax: +357-24-821787
Web: www.vitaldrive.net
E-Mail: info@vitaldrive.net

W**W.I.R.E SERVICES, A DIVISION OF MANITOBA HYDRO**

540 - 444 St. Mary Avenue
Winnipeg, MB, CA R3C 3T7
Tel: (204) 480-5800 • Fax: (204) 480-5107
Web: www.wireservices.ca
E-Mail: info@wireservices.ca
See ad page 24

W.I.R.E. Services is a combined initiative between Manitoba Hydro and LiDAR Services International Inc. providing electric utilities with Aerial LiDAR Data, Thermal Rating & Re-Rating Analysis, New Route Surveys, Danger Tree and Vegetation Assessments.

WATER-JEL TECHNOLOGIES

50 Broad Street
Carlstadt, NJ, U.S.A 07072
Tel: (201) 507-8300 • (800) 275-3433
Fax: (201) 507-8325
Web: www.waterjel.com
E-Mail: info@waterjel.com

**WAUKESHA ELECTRIC SYSTEMS**

400 S. Prairie Ave.
Waukesha, WI, U.S.A. 53186
Tel: 1-800-835-2732 • Fax: (262) 521-0196
Web: www.waukeshaelectric.com
E-Mail: info@waukesha.spx.com

Largest U.S. manufacturer of power transformers and valued supplier of transformer, LTC and breaker components; training; and complete transformer service solutions: spare transformer fleet management; transformer installation, maintenance, relocation and testing; transformer oil processing, dryouts and retrofills; equipment regasketing; load tap changer field retrofits, repairs and refurbishments.

WELLS CARGO, INC.

PO Box 728
Elkhart, IN, U.S.A 46515
Tel: (800) 348-7553 • Fax: (574) 264-5938
Web: www.wellscargo.com
E-Mail: info@wellscargo.com

**WESTEX INC.**

2845 West 48th Place
Chicago, IL, U.S.A. 60632
Tel: (773) 523-7000 • Fax: (773) 523-0965
Web: www.westexinc.com
E-Mail: menright@westexinc.com
See ad page 11

INDURA® Ultra Soft® provides the perfect daily wear solution for the new requirements of NFPA 70E. You get flame resistance that is guaranteed for the life of the garment without sacrificing the soft breathable comfort of cotton. INDURA® Ultra Soft® provides industry leading protection, comfort and value.

WILLIAM FRICK & COMPANY

2600 Commerce Drive
Libertyville, IL, U.S.A 60048
Tel: (847) 918-3700 • Fax: (847) 918-3701
Web: www.fricknet.com
E-Mail: sales@fricknet.com

Winola Industrial Inc.

Climbing Device Division

WINOLA INDUSTRIAL INC.

R.R. #1 Box 1070
Factoryville, PA, U.S.A. 18419
Tel: (570) 378-3808 • Fax: (570) 378-2597
Web: www.winolaindustrial.com
E-Mail: winola@epix.net
See ad page 124

Winola Industrial Inc. is the manufacturer of the original McGregor Ladders. We also fabricate a wide variety of application-specific climbing devices and related accessories for transmission, distribution and communication structures. Standard designs are frequently in stock. We also provide arrange of field services to our manufacturing, utility, mining and cellular customers.

WIRE WORLD INC.

1130 7th Avenue
Greeley, CO, U.S.A 80631
Tel: (970) 356-5505 • Fax: (970) 356-4834
Web: www.wireworldinc.com
E-Mail: asaave@wireworldinc.com

**WORKRITE UNIFORM COMPANY**

500 E. Third Street P.O. Box 1192
Oxnard, CA, U.S.A. 93032-1192
Tel: (805) 483-0175 • 1-800-521-1888
Fax: (805) 483-0678
Web: www.workrite.com

See ad page 3

Founded in 1973, market-leading Workrite manufactures superior flame-resistant apparel in the widest assortment of styles, colors, sizes, and fabrics. Workrite garments ensure excellent protection for petrochemical, utility, and all industries needing compliance with NFPA 70E requirements. Call or visit our website, or e-mail to info@workrite.com.

Y

**YASKAWA ELECTRIC AMERICA, INC.**

2121 Norman Drive South
Waukegan, IL, U.S.A. 60085
Tel: (847) 887-7000 • Fax: (847) 887-7030
Web: www.yaskawa.com

Established in 1915, Yaskawa is the world's largest manufacturer of overhead distribution switches. Yaskawa has earned the reputation for the most reliable, most technically advanced, and longest-lasting products.

Just ask our customers. Our customers enjoy lower ownership costs and increased performance, productivity and profitability of their overhead, and capacitor switches.

Z

**ZENSOL AUTOMATION INC.**

2281 rue Guenette
St-Laurent, QC, CA H4R 2E9
Tel: (514) 333-3488 x 226 • Fax: (514) 333-3499
Web: www.zensol.com
E-Mail: zensol@zensol.com

Zensol develops and manufactures computerized test equipment (breaker analyzers, recloser analyzers, breaker simulators, vibration analyzers) for low, medium and high voltage circuit breakers and reclosers, offers R&D and consulting services around electrical apparatus.

Customers in more than 20 countries include Hydro Quebec, CFE - Mexico, CVG-Edelca (Venezuela), Ameren (USA), Areva.

ZIV P+C, S.L.

Parque Tecnológico, 210
Zamudio, Vizcaya, Spain 48170
Tel: +34.94.403.74.00 • Fax: +34.94.403.74.43
Web: www.zivpmasc.com
E-Mail: comercial.bilbao@ziv.es

PRODUCTS & SERVICES INDEX

MAIN CATEGORY INDEX

Automation / IT	69
Communications Systems.....	73
Computers & Software for Utilities.....	78
Distribution.....	80
Energy Services	89
Engineering & Consultants.....	92
Environmental Products & Services	94
Lighting.....	95
Line Construction & Maintenance.....	95
Meters & Metering Devices	97

PAGE

MAIN CATEGORY INDEX

Power Monitoring.....	99
Safety & Security.....	105
Substation Management & Maintenance	109
Test & Measurement	112
Tools & Supplies.....	120
Training.....	126
Transformers	128
Transmission	133
Utility Vehicles & Accessories	137
Wire, Cable & Fiber Optics Equipment.....	139

PAGE



Electric Energy T&D

BUYERSGUIDE

visit us online at www.eetdbuyersguide.com

AUTOMATION / IT

ADVANCE METERING INFRASTRUCTURE - AMI

ACLARA

Tel: (800) 297-2728
www.aclaratech.com

EKA SYSTEMS, INC.

Tel: (301) 515-7118
www.ekasystems.com

ELSTER

Tel: (919) 212-4800
www.elster-eis.com

ENSPIRA SOLUTIONS INC.

Tel: (303) 520-2513
www.enspiria.com

METERSMART

Tel: (817) 652-1933 • (866) 944-4868
www.metersmart.com

AM/FM GIS

ENSPIRA SOLUTIONS INC.

Tel: (303) 520-2513
www.enspiria.com

INTERGRAPH CORPORATION

Tel: (303) 785-9835
www.intergraph.com

OSMOSE UTILITIES SERVICES, INC.

Tel: (716) 319-3460
www.osmoseutilities.com

POWER ENGINEERS, INC.

Tel: (208) 788-3456
www.powereng.com

SOUTHEASTERN REPROGRAPHICS, INC. SRI

Tel: (770) 619-5545
www.srimap.com

UBISENSE CONSULTING

Tel: (303) 539-6922
www.ubisense.net/gis

ASSET MANAGEMENT

ADVANTICA INC.

Tel: (717) 724-1900
www.advanticaelectric.com

AUTODESK INC.

Tel: (415) 507-5000
www.autodesk.com

AXIA SOFTWARE CORPORATION

Tel: (604) 683-2942
www.searchsolvescore.com

B.L. ROBINSON SURVEY AND ENGINEERING

Tel: (330) 836-8487
www.brobinson.com

CAMCODE DIVISION OF HORIZONS INC

Tel: (800) 627-3917
www.camcod.com/utility/utility.asp

CURRENT GROUP LLC

Tel: (301) 944-2727
www.currentgroup.com

ENSPIRA SOLUTIONS INC.

Tel: (303) 520-2513
www.enspiria.com

INCON POWER RELIABILITY PRODUCTS

Tel: (207) 283-0156 • 1-800-872-3455
www.incon.com

INTERGRAPH CORPORATION

Tel: (303) 785-9835
www.intergraph.com

MINCOM INC.

Tel: (303) 446-9000
www.mincom.com

POWER ENGINEERS, INC.

Tel: (208) 788-3456
www.powereng.com

SAP AMERICAS

Tel: (610) 661-1000
www.sap.com

TOOLHOUND

Tel: (800) 387-8665
www.toolhound.com

AUTOMATIC METER READING (AMR) - C&I

COMVERGE, INC.

Tel: (888) 565-5525
www.comverge.com

SENSUS METERING SYSTEMS

Tel: (724) 430-3956
www.sensus.com

AUTOMATIC METER READING (AMR) - COMMUNICATIONS

AZTECH ASSOCIATES INC.

Tel: (613) 384-9400
www.aztechmeter.com

CALAMP CORP.

Tel: (805) 987-9000
www.calamp.com

SENSUS METERING SYSTEMS

Tel: (724) 430-3956
www.sensus.com

TANTALUS SYSTEMS CORP.

Tel: (604) 299-0458
www.tantalus.com

AUTOMATIC METER READING (AMR) EQUIPMENT

BADGER METER, INC.

Tel: (800) 876-3837
www.badgermeter.com

COMVERGE, INC.

Tel: (888) 565-5525
www.comverge.com

ELSTER

Tel: (919) 212-4800
www.elster-eis.com

ESUNTECH, INC.

Tel: (519) 341-3586
www.esun-tech.com

SENSUS METERING SYSTEMS

Tel: (724) 430-3956
www.sensus.com

SPINWAVE SYSTEMS, INC.

Tel: (978) 392-9000
www.spinwavesystems.com

AUTOMATION PRODUCTS

AEGIS TECHNOLOGIES

Tel: (602) 443-5000
www.aegistech.us

ASAT SOLUTIONS INC.

Tel: (403) 569-1680
www.asatsolutions.com

DREHMO GMBH (EMG) VALVE AUTOMATION

Tel: +49 7634 551320
www.drehmo.com

FLIR SYSTEMS

Tel: (978) 901-8000 • (800) 464-6372
www.goinfraed.com

RUGGED COM INC.

Tel: (905) 856-5288 • (888) 264-0006
www.ruggedcom.com

SCHWEITZER ENGINEERING LABORATORIES INC.

Tel: (509) 332-1890
www.selinc.com

SUN-NET CONSULTING

Tel: (408) 323-1318
www.sncsw.com

AUTOMATION SYSTEMS

DC SYSTEMS

Tel: (925) 485-0200
www.dcsystems.com

FLIR SYSTEMS

Tel: (978) 901-8000 • (800) 464-6372
www.goinfraed.com

AUTOMATION / IT

OPEN SYSTEMS INTERNATIONAL INC.

Tel: (763) 551-0559
www.osii.com

RUGGED COM INC.

Tel: (905) 856-5288 • (888) 264-0006
www.ruggedcom.com

VIRELEC LTD.

Tel: (905) 569-8030
www.virelec.com

BILLING

IHDEA

Tel: (512) 553-0898
www.ihdea.com

MINCOM INC.

Tel: (303) 446-9000
www.mincom.com

BILLING SOLUTIONS

EXCELERON SOFTWARE (DALLAS

HEADQUARTERS)

Tel: (972) 852-2711
www.exceleron.com

MINCOM INC.

Tel: (303) 446-9000
www.mincom.com

BILLING/CUSTOMER CARE

DAFFRON & ASSOCIATES, INC.

Tel: (800) 325-0208
www.daffron.com

MINCOM INC.

Tel: (303) 446-9000
www.mincom.com

CIS SOLUTIONS

ENVISION

Tel: (512) 353-6000
www.eusc.com

FIRST DATA UTILITIES: POWERED BY PEACE

Tel: (305) 341-2400
www.firstdatautilities.com

MINCOM INC.

Tel: (303) 446-9000
www.mincom.com

COMPUTER CONTROLS AND AUTOMATION

AEGIS TECHNOLOGIES

Tel: (602) 443-5000
www.aegistech.us

ESUNTECH, INC.

Tel: (519) 341-3586
www.esun-tech.com

RCCS

Tel: (781) 848-0155
www.rccscontrols.com

RUGGED COM INC.

Tel: (905) 856-5288 • (888) 264-0006
www.ruggedcom.com

SCHWEITZER ENGINEERING LABORATORIES INC.

Tel: (509) 332-1890
www.selinc.com

SUBNET SOLUTIONS INC.

Tel: (403) 270-8885
www.subnetsolutions.com

VIRELEC LTD.

Tel: (905) 569-8030
www.virelec.com

CONSOLES - SCADA CONTROL CENTERS

PRIMATE TECHNOLOGIES

Tel: 321-821-2227
www.primate-tech.com

CONSOLES - T&D CONTROL CENTERS

PRIMATE TECHNOLOGIES

Tel: 321-821-2227
www.primate-tech.com

CONSULTANTS - SCADA/EMS ENGINEERING

POWER ENGINEERS, INC.

Tel: (208) 788-3456
www.powereng.com

CONTROL PANELS

CITEL SURGE PROTECTION

Tel: (305) 621-0022
www.citelprotection.com

CONTROL CENTER LLC A GTE COMPANY

Tel: (407) 304-5200
www.controlcenter.net

CONTROL SYSTEM

AEGIS TECHNOLOGIES

Tel: (602) 443-5000
www.aegistech.us

OPEN SYSTEMS INTERNATIONAL INC.

Tel: (763) 551-0559
www.osii.com

RUGGED COM INC.

Tel: (905) 856-5288 • (888) 264-0006
www.ruggedcom.com

VIRELEC LTD.

Tel: (905) 569-8030
www.virelec.com

CONTROL SYSTEMS - ELECTRIC/ELECTRONIC

AXIOMATIC TECHNOLOGIES CORPORATION

Tel: (905) 602-9270
www.axiomatic.com

OPEN SYSTEMS INTERNATIONAL INC.

Tel: (763) 551-0559
www.osii.com

CONTROLLERS/CONTROLS - PROGRAMMABLE

SCHWEITZER ENGINEERING LABORATORIES INC.

Tel: (509) 332-1890
www.selinc.com

CYBER SECURITY

N-DIMENSION SOLUTIONS INC.

Tel: (905) 707-8884
www.n-dimension.ca

DATA ACQUISITION SYSTEMS

AEGIS TECHNOLOGIES

Tel: (602) 443-5000
www.aegistech.us

COOPER POWER SYSTEMS - CYBECTEC

Tel: (418) 834-0009
www.cybectec.com

OLAMETER INC.

Tel: (905) 841-1167 • (800) 903-7003
www.olameter.com

OPEN SYSTEMS INTERNATIONAL INC.

Tel: (763) 551-0559
www.osii.com

DATA CONVERSION

AEGIS TECHNOLOGIES

Tel: (602) 443-5000
www.aegistech.us

COOPER POWER SYSTEMS - CYBECTEC

Tel: (418) 834-0009
www.cybectec.com

DISTRIBUTION AUTOMATION - COMMUNICATIONS

AEGIS TECHNOLOGIES

Tel: (602) 443-5000
www.aegistech.us

COOPER POWER SYSTEMS - CYBECTEC

Tel: (418) 834-0009
www.cybectec.com

CURRENT GROUP LLC

Tel: (301) 944-2727
www.currentgroup.com

HARTING NORTH AMERICA

Tel: (847) 741-1500
www.harting-usa.com

OPEN SYSTEMS INTERNATIONAL INC.

Tel: (763) 551-0559
www.osii.com

RUGGED COM INC.

Tel: (905) 856-5288 • (888) 264-0006
www.ruggedcom.com

S&C ELECTRIC COMPANY

Tel: (773) 338-1000
www.sandc.com

TAVRIDA ELECTRIC NORTH AMERICA INC.

Tel: (604) 540-6600
www.tavrda-na.com

TELEMETRIC CORPORATION

Tel: (208) 658-1292
www.telemetric.net

DISTRIBUTION AUTOMATION SYSTEMS**AEGIS TECHNOLOGIES**

Tel: (602) 443-5000
www.aegistech.us

COOPER POWER SYSTEMS - CYBECTEC

Tel: (418) 834-0009
www.cybectec.com

CURRENT GROUP LLC

Tel: (301) 944-2727
www.currentgroup.com

MICROSOL

Tel: (203) 888-3002
www.microsol.com

OPEN SYSTEMS INTERNATIONAL INC.

Tel: (763) 551-0559
www.osii.com

RUGGED COM INC.

Tel: (905) 856-5288 • (888) 264-0006
www.ruggedcom.com

S & C ELECTRIC CANADA LTD

Tel: (416) 249-9171
www.sandc.com

S&C ELECTRIC COMPANY

Tel: (773) 338-1000
www.sandc.com

SCHWEITZER ENGINEERING LABORATORIES INC.

Tel: (509) 332-1890
www.selinc.com

THOMAS & BETTS - STEEL STRUCTURES DIVISION

Tel: (901) 252-8115
www.tnb.com

THOMAS & BETTS - UTILITY GROUP

Tel: (901) 252-8251
www.tnb.com

VIRELEC LTD.

Tel: (905) 569-8030
www.virelec.com

DISTRIBUTION MANAGEMENT SYSTEMS**ADVANCED CONTROL SYSTEMS**

Tel: (770) 446-8854
www.acsatlanta.com

CURRENT GROUP LLC

Tel: (301) 944-2727
www.currentgroup.com

OPEN SYSTEMS INTERNATIONAL INC.

Tel: (763) 551-0559
www.osii.com

ENERGY MANAGEMENT SYSTEMS**AREVA T&D CANADA INC.**

Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.

Tel: (484) 766-8100
www.areva-td.com

BPL GLOBAL

Tel: (724) 933-7700
www.bplglobal.net

COMVERGE, INC.

Tel: (888) 565-5525
www.comverge.com

CURRENT GROUP LLC

Tel: (301) 944-2727
www.currentgroup.com

ENERGATE

Tel: (613) 482-7928
www.energateinc.com

ESUNTECH, INC.

Tel: (519) 341-3586
www.esun-tech.com

GDS ASSOCIATES, INC.

Tel: (770) 425-8100
www.gdsassociates.com

OPEN SYSTEMS INTERNATIONAL INC.

Tel: (763) 551-0559
www.osii.com

FIELD AUTOMATION**AEGIS TECHNOLOGIES**

Tel: (602) 443-5000
www.aegistech.us

ENSPIRIA SOLUTIONS INC.

Tel: (303) 520-2513
www.enspiria.com

GARRETTCOM INC.

Tel: (510) 438-9071
www.garrettcom.com

INTERGRAPH CORPORATION

Tel: (303) 785-9835
www.intergraph.com

RUGGED COM INC.

Tel: (905) 856-5288 • (888) 264-0006
www.ruggedcom.com

VENTYX

Tel: (770) 952-8444 • 800-868-0497
www.ventyx.com

FIELD INSTALLATION SERVICES**OLAMETER INC.**

Tel: (905) 841-1167 • (800) 903-7003
www.olameter.com

GIS - SOFTWARE**BYERS ENGINEERING COMPANY**

Tel: (404) 497-1550
www.byers.com

INTERGRAPH CORPORATION

Tel: (303) 785-9835
www.intergraph.com

LAUREL HILL GIS, INC

Tel: (303) 772-6856
www.laurelhillgis.com

RED PLANET CONSULTING

Tel: 1-303-443-7447 ext 115
www.redplanetconsulting.com

GLOBAL POSITIONING SYSTEMS - MAPPING SYSTEMS**W.I.R.E SERVICES, A DIVISION OF MANITOBA HYDRO**

Tel: (204) 480-5800
www.wireservices.ca

GLOBAL POSITIONING SYSTEMS - PRECISE TIMING SYSTEMS**CXR LARUS CORPORATION**

Tel: (408) 573-2700 • 1-800-999-9946
www.cxrlarus.com

GLOBAL POSITIONING SYSTEMS - SUBSTATION SYNCHRONIZATION**CXR LARUS CORPORATION**

Tel: (408) 573-2700 • 1-800-999-9946
www.cxrlarus.com

GLOBAL POSITIONING SYSTEMS (GPS)**RTK INSTRUMENTS LTD.**

Tel: (908) 688-6709
www.rtkinstruments.com

INFORMATION TECHNOLOGY AND MANAGEMENT CONSULTING**ENSPIRIA SOLUTIONS INC.**

Tel: (303) 520-2513
www.enspiria.com

MINCOM INC.

Tel: (303) 446-9000
www.mincom.com

UTILIPOINT INTERNATIONAL

Tel: (214) 923-4876
www.utilipoint.com

METER - READING SERVICES**OLAMETER INC.**

Tel: (905) 841-1167 • (800) 903-7003
www.olameter.com

METER READING EQUIPMENT (AMR) - AUTOMATIC

BADGER METER, INC.
Tel: (800) 876-3837
www.badgermeter.com

CANNON TECHNOLOGIES/COOPER POWER SYSTEMS
Tel: (763) 543-7772
www.cannontech.com

COMVERGE, INC.
Tel: (888) 565-5525
www.comverge.com

COOPER POWER SYSTEMS
Tel: (262) 524-3300
www.cooperpower.com

LANDIS+GYR INC.
Tel: (765) 742-1001
www.landisgyr.us

NURI TELECOM CO., LTD.
Tel: +82-2-78-0741
www.nuritelecom.com

SENSUS METERING SYSTEMS
Tel: (724) 430-3956
www.sensus.com

TELVENT
Tel: (713) 939-9399
www.telvent.com

TRILLIANT NETWORKS INC.
Tel: (650) 204-5050
www.trillianetworks.com

METER SERVICES

BAY METAL INC.
Tel: (330) 523-0087
www.baymetal.com

UTILICON SOLUTIONS, LTD
Tel: (215) 784-1406 • (877) 884-5426
www.utiliconltd.com

METERING DATA - MANAGEMENT - MDM

ECOLOGIC ANALYTICS (FORMERLY WACS)
Tel: (952) 843-6000
www.ecologicanalytics.com

ENSPIRIA SOLUTIONS INC.
Tel: (303) 520-2513
www.enspiria.com

OLAMETER INC.
Tel: (905) 841-1167 • (800) 903-7003
www.olameter.com

METERING RESIDENTIAL AND COMMERCIAL

BADGER METER, INC.
Tel: (800) 876-3837
www.badgermeter.com

ELSTER
Tel: (919) 212-4800
www.elster-eis.com

LANDIS+GYR INC.
Tel: (765) 742-1001
www.landisgyr.us

SENSUS METERING SYSTEMS
Tel: (724) 430-3956
www.sensus.com

METERING SYSTEMS - ELECTRONIC

ELSTER
Tel: (919) 212-4800
www.elster-eis.com

MICROTEX ELECTRONICS
Tel: (972) 479-1011
www.microtexelectronics.com

METERS - TIME-OF-USE

SCHWEITZER ENGINEERING LABORATORIES INC.
Tel: (509) 332-1890
www.selinc.com

MOBILE WORKFORCE MANAGEMENT

INTERGRAPH CORPORATION
Tel: (303) 785-9835
www.intergraph.com

POWEL INC.
Tel: (651) 251-3005
www.powelinc.com

RADIO IP SOFTWARE INC.
Tel: (514) 890-6070 • 1-877-717-2242
www.radio-ip.com

TENSING
Tel: (240) 403-6001
www.tensing.com

OUTAGE MANAGEMENT SYSTEMS

CURRENT GROUP LLC
Tel: (301) 944-2727
www.currentgroup.com

ENSPIRIA SOLUTIONS INC.
Tel: (303) 520-2513
www.enspiria.com

INTERGRAPH CORPORATION
Tel: (303) 785-9835
www.intergraph.com

OPEN SYSTEMS INTERNATIONAL INC.
Tel: (763) 551-0559
www.osii.com

SUN-NET CONSULTING
Tel: (408) 323-1318
www.snscsw.com

W.I.R.E SERVICES, A DIVISION OF MANITOBA HYDRO
Tel: (204) 480-5800
www.wireservices.ca

OUTSOURCED CUSTOMER CARE & BILLING

MINCOM INC.
Tel: (303) 446-9000
www.mincom.com

OLAMETER INC.
Tel: (905) 841-1167 • (800) 903-7003
www.olameter.com

RELAYS - SUBSTATION AUTOMATION

ASAT SOLUTIONS INC.
Tel: (403) 569-1680
www.asatsolutions.com

S&C ELECTRIC COMPANY
Tel: (773) 338-1000
www.sandc.com

SCHWEITZER ENGINEERING LABORATORIES INC.
Tel: (509) 332-1890
www.selinc.com

VIRELEC LTD.
Tel: (905) 569-8030
www.virelec.com

ZIV P+C, S.L.
Tel: +34.94.403.74.00
www.zivpmasc.com

REMOTE INFORMATION SYSTEMS - AUTOMATIC

OPEN SYSTEMS INTERNATIONAL INC.
Tel: (763) 551-0559
www.osii.com

SUBNET SOLUTIONS INC.
Tel: (403) 270-8885
www.subnetsolutions.com

REMOTE TERMINAL UNITS

ASAT SOLUTIONS INC.
Tel: (403) 569-1680
www.asatsolutions.com

OPEN SYSTEMS INTERNATIONAL INC.
Tel: (763) 551-0559
www.osii.com

RUGGED COM INC.
Tel: (905) 856-5288 • (888) 264-0006
www.ruggedcom.com

SCHWEITZER ENGINEERING LABORATORIES INC.
Tel: (509) 332-1890
www.selinc.com

TELVENT
Tel: (713) 939-9399
www.telvent.com

VIRELEC LTD.
Tel: (905) 569-8030
www.virelec.com

SCADA - ENERGY CONTROL SYSTEMS**OPEN SYSTEMS INTERNATIONAL INC.**

Tel: (763) 551-0559
www.osii.com

SCADA SYSTEMS**AREVA T&D CANADA INC.**

Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.

Tel: (484) 766-8100
www.areva-td.com

OPEN SYSTEMS INTERNATIONAL INC.

Tel: (763) 551-0559
www.osii.com

PROSOFT TECHNOLOGY

Tel: (661) 716-5100
www.prosoft-technology.com

TELVENT

Tel: (713) 939-9399
www.telvent.com

VIRELEC LTD.

Tel: (905) 569-8030
www.virelec.com

SOFTWARE - BILLING**MINCOM INC.**

Tel: (303) 446-9000
www.mincom.com

**SOFTWARE - ELECTRIC DESIGN
AUTOMATION****INTERGRAPH CORPORATION**

Tel: (303) 785-9835
www.intergraph.com

MANITOBA HVDC RESEARCH CENTRE INC.

Tel: (204) 989-1240
www.pscad.com

SUBSTATION AUTOMATION**AEGIS TECHNOLOGIES**

Tel: (602) 443-5000
www.aegistech.us

AREVA T&D CANADA INC.

Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.

Tel: (484) 766-8100
www.areva-td.com

ASAT SOLUTIONS INC.

Tel: (403) 569-1680
www.asatsolutions.com

COOPER POWER SYSTEMS - CYBECTEC

Tel: (418) 834-0009
www.cybectec.com

GARRETTCOM INC.

Tel: (510) 438-9071
www.garrettcom.com

OPEN SYSTEMS INTERNATIONAL INC.

Tel: (763) 551-0559
www.osii.com

**SCHWEITZER ENGINEERING LABORATORIES
INC.**

Tel: (509) 332-1890
www.selinc.com

SUBNET SOLUTIONS INC.

Tel: (403) 270-8885
www.subnetsolutions.com

TELVENT

Tel: (713) 939-9399
www.telvent.com

SYSTEMS INTEGRATOR**METERSMART**

Tel: (817) 652-1933 • (866) 944-4868
www.metersmart.com

VIRELEC LTD.

Tel: (905) 569-8030
www.virelec.com

UTILITY AUTOMATION**POWER ENGINEERS, INC.**

Tel: (208) 788-3456
www.powereng.com

SUN-NET CONSULTING

Tel: (408) 323-1318
www.sncsw.com

VIRELEC LTD.

Tel: (905) 569-8030
www.virelec.com

COMMUNICATIONS SYSTEMS**AUTOMATIC METER READING (AMR)
- COMMUNICATIONS****AZTECH ASSOCIATES INC.**

Tel: (613) 384-9400
www.aztechmeter.com

CALAMP CORP.

Tel: (805) 987-9000
www.calamp.com

SENSUS METERING SYSTEMS

Tel: (724) 430-3956
www.sensus.com

TANTALUS SYSTEMS CORP.

Tel: (604) 299-0458
www.tantalus.com

BATTERIES - TELECOMMUNICATION**ENXERGY**

Tel: (608) 565-6290
www.enxergy.com

CLOCKS AND TIME DISPLAYS**SCHWEITZER ENGINEERING LABORATORIES
INC.**

Tel: (509) 332-1890
www.selinc.com

COMMUNICATION SYSTEMS**AEGIS TECHNOLOGIES**

Tel: (602) 443-5000
www.aegistech.us

ARCADIAN NETWORKS

Tel: (914) 579-6380
www.arcadiannetworks.com

CURRENT GROUP LLC

Tel: (301) 944-2727
www.currentgroup.com

HUIHONG INTERNATIONAL LIMITED

Tel: 86-755-21863622
www.sunrisephotonics.com

POWER ENGINEERS, INC.

Tel: (208) 788-3456
www.powereng.com

RADIUS US, INC. (ROCKFORD)

Tel: (414) 378-8491
www.radius.net

RUGGED COM INC.

Tel: (905) 856-5288 • (888) 264-0006
www.ruggedcom.com

TWISTED PAIR SOLUTIONS, INC.

Tel: (206) 442-2101
www.twistpair.com

**COMMUNICATION SYSTEMS -
PROTECTIVE RELAYS****RFL ELECTRONICS INC.**

Tel: (973) 334-3100
www.rflect.com

RUGGED COM INC.

Tel: (905) 856-5288 • (888) 264-0006
www.ruggedcom.com

COMMUNICATIONS SYSTEMS

TAVRIDA ELECTRIC NORTH AMERICA INC.

Tel: (604) 540-6600
www.tavrida-na.com

COMPUTER TELEPHONY SYSTEMS

CENTURION, INC.

Tel: (262) 317-5635
www.centonline.com

CONSOLES - SCADA CONTROL CENTERS

PRIMATE TECHNOLOGIES

Tel: 321-821-2227
www.primate-tech.com

CONSOLES - T&D CONTROL CENTERS

PRIMATE TECHNOLOGIES

Tel: 321-821-2227
www.primate-tech.com

CONTROL - ROOM DISPLAY SYSTEMS

PRIMATE TECHNOLOGIES

Tel: 321-821-2227
www.primate-tech.com

CONTROL CENTER DESIGN

PRIMATE TECHNOLOGIES

Tel: 321-821-2227
www.primate-tech.com

CONTROL PANELS

CITEL SURGE PROTECTION

Tel: (305) 621-0022
www.citelprotection.com

CONTROL CENTER LLC A GTE COMPANY

Tel: (407) 304-5200
www.controlcenter.net

CONTROL SYSTEM

AEGIS TECHNOLOGIES

Tel: (602) 443-5000
www.aegistech.us

OPEN SYSTEMS INTERNATIONAL INC.

Tel: (763) 551-0559
www.osii.com

RUGGED COM INC.

Tel: (905) 856-5288 • (888) 264-0006
www.ruggedcom.com

VIRELEC LTD.

Tel: (905) 569-8030
www.virelec.com

CONTROL SYSTEMS - ELECTRIC/ ELECTRONIC

AXIOMATIC TECHNOLOGIES CORPORATION

Tel: (905) 602-9270
www.axiomatic.com

OPEN SYSTEMS INTERNATIONAL INC.

Tel: (763) 551-0559
www.osii.com

CONTROLLERS/CONTROLS - PROGRAMMABLE

SCHWEITZER ENGINEERING LABORATORIES INC.

Tel: (509) 332-1890
www.selinc.com

CONTROLS - LOAD

OPEN SYSTEMS INTERNATIONAL INC.

Tel: (763) 551-0559
www.osii.com

CONTROLS - LTC TRANSFORMER

INCON POWER RELIABILITY PRODUCTS

Tel: (207) 283-0156 • 1-800-872-3455
www.incon.com

CONTROLS - PEAK DEMAND

BRAYDEN AUTOMATION CORP.

Tel: 1.888.BRAYDEN (272.9336)
www.brayden.com

NEOPTIX FIBER OPTIC SENSORS

Tel: (418) 687-2500
www.neoptix.com

OPEN SYSTEMS INTERNATIONAL INC.

Tel: (763) 551-0559
www.osii.com

DATA ACQUISITION SYSTEMS

AEGIS TECHNOLOGIES

Tel: (602) 443-5000
www.aegistech.us

COOPER POWER SYSTEMS - CYBECTEC

Tel: (418) 834-0009
www.cybectec.com

OLAMETER INC.

Tel: (905) 841-1167 • (800) 903-7003
www.olameter.com

OPEN SYSTEMS INTERNATIONAL INC.

Tel: (763) 551-0559
www.osii.com

DATA CONVERSION

AEGIS TECHNOLOGIES

Tel: (602) 443-5000
www.aegistech.us

COOPER POWER SYSTEMS - CYBECTEC

Tel: (418) 834-0009
www.cybectec.com

DISPATCH SYSTEMS - COMPUTER- AIDED

INTERGRAPH CORPORATION

Tel: (303) 785-9835
www.intergraph.com

DISTRIBUTION AUTOMATION - COMMUNICATIONS

AEGIS TECHNOLOGIES

Tel: (602) 443-5000
www.aegistech.us

COOPER POWER SYSTEMS - CYBECTEC

Tel: (418) 834-0009
www.cybectec.com

CURRENT GROUP LLC

Tel: (301) 944-2727
www.currentgroup.com

HARTING NORTH AMERICA

Tel: (847) 741-1500
www.harting-usa.com

OPEN SYSTEMS INTERNATIONAL INC.

Tel: (763) 551-0559
www.osii.com

RUGGED COM INC.

Tel: (905) 856-5288 • (888) 264-0006
www.ruggedcom.com

S&C ELECTRIC COMPANY

Tel: (773) 338-1000
www.sandc.com

TAVRIDA ELECTRIC NORTH AMERICA INC.

Tel: (604) 540-6600
www.tavrida-na.com

TELEMETRIC CORPORATION

Tel: (208) 658-1292
www.telemetric.net

ETHERNET

AEGIS TECHNOLOGIES

Tel: (602) 443-5000
www.aegistech.us

GARRETTCOM INC.

Tel: (510) 438-9071
www.garrettcom.com

FIBER OPTIC COMMUNICATIONS

RUGGED COM INC.

Tel: (905) 856-5288 • (888) 264-0006
www.ruggedcom.com

GLOBAL POSITIONING SYSTEMS - MAPPING SYSTEMS

W.I.R.E SERVICES, A DIVISION OF MANITOBA HYDRO

Tel: (204) 480-5800
www.wireservices.ca

GLOBAL POSITIONING SYSTEMS - PRECISE TIMING SYSTEMS

CXR LARUS CORPORATION

Tel: (408) 573-2700 • 1-800-999-9946
www.cxrlarus.com

GLOBAL POSITIONING SYSTEMS - SUBSTATION SYNCHRONIZATION

CXR LARUS CORPORATION

Tel: (408) 573-2700 • 1-800-999-9946
www.cxrlarus.com

GLOBAL POSITIONING SYSTEMS (GPS)

RTK INSTRUMENTS LTD.

Tel: (908) 688-6709
www.rtkinstruments.com

HUB SWITCHES

BROOKS UTILITY PRODUCTS GROUP

(Brooks Ekstrom, Brooks Meter Devices,
Brooks Security Products)
Tel: (248) 477-0250 • 888-687-3008
www.brooksutility.com

DATA COMM FOR BUSINESS INC.

Tel: (217) 897-6600
www.dcbnet.com

GARRETTCOM INC.

Tel: (510) 438-9071
www.garrettcom.com

RUGGED COM INC.

Tel: (905) 856-5288 • (888) 264-0006
www.ruggedcom.com

LOAD MANAGEMENT - COMMUNICATIONS

CURRENT GROUP LLC

Tel: (301) 944-2727
www.currentgroup.com

MEDIA CONVERTERS

GARRETTCOM INC.

Tel: (510) 438-9071
www.garrettcom.com

RUGGED COM INC.

Tel: (905) 856-5288 • (888) 264-0006
www.ruggedcom.com

MOBILE - DATA

RADIO IP SOFTWARE INC.

Tel: (514) 890-6070 • 1-877-717-2242
www.radio-ip.com

MOBILE COMMUNICATION

RADIO IP SOFTWARE INC.

Tel: (514) 890-6070 • 1-877-717-2242
www.radio-ip.com

MOBILE WORKFORCE MANAGEMENT

INTERGRAPH CORPORATION

Tel: (303) 785-9835
www.intergraph.com

POWEL INC.

Tel: (651) 251-3005
www.powelinc.com

RADIO IP SOFTWARE INC.

Tel: (514) 890-6070 • 1-877-717-2242
www.radio-ip.com

TENSING

Tel: (240) 403-6001
www.tensing.com

MODEMS - DATA COMMUNICATION

CXR LARUS CORPORATION

Tel: (408) 573-2700 • 1-800-999-9946
www.cxrlarus.com

DATA COMM FOR BUSINESS INC.

Tel: (217) 897-6600
www.dcbnet.com

MONITORING - COMMUNICATIONS

AEGIS TECHNOLOGIES

Tel: (602) 443-5000
www.aegistech.us

CURRENT GROUP LLC

Tel: (301) 944-2727
www.currentgroup.com

DYNAMIC RATINGS, INC.

Tel: (262) 746-1230
www.dynamicratings.com

SENSUS METERING SYSTEMS

Tel: (724) 430-3956
www.sensus.com

MULTIPLEXERS - DATA COMMUNICATIONS

CXR LARUS CORPORATION

Tel: (408) 573-2700 • 1-800-999-9946
www.cxrlarus.com

DATA COMM FOR BUSINESS INC.

Tel: (217) 897-6600
www.dcbnet.com

MULTIPLEXERS - FIBER OPTICS

INIVEN

Tel: (908) 722-3770
www.iniven.com

OPERATION SUPPORT SYSTEMS

CSS GROUP

Tel: (316) 269-9090
www.translore.com

OUTAGE MANAGEMENT SYSTEMS

CURRENT GROUP LLC

Tel: (301) 944-2727
www.currentgroup.com

ENSPERIA SOLUTIONS INC.

Tel: (303) 520-2513
www.ensperia.com

INTERGRAPH CORPORATION

Tel: (303) 785-9835
www.intergraph.com

OPEN SYSTEMS INTERNATIONAL INC.

Tel: (763) 551-0559
www.osii.com

SUN-NET CONSULTING

Tel: (408) 323-1318
www.snscsw.com

W.I.R.E SERVICES, A DIVISION OF MANITOBA HYDRO

Tel: (204) 480-5800
www.wireservices.ca

POWER - LINE CARRIER EQUIPMENT - SYSTEMS

CURRENT GROUP LLC

Tel: (301) 944-2727
www.currentgroup.com

TRENCH LIMITED

Tel: (416) 298-8108
www.trenchgroup.com

POWER - MANAGEMENT SYSTEM

CURRENT GROUP LLC

Tel: (301) 944-2727
www.currentgroup.com

RADIO COMMUNICATIONS

LOR MANUFACTURING CO., INC.

Tel: (989) 644-2581
www.lormfg.com

SENSUS METERING SYSTEMS

Tel: (724) 430-3956
www.sensus.com

REMOTE - SITE MONITORING

ALPHA TECHNOLOGIES

Tel: (360) 392-2263
www.alpha.com

ESUNTECH, INC.

Tel: (519) 341-3586
www.esun-tech.com

REMOTE INFORMATION SYSTEMS - AUTOMATIC

OPEN SYSTEMS INTERNATIONAL INC.

Tel: (763) 551-0559
www.osii.com

SUBNET SOLUTIONS INC.

Tel: (403) 270-8885
www.subnetsolutions.com

REMOTE TERMINAL UNITS

ASAT SOLUTIONS INC.

Tel: (403) 569-1680
www.asatsolutions.com

OPEN SYSTEMS INTERNATIONAL INC.

Tel: (763) 551-0559
www.osii.com

RUGGED COM INC.

Tel: (905) 856-5288 • (888) 264-0006
www.ruggedcom.com

SCHWEITZER ENGINEERING LABORATORIES INC.

Tel: (509) 332-1890
www.selinc.com

TELVENT

Tel: (713) 939-9399
www.telvent.com

VIRELEC LTD.

Tel: (905) 569-8030
www.virelec.com

REMOTE TERMINAL UNITS - COMMUNICATIONS

AEGIS TECHNOLOGIES

Tel: (602) 443-5000
www.aegistech.us

OPEN SYSTEMS INTERNATIONAL INC.

Tel: (763) 551-0559
www.osii.com

SCADA - COMMUNICATIONS

AEGIS TECHNOLOGIES

Tel: (602) 443-5000
www.aegistech.us

CIRRONET INC.

Tel: (678) 684-2000
www.cirronet.com

DATA COMM FOR BUSINESS INC.

Tel: (217) 897-6600
www.dcbnet.com

GARRETTCOM INC.

Tel: (510) 438-9071
www.garrettcom.com

GE MDS LLC

Tel: (585) 242-9600
www.gemds.com

OPEN SYSTEMS INTERNATIONAL INC.

Tel: (763) 551-0559
www.osii.com

RUGGED COM INC.

Tel: (905) 856-5288 • (888) 264-0006
www.ruggedcom.com

STRATOS

Tel: (888) 766-1313
www.stratosglobal.com

SUBNET SOLUTIONS INC.

Tel: (403) 270-8885
www.subnetsolutions.com

SCADA - ENERGY CONTROL SYSTEMS

OPEN SYSTEMS INTERNATIONAL INC.

Tel: (763) 551-0559
www.osii.com

SCADA SYSTEMS

AREVA T&D CANADA INC.

Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.

Tel: (484) 766-8100
www.areva-td.com

OPEN SYSTEMS INTERNATIONAL INC.

Tel: (763) 551-0559
www.osii.com

PROSOFT TECHNOLOGY

Tel: (661) 716-5100
www.prosoft-technology.com

TELVENT

Tel: (713) 939-9399
www.telvent.com

VIRELEC LTD.

Tel: (905) 569-8030
www.virelec.com

SUBSTATION - COMMUNICATION EQUIPMENT

AEGIS TECHNOLOGIES

Tel: (602) 443-5000
www.aegistech.us

CURRENT GROUP LLC

Tel: (301) 944-2727
www.currentgroup.com

GARRETTCOM INC.

Tel: (510) 438-9071
www.garrettcom.com

OPEN SYSTEMS INTERNATIONAL INC.

Tel: (763) 551-0559
www.osii.com

RUGGED COM INC.

Tel: (905) 856-5288 • (888) 264-0006
www.ruggedcom.com

SUBSTATION - COMMUNICATIONS

AEGIS TECHNOLOGIES

Tel: (602) 443-5000
www.aegistech.us

CURRENT GROUP LLC

Tel: (301) 944-2727
www.currentgroup.com

SUBNET SOLUTIONS INC.

Tel: (403) 270-8885
www.subnetsolutions.com

TELTONE CORPORATION

Tel: (425) 951-3006
www.teltone.com

SYSTEMS INTEGRATOR

METERSMART

Tel: (817) 652-1933 • (866) 944-4868
www.metersmart.com

VIRELEC LTD.

Tel: (905) 569-8030
www.virelec.com

TELECOMMUNICATIONS

DACA VISION

Tel: (514) 347-9499
www.dacavision.com

DIMAT

Tel: +34933490700
www.dimat.com

INTERGRAPH CORPORATION

Tel: (303) 785-9835
www.intergraph.com

IQ SERVICES

Tel: (612) 243-6700
www.iq-services.com

RUGGED COM INC.

Tel: (905) 856-5288 • (888) 264-0006
www.ruggedcom.com

TELECOMMUNICATIONS - DC POWER

ALPHA TECHNOLOGIES

Tel: (360) 392-2263
www.alpha.com

GARRETTCOM INC.

Tel: (510) 438-9071
www.garrettcom.com

TOWERS - ANTENNA

THOMAS & BETTS - STEEL STRUCTURES DIVISION

Tel: (901) 252-8115
www.tnb.com

TOWERS - TELECOMMUNICATION

FWT INC.

Tel: (817) 255-2998
www.fwtinc.com

ROHN PRODUCTS

Tel: (309) 697-4400
www.radiancorp.com

SABRE TUBULAR STRUCTURES

Tel: (817) 852-1700
www.sabretubularstructures.com

THOMAS & BETTS - STEEL STRUCTURES DIVISION

Tel: (901) 252-8115
www.tnb.com

Delivering Power Projects Coast to Coast



Sabre Tubular Structures has the power to deliver your project on time and under budget. Centrally located in the heart of Texas, we design and manufacture a full line of transmission, distribution and substation solutions. With one of the largest galvanizers in North America located on-site, our facility has the ability to meet your delivery deadlines. Call Sabre today to see **POWER LINE** SYSTEMS INC. how we can help you deliver the power. Authorized PLS-CADD Solutions Provider

Sabre Tubular Structures is an Authorized PLS-CADD Solutions Provider.



**Call Toll Free Today
1-866-254-3707**

utilitiesales@sabrecom.com
www.SabreTubularStructures.com



TOWERS - WIRELESS

FWT INC.

Tel: (817) 255-2998
www.fwtinc.com

ROHN PRODUCTS

Tel: (309) 697-4400
www.radiancorp.com

THOMAS & BETTS - STEEL STRUCTURES

DIVISION

Tel: (901) 252-8115
www.tnb.com

TRANSFORMERS - NETWORK

RICHARDS MANUFACTURING CO. SALES INC.

Tel: (973) 371-1771
www.richards-mfg.com

COMPUTERS & SOFTWARE FOR UTILITIES

ASSET MANAGEMENT

ADVANTICA INC.

Tel: (717) 724-1900
www.advanticaelectric.com

AUTODESK INC.

Tel: (415) 507-5000
www.autodesk.com

AXIA SOFTWARE CORPORATION

Tel: (604) 683-2942
www.searchsolvescore.com

B.L. ROBINSON SURVEY AND ENGINEERING

Tel: (330) 836-8487
www.blrobinson.com

CAMCODE DIVISION OF HORIZONS INC

Tel: (800) 627-3917
www.camcod.com/utility/utility.asp

CURRENT GROUP LLC

Tel: (301) 944-2727
www.currentgroup.com

ENSPIRIA SOLUTIONS INC.

Tel: (303) 520-2513
www.enspiria.com

INCON POWER RELIABILITY PRODUCTS

Tel: (207) 283-0156 • 1-800-872-3455
www.incon.com

INTERGRAPH CORPORATION

Tel: (303) 785-9835
www.intergraph.com

MINCOM INC.

Tel: (303) 446-9000
www.mincom.com

POWER ENGINEERS, INC.

Tel: (208) 788-3456
www.powereng.com

SAP AMERICAS

Tel: (610) 661-1000
www.sap.com

TOOLHOUND

Tel: (800) 387-8665
www.toolhound.com

BILLING

IHDEA

Tel: (512) 553-0898
www.ihdea.com

MINCOM INC.

Tel: (303) 446-9000
www.mincom.com

BILLING SOLUTIONS

MINCOM INC.

Tel: (303) 446-9000
www.mincom.com

BILLING/CUSTOMER CARE

DAFFRON & ASSOCIATES, INC.

Tel: (800) 325-0208
www.daffron.com

MINCOM INC.

Tel: (303) 446-9000
www.mincom.com

CIS SOLUTIONS

ENVISION

Tel: (512) 353-6000
www.eusc.com

FIRST DATA UTILITIES: POWERED BY PEACE

Tel: (305) 341-2400
www.firstdatautilities.com

MINCOM INC.

Tel: (303) 446-9000
www.mincom.com

COMPUTER CONTROLS AND AUTOMATION

AEGIS TECHNOLOGIES

Tel: (602) 443-5000
www.aegistech.us

ESUNTECH, INC.

Tel: (519) 341-3586
www.esun-tech.com

RCCS

Tel: (781) 848-0155
www.rccscontrols.com

RUGGED COM INC.

Tel: (905) 856-5288 • (888) 264-0006
www.ruggedcom.com

SCHWEITZER ENGINEERING LABORATORIES INC.

Tel: (509) 332-1890
www.selinc.com

SUBNET SOLUTIONS INC.

Tel: (403) 270-8885
www.subnetsolutions.com

VIRELEC LTD.

Tel: (905) 569-8030
www.virelec.com

COMPUTER TELEPHONY SYSTEMS

CENTURION, INC.

Tel: (262) 317-5635
www.centonline.com

COMPUTERS - EQUIPMENT

MATROX GRAPHICS INC.

Tel: (514) 822-6000, ext. 2638
www.matrox.com/graphics

SCHWEITZER ENGINEERING LABORATORIES INC.

Tel: (509) 332-1890
www.selinc.com

COMPUTERS - RUGGED MOBILE

RUGGED COM INC.

Tel: (905) 856-5288 • (888) 264-0006
www.ruggedcom.com

TRIMBLE (TRIPOD DATA SYSTEMS, A DIVISION OF TRIMBLE)

Tel: (541) 750-9200
www.trimble.com

COMPUTERS - SOFTWARE

OPAL-RT

Tel: (514) 935-2323
Web: www.opal-rt.com

COMPUTERS - WIRELESS**RADIO IP SOFTWARE INC.**

Tel: (514) 890-6070 • 1-877-717-2242
www.radio-ip.com

CONTROL - ROOM DISPLAY SYSTEMS**PRIMATE TECHNOLOGIES**

Tel: 321-821-2227
www.prima-tech.com

CYBER SECURITY**N-DIMENSION SOLUTIONS INC.**

Tel: (905) 707-8884
www.n-dimension.ca

DATA CONVERSION**AEGIS TECHNOLOGIES**

Tel: (602) 443-5000
www.aegistech.us

COOPER POWER SYSTEMS - CYBECTEC

Tel: (418) 834-0009
www.cybectec.com

DISPATCH SYSTEMS - COMPUTER-AIDED**INTERGRAPH CORPORATION**

Tel: (303) 785-9835
www.intergraph.com

ELECTRICAL SOFTWARE**AREVA T&D CANADA INC.**

Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.

Tel: (484) 766-8100
www.areva-td.com

MILSOFT UTILITY SOLUTIONS

Tel: (325) 695-1642 • 1-800-344-5647
www.milsoft.com

OPAL-RT

Tel: (514) 935-2323
Web: www.opal-rt.com

ENERGY MANAGEMENT SYSTEMS**AREVA T&D CANADA INC.**

Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.

Tel: (484) 766-8100
www.areva-td.com

BPL GLOBAL

Tel: (724) 933-7700
www.bplglobal.net

COMVERGE, INC.

Tel: (888) 565-5525
www.comverge.com

CURRENT GROUP LLC

Tel: (301) 944-2727
www.currentgroup.com

ENERGATE

Tel: (613) 482-7928
www.energateinc.com

ESUNTECH, INC.

Tel: (519) 341-3586
www.esun-tech.com

GDS ASSOCIATES, INC.

Tel: (770) 425-8100
www.gdsassociates.com

OPEN SYSTEMS INTERNATIONAL INC.

Tel: (763) 551-0559
www.osii.com

ENGINEERING - SOFTWARES**OPAL-RT**

Tel: (514) 935-2323
Web: www.opal-rt.com

FIELD AUTOMATION**AEGIS TECHNOLOGIES**

Tel: (602) 443-5000
www.aegistech.us

ENSPERIA SOLUTIONS INC.

Tel: (303) 520-2513
www.ensperia.com

GARRETTCOM INC.

Tel: (510) 438-9071
www.garrettcom.com

INTERGRAPH CORPORATION

Tel: (303) 785-9835
www.intergraph.com

RUGGED COM INC.

Tel: (905) 856-5288 • (888) 264-0006
www.ruggedcom.com

VENTYX

Tel: (770) 952-8444 • 800-868-0497
www.ventyx.com

GIS - SOFTWARE**BYERS ENGINEERING COMPANY**

Tel: (404) 497-1550
www.byers.com

INTERGRAPH CORPORATION

Tel: (303) 785-9835
www.intergraph.com

LAUREL HILL GIS, INC

Tel: (303) 772-6856
www.laurelhillgis.com

RED PLANET CONSULTING

Tel: 1-303-443-7447 ext 115
www.redplanetconsulting.com

MAPPING SYSTEMS - MOBILE**ARBORMETRICS SOLUTIONS LTD**

Tel: (407) 339-1733 • (866) 685-1880
www.arbormetricssolutions.com

INTERGRAPH CORPORATION

Tel: (303) 785-9835
www.intergraph.com

MAPFRAME CORPORATION

Tel: (214) 741-2264
www.mapframe.com

TC TECHNOLOGY

Tel: (760) 929-8345
www.tctechnology.com

METER READING EQUIPMENT (AMR) - AUTOMATIC**BADGER METER, INC.**

Tel: (800) 876-3837
www.badgermeter.com

CANNON TECHNOLOGIES/COOPER POWER SYSTEMS

Tel: (763) 543-7772
www.cannontech.com

COMVERGE, INC.

Tel: (888) 565-5525
www.comverge.com

COOPER POWER SYSTEMS

Tel: (262) 524-3300
www.cooperpower.com

LANDIS+GYR INC.

Tel: (765) 742-1001
www.landisgyr.us

NURI TELECOM CO., LTD.

Tel: +82-2-78-0741
www.nuritelecom.com

SENSUS METERING SYSTEMS

Tel: (724) 430-3956
www.sensus.com

TELVENT

Tel: (713) 939-9399
www.telvent.com

TRILLIANT NETWORKS INC.

Tel: (650) 204-5050
www.trilliantnetworks.com

ON-LINE MONITORING**HV TECHNOLOGIES INC.**

Tel: (703) 365-2330
www.hvtechnologies.com

NEOPTIX FIBER OPTIC SENSORS

Tel: (418) 687-2500
www.neoptix.com

PROGOS LTDA TRANSFORMADORES & EQUIPOS ELECTRICOS

Tel: 569 9872 7411
www.progos.cl

OPERATION SUPPORT SYSTEMS**CSS GROUP**

Tel: (316) 269-9090
www.translore.com

OUTAGE MANAGEMENT SYSTEMS**CURRENT GROUP LLC**

Tel: (301) 944-2727
www.currentgroup.com

ENSPIRIA SOLUTIONS INC.

Tel: (303) 520-2513
www.enspiria.com

INTERGRAPH CORPORATION

Tel: (303) 785-9835
www.intergraph.com

OPEN SYSTEMS INTERNATIONAL INC.

Tel: (763) 551-0559
www.osii.com

SUN-NET CONSULTING

Tel: (408) 323-1318
www.snscsw.com

**W.I.R.E SERVICES, A DIVISION OF MANITOBA
HYDRO**

Tel: (204) 480-5800
www.wireservices.ca

SOFTWARE**BOLD TECHNOLOGIES LTD**

Tel: (847) 867-9400
www.boldgroup.com

FLIR SYSTEMS

Tel: (978) 901-8000 • (800) 464-6372
www.goifrared.com

SKYWIRE SOFTWARE

Tel: (972) 377-1110
www.skywiresoftware.com

SOFTWARE - APPLICATION**FLIR SYSTEMS**

Tel: (978) 901-8000 • (800) 464-6372
www.goifrared.com

SUN-NET CONSULTING

Tel: (408) 323-1318
www.snscsw.com

SOFTWARE - BILLING**MINCOM INC.**

Tel: (303) 446-9000
www.mincom.com

SOFTWARE - DESIGN**OPAL-RT**

Tel: (514) 935-2323
Web: www.opal-rt.com

POWEL INC.

Tel: (651) 251-3005
www.powelinc.com

**SOFTWARE - ELECTRIC DESIGN
AUTOMATION****INTERGRAPH CORPORATION**

Tel: (303) 785-9835
www.intergraph.com

MANITOBA HVDC RESEARCH CENTRE INC.

Tel: (204) 989-1240
www.pscad.com

SOFTWARE - ENGINEERING**ENSPIRIA SOLUTIONS INC.**

Tel: (303) 520-2513
www.enspiria.com

MANITOBA HVDC RESEARCH CENTRE INC.

Tel: (204) 989-1240
www.pscad.com

OPAL-RT

Tel: (514) 935-2323
Web: www.opal-rt.com

POWEL INC.

Tel: (651) 251-3005
www.powelinc.com

SOFTWARE - T&D LINE DESIGN**INTERGRAPH CORPORATION**

Tel: (303) 785-9835
www.intergraph.com

SOFTWARE INTEGRATION**ENSPIRIA SOLUTIONS INC.**

Tel: (303) 520-2513
www.enspiria.com

ESUNTECH, INC.

Tel: (519) 341-3586
www.esun-tech.com

SOFTWARE SOLUTIONS**ASSURX, INC.**

Tel: (408) 778-1376
www.assurxenergy.com

ATLAS BUSINESS SOLUTIONS, INC. (ABS)

Tel: (800) 874-8801
www.abs-usa.com

CEELOX

Tel: (813) 769-0918
www.ceelox.com

METERSMART

Tel: (817) 652-1933 • (866) 944-4868
www.metersmart.com

RADIO IP SOFTWARE INC.

Tel: (514) 890-6070 • 1-877-717-2242
www.radio-ip.com

SYSTEMS INTEGRATOR**METERSMART**

Tel: (817) 652-1933 • (866) 944-4868
www.metersmart.com

VIRELEC LTD.

Tel: (905) 569-8030
www.virelec.com

DISTRIBUTION**ANCHORS - BOLTS****HUGHES BROTHERS INC.**

Tel: (402) 643-2991
www.hughesbros.com

**THOMAS & BETTS - STEEL STRUCTURES
DIVISION**

Tel: (901) 252-8115
www.tnb.com

ANCHORS - FOUNDATION**HUBBELL POWER SYSTEMS INC.**

Tel: (573) 682-5521
www.hubbellpowersystems.com

**ARRESTERS, LIGHTNING,
DISTRIBUTION - LINE TYPE****HUBBELL POWER SYSTEMS INC.**

Tel: (573) 682-5521
www.hubbellpowersystems.com

**THOMAS & BETTS - STEEL STRUCTURES
DIVISION**

Tel: (901) 252-8115
www.tnb.com

THOMAS & BETTS - UTILITY GROUP

Tel: (901) 252-8251
www.tnb.com

BIRD CONTROL**BIRD-X**

Tel: (312) 226-2473
www.bird-x.com

BOOTS - BUS BAR**INSULBOOT A DIV. OF PLASTIC DIP MOLDINGS**

Tel: (215) 766-2020
www.insulboot.com

PATELMECH INDIA

Tel: +91-288-2730199
www.patelmech.com

BOX PADS**CONCAST INC.**

Tel: (507) 732-4095
www.concastinc.com

HIGHLINE PRODUCTS

Tel: (787) 328-3220
www.highlineproducts.com

BRACES - CROSSARM**HUGHES BROTHERS INC.**

Tel: (402) 643-2991
www.hughesbros.com

THOMAS & BETTS - STEEL STRUCTURES DIVISION

Tel: (901) 252-8115
www.tnb.com

BUSHING REPAIR**CK COMPOSITES INC.**

Tel: (724) 547-4581
www.ckcomposites.com

PCORE ELECTRIC COMPANY, INC.

Tel: (585) 768-1200
www.pcoreelectric.com

BUSHINGS**AREVA T&D CANADA INC.**

Tel: (450) 659-8921
www.areva-td.com

PCORE ELECTRIC COMPANY, INC.

Tel: (585) 768-1200
www.pcoreelectric.com

TRENCH LIMITED

Tel: (416) 298-8108
www.trenchgroup.com

BUSHINGS - COMPOSITE**POLYCAST INTERNATIONAL**

Tel: (204) 632-5428 • (800) 665-7445
www.polycastinternational.com

BUSHINGS - CONDENSER-TYPE-CAST EPOXY**PCORE ELECTRIC COMPANY, INC.**

Tel: (585) 768-1200
www.pcoreelectric.com

TRENCH LIMITED

Tel: (416) 298-8108
www.trenchgroup.com

BUSHINGS - DISTRIBUTION APPARATUS (THROUGH 34.5KV)**PCORE ELECTRIC COMPANY, INC.**

Tel: (585) 768-1200
www.pcoreelectric.com

POLYCAST INTERNATIONAL

Tel: (204) 632-5428 • (800) 665-7445
www.polycastinternational.com

TRENCH LIMITED

Tel: (416) 298-8108
www.trenchgroup.com

BUSHINGS - HIGH VOLTAGE APPARATUS (OVER 34.5KV)**PCORE ELECTRIC COMPANY, INC.**

Tel: (585) 768-1200
www.pcoreelectric.com

TRENCH LIMITED

Tel: (416) 298-8108
www.trenchgroup.com

CAPACITORS**AREVA T&D CANADA INC.**

Tel: (450) 659-8921
www.areva-td.com

CAPACITORS - CONTROLS**ACCURATE CONTROLS INC**

Tel: (617) 872-2510
www accuratcontrolsinc.com

COMVERGE, INC.

Tel: (888) 565-5525
www.comverge.com

S&C ELECTRIC COMPANY

Tel: (773) 338-1000
www.sandc.com

CAPACITORS - POWER FACTOR CORRECTION**POWER SURVEY**

Tel: (514) 333-8392
www.powersurvey.com

CAPACITORS - SWITCHES**SOUTHERN STATES, LLC.**

Tel: (770) 946-4562
www.southernstatesllc.com

THOMAS & BETTS - STEEL STRUCTURES DIVISION

Tel: (901) 252-8115
www.tnb.com

THOMAS & BETTS - UTILITY GROUP

Tel: (901) 252-8251
www.tnb.com

YASKAWA ELECTRIC AMERICA, INC.

Tel: (847) 887-7000
www.yaskawa.com

CIRCUIT BREAKER COMPONENTS**CIRCUIT BREAKER SALES CO. INC.**

Tel: (940) 665-4444
www.cbsales.com

HIGH VOLTAGE SUPPLY

Tel: (214) 637-4434 • (800) 338-5526
www.highvoltagesupply.com

CIRCUIT BREAKERS**AREVA T&D CANADA INC.**

Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.

Tel: (484) 766-8100
www.areva-td.com

CIRCUIT BREAKER SALES CO. INC.

Tel: (940) 665-4444
www.cbsales.com

ELECTRICAL WORLD INDUSTRIAL SALES CORP.

Tel: (800) 422-0089
www.elecworld.com

ROMAC

Tel: (800) 843-5473
www.romacsupply.com

TAVRIDA ELECTRIC NORTH AMERICA INC.

Tel: (604) 540-6600
www.tavrída-na.com

CIRCUIT BREAKERS - MEDIUM AND HIGH VOLTAGE**BELYEA COMPANY, INC.**

Tel: (610) 515-8775
www.belyeapower.com

TAVRIDA ELECTRIC NORTH AMERICA INC.

Tel: (604) 540-6600
www.tavrída-na.com

CIRCUIT BREAKERS - MODIFICATION AND REPAIRS**BELYEA COMPANY, INC.**

Tel: (610) 515-8775
www.belyeapower.com

CIRCUIT BREAKERS - OIL**BELYEA COMPANY, INC.**

Tel: (610) 515-8775
www.belyeapower.com

CIRCUIT BREAKERS - OUTDOOR**TAVRIDA ELECTRIC NORTH AMERICA INC.**

Tel: (604) 540-6600
www.tavrída-na.com

DISTRIBUTION

CIRCUIT BREAKERS - SF6

HVB AE POWER SYSTEMS INC.

Tel: (770) 495-1755
www.hvbi.com

CIRCUIT BREAKERS - VACUUM

CIRCUIT BREAKER SALES CO. INC.

Tel: (940) 665-4444
www.cbsales.com

TAVRIDA ELECTRIC NORTH AMERICA INC.

Tel: (604) 540-6600
www.tavrida-na.com

CIRCUIT RECLOSERS, AUTOMATIC - THREE-PHASE

TAVRIDA ELECTRIC NORTH AMERICA INC.

Tel: (604) 540-6600
www.tavrida-na.com

CIRCUIT SWITCHERS

GR POWER SWITCHGEAR LTD

Tel: 91-040-23095589
www.grpsl.net

S&C ELECTRIC COMPANY

Tel: (773) 338-1000
www.sandc.com

SOUTHERN STATES, LLC.

Tel: (770) 946-4562
www.southernstatesllc.com

CIRCUIT SWITCHERS -MOBILE

SOUTHERN STATES, LLC.

Tel: (770) 946-4562
www.southernstatesllc.com

CLOCKS AND TIME DISPLAYS

SCHWEITZER ENGINEERING LABORATORIES INC.

Tel: (509) 332-1890
www.selinc.com

COATINGS - ANIMAL GUARD

INSULBOOT A DIV. OF PLASTIC DIP MOLDINGS

Tel: (215) 766-2020
www.insulboot.com

COATINGS - CORROSION PREVENTION

LOCWELD INC.

Tel: (450) 659-9661
www.locweld.com

COATINGS - SILICONE

DOW CORNING CORPORATION

Tel: (989) 496-4400
www.dowcorning.com/power

CONNECTORS - COMPRESSION, DISTRIBUTION

HUBBELL POWER SYSTEMS INC.

Tel: (573) 682-5521
www.hubbellpowersystems.com

RICHARDS MANUFACTURING CO. SALES INC.

Tel: (973) 371-1771
www.richards-mfg.com

CONNECTORS - ELECTRICAL

K & H INDUSTRIES INC.

Tel: (716) 549-0135
www.khindustries.com

PENN-UNION

Tel: (814) 734-1631
www.penn-union.com

RICHARDS MANUFACTURING CO. SALES INC.

Tel: (973) 371-1771
www.richards-mfg.com

CONNECTORS - GROUNDING

IMPL0 TECHNOLOGIES

Tel: (905) 513-9084
www.implotech.ca

THOMAS & BETTS - STEEL STRUCTURES DIVISION

Tel: (901) 252-8115
www.tnb.com

THOMAS & BETTS - UTILITY GROUP

Tel: (901) 252-8251
www.tnb.com

CONNECTORS - MANUFACTURING

POSITRONIC INDUSTRIES INC.

Tel: (417) 866-2322 • (800) 641-4054
www.connectpositronic.com

CONNECTORS - SOLDER

RICHARDS MANUFACTURING CO. SALES INC.

Tel: (973) 371-1771
www.richards-mfg.com

CONNECTORS - SUBSTATION

ACA CONDUCTOR ACCESSORIES

Tel: (864) 433-0333
www.acasolutions.com

HUBBELL POWER SYSTEMS INC.

Tel: (573) 682-5521
www.hubbellpowersystems.com

IMPL0 TECHNOLOGIES

Tel: (905) 513-9084
www.implotech.ca

THOMAS & BETTS - STEEL STRUCTURES DIVISION

Tel: (901) 252-8115
www.tnb.com

THOMAS & BETTS - UTILITY GROUP

Tel: (901) 252-8251
www.tnb.com

CONNECTORS, UNDERGROUND - TERMINATING

RICHARDS MANUFACTURING CO. SALES INC.

Tel: (973) 371-1771
www.richards-mfg.com

THOMAS & BETTS - STEEL STRUCTURES DIVISION

Tel: (901) 252-8115
www.tnb.com

THOMAS & BETTS - UTILITY GROUP

Tel: (901) 252-8251
www.tnb.com

CONSOLES - T&D CONTROL CENTERS

PRIMATE TECHNOLOGIES

Tel: 321-821-2227
www.primate-tech.com

CONTACTORS

TAVRIDA ELECTRIC NORTH AMERICA INC.

Tel: (604) 540-6600
www.tavrida-na.com

CONTACTORS - DC/AC

GEORGE M. FRASER LTD (LACHUTE)

Tel: (450) 562-0771
www.gmfraser.com

GEORGE M. FRASER LTD (PICKERING)

Tel: (905) 420-6555
www.gmfraser.com

CONTROLS - VAR

OPEN SYSTEMS INTERNATIONAL INC.

Tel: (763) 551-0559
www.osii.com

S&C ELECTRIC COMPANY

Tel: (773) 338-1000
www.sandc.com

CROSSARMS

DIS-TRAN

Tel: (318) 448-0274
www.distran.com

HUGHES BROTHERS INC.

Tel: (402) 643-2991
www.hughesbros.com

THOMAS & BETTS - STEEL STRUCTURES DIVISION

Tel: (901) 252-8115
www.tnb.com

CROSSARMS - FIBERGLASS - REINFORCED**GEOTEK INC.**

Tel: (800) 533-1680
www.geotekinc.com

HUGHES BROTHERS INC.

Tel: (402) 643-2991
www.hughesbros.com

LAKEPORT POWER LTD

Tel: (905) 355-3281 • (800) 293-1909
www.lakeportpower.com

CROSSARMS, WOOD - LAMINATED**HUGHES BROTHERS INC.**

Tel: (402) 643-2991
www.hughesbros.com

CROSSARMS, WOOD - SOLID**DIS-TRAN**

Tel: (318) 448-0274
www.distran.com

HUGHES BROTHERS INC.

Tel: (402) 643-2991
www.hughesbros.com

CUTOUTS, LOADBREAK**HUBBELL POWER SYSTEMS INC.**

Tel: (573) 682-5521
www.hubbellpowersystems.com

IMPACT POWER, INC.

Tel: (949) 477-9198
www.impactpwr.com

DEADENDS WOOD, LAMINATED**HUGHES BROTHERS INC.**

Tel: (402) 643-2991
www.hughesbros.com

DISTRIBUTED CONTROL SYSTEMS**GENERAL ELECTRIC - CONSUMER & INDUSTRIAL**

Tel: (800) 431-7867
www.geindustrial.com

DISTRIBUTION AUTOMATION - COMMUNICATIONS**AEGIS TECHNOLOGIES**

Tel: (602) 443-5000
www.aegistech.us

COOPER POWER SYSTEMS - CYBECTEC

Tel: (418) 834-0009
www.cybectec.com

CURRENT GROUP LLC

Tel: (301) 944-2727
www.currentgroup.com

HARTING NORTH AMERICA

Tel: (847) 741-1500
www.harting-usa.com

OPEN SYSTEMS INTERNATIONAL INC.

Tel: (763) 551-0559
www.osii.com

RUGGED COM INC.

Tel: (905) 856-5288 • (888) 264-0006
www.ruggedcom.com

S&C ELECTRIC COMPANY

Tel: (773) 338-1000
www.sandc.com

TAVRIDA ELECTRIC NORTH AMERICA INC.

Tel: (604) 540-6600
www.tavrada-na.com

TELEMETRIC CORPORATION

Tel: (208) 658-1292
www.telemetric.net

DISTRIBUTION AUTOMATION SYSTEMS**AEGIS TECHNOLOGIES**

Tel: (602) 443-5000
www.aegistech.us

COOPER POWER SYSTEMS - CYBECTEC

Tel: (418) 834-0009
www.cybectec.com

CURRENT GROUP LLC

Tel: (301) 944-2727
www.currentgroup.com

MICROSOL

Tel: (203) 888-3002
www.microsol.com

OPEN SYSTEMS INTERNATIONAL INC.

Tel: (763) 551-0559
www.osii.com

RUGGED COM INC.

Tel: (905) 856-5288 • (888) 264-0006
www.ruggedcom.com

S & C ELECTRIC CANADA LTD

Tel: (416) 249-9171
www.sandc.com

S&C ELECTRIC COMPANY

Tel: (773) 338-1000
www.sandc.com

SCHWEITZER ENGINEERING LABORATORIES INC.

Tel: (509) 332-1890
www.selinc.com

THOMAS & BETTS - STEEL STRUCTURES DIVISION

Tel: (901) 252-8115
www.tnb.com

THOMAS & BETTS - UTILITY GROUP

Tel: (901) 252-8251
www.tnb.com

VIRELEC LTD.

Tel: (905) 569-8030
www.virelec.com

DISTRIBUTION MANAGEMENT SYSTEMS**ADVANCED CONTROL SYSTEMS**

Tel: (770) 446-8854
www.acsatlanta.com

CURRENT GROUP LLC

Tel: (301) 944-2727
www.currentgroup.com

OPEN SYSTEMS INTERNATIONAL INC.

Tel: (763) 551-0559
www.osii.com

DUCT - PLASTIC**CARLON**

Tel: (800) 322-7566
www.carlon.com

CHAMPION FIBERGLASS, INC.

Tel: (281) 655-8900
www.championfiberglass.com

ENCLOSURES - FIBERGLASS-REINFORCED**CONCAST INC.**

Tel: (507) 732-4095
www.concastinc.com

ENCLOSURES - METAL**BROOKS UTILITY PRODUCTS GROUP**

(Brooks Ekstrom, Brooks Meter Devices, Brooks Security Products)

Tel: (248) 477-0250 • 888-687-3008
www.brooksutility.com

ENCLOSURES - NEMA TYPE**BROOKS UTILITY PRODUCTS GROUP**

(Brooks Ekstrom, Brooks Meter Devices, Brooks Security Products)

Tel: (248) 477-0250 • 888-687-3008
www.brooksutility.com

ENCLOSURES - POLYMER CONCRETE**HUBBELL POWER SYSTEMS INC.**

Tel: (573) 682-5521
www.hubbellpowersystems.com

ENGINEERING - SERVICES - T & D**AREVA T&D CANADA INC.**

Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.

Tel: (484) 766-8100
www.areva-td.com

POWER ENGINEERS, INC.

Tel: (208) 788-3456
www.powereng.com

DISTRIBUTION

S&C ELECTRIC COMPANY

Tel: (773) 338-1000
www.sandc.com

SARGENT & LUNDY LLC

Tel: (312) 269-2000
www.sargentlundy.com

SNC-LAVALIN TRANSMISSION & DISTRIBUTION

Tel: (514) 334-6780
www.sncclavalin.com/td

FIBERGLASS - PIPE, TANK

HASTINGS FIBERGLASS PRODUCTS INC.

Tel: (269) 945-9541
www.hfgp.com

FUSELINK - CUTOUTS

HUBBELL POWER SYSTEMS INC.

Tel: (573) 682-5521
www.hubbellpowersystems.com

S&C ELECTRIC COMPANY

Tel: (773) 338-1000
www.sandc.com

FUSES

S&C ELECTRIC COMPANY

Tel: (773) 338-1000
www.sandc.com

GAS AND RELATED PRODUCTS - SF6 INSULATING

ADVANCED SPECIALTY GASES

Tel: (775) 356-5500
www.advancedspecialtygases.com

GROUND RODS - COPPERWELD

COMMSCOPE BIMETALS

Tel: (704) 883-8015 • (800) 982-1708
www.commscope.com

GROUNDING - EQUIPMENT

CICAME ENERGIE INC.

Tel: (450) 679-7778
www.cicame.ca

HASTINGS FIBERGLASS PRODUCTS INC.

Tel: (269) 945-9541
www.hfgp.com

HUBBELL POWER SYSTEMS INC.

Tel: (573) 682-5521
www.hubbellpowersystems.com

HARDWARE - POLELINE

HUGHES BROTHERS INC.

Tel: (402) 643-2991
www.hughesbros.com

POWER LINE HARDWARE LLC

Tel: (904) 695-9880
www.powerlinehardware.com

RICHARDS MANUFACTURING CO. SALES INC.

Tel: (973) 371-1771
www.richards-mfg.com

HEAT EXCHANGERS

TRANTECH RADIATOR PRODUCTS INC.

Tel: (803) 637-3166
www.trantechradiators.com

INSULATORS - COATING SERVICES

GLOBAL INSULATOR GROUP

Tel: 7 343 2163577
www.gig-group.com

INSULATORS - COMPOSITE

K-LINE INSULATORS LIMITED

Tel: (416) 292-2008
www.k-line.net

K-LINE INSULATORS USA INC

Tel: (585) 235-2870
www.k-line.net

INSULATORS - GUY STRAIN - FIBERGLASS - REINFORCED

HUBBELL POWER SYSTEMS INC.

Tel: (573) 682-5521
www.hubbellpowersystems.com

HUGHES BROTHERS INC.

Tel: (402) 643-2991
www.hughesbros.com

K-LINE INSULATORS LIMITED

Tel: (416) 292-2008
www.k-line.net

K-LINE INSULATORS USA INC

Tel: (585) 235-2870
www.k-line.net

INSULATORS - POLYMER

DOW CORNING CORPORATION

Tel: (989) 496-4400
www.dowcorning.com/power

GLP HI-TECH POWER PRODUCTS

Tel: (450) 347-0177 • 1-877-348-4918
www.glppower.com

HUBBELL POWER SYSTEMS INC.

Tel: (573) 682-5521
www.hubbellpowersystems.com

K-LINE INSULATORS LIMITED

Tel: (416) 292-2008
www.k-line.net

K-LINE INSULATORS USA INC

Tel: (585) 235-2870
www.k-line.net

LAKEPORT POWER LTD

Tel: (905) 355-3281 • (800) 293-1909
www.lakeportpower.com

POLYCAST INTERNATIONAL

Tel: (204) 632-5428 • (800) 665-7445
www.polycastinternational.com

INSULATORS - PORCELAIN

AMERICA ASIA GROUP CO.

Tel: (626) 309-0198
www.aagcusa.com

ORBIS TRADE INC

Tel: (305) 358-9032
www.orbistradeinc.com

INSULATORS - POST-HORIZONTAL

K-LINE INSULATORS LIMITED

Tel: (416) 292-2008
www.k-line.net

K-LINE INSULATORS USA INC

Tel: (585) 235-2870
www.k-line.net

INSULATORS - SUSPENSION

K-LINE INSULATORS LIMITED

Tel: (416) 292-2008
www.k-line.net

K-LINE INSULATORS USA INC

Tel: (585) 235-2870
www.k-line.net

SEDIVER CANADA INC.

Tel: (514) 739-3385
www.sediver.fr

INSULATORS - SWITCH AND BUS

POLYCAST INTERNATIONAL

Tel: (204) 632-5428 • (800) 665-7445
www.polycastinternational.com

INVERTERS

CANADIAN DRIVES INC.

Tel: (905) 660-2766
www.canadiandrives.com

LANYARDS, SHOCK ABSORBING

HASTINGS FIBERGLASS PRODUCTS INC.

Tel: (269) 945-9541
www.hfgp.com

LINKS - FUSE

LUCAS-MILHAUPT, INC., A HANDY & HARMAN CO.

Tel: (414) 769-6000
www.lucasmilhaupt.com

LOAD BANK

HEATREX INC.

Tel: (814) 724-1800
www.heatrex.com

METAL - MANUFACTURER**NATIONAL BRONZE & METALS, INC.**

Tel: (713) 869-9600
www.nbmmetals.com

PLATFORMS - LINEMAN'S**HASTINGS FIBERGLASS PRODUCTS INC.**

Tel: (269) 945-9541
www.hfgp.com

POLE - WOOD / PRESERVATIVES**ARCH WOOD PROTECTION, INC.**

Tel: (770) 801-6600
www.wolmanizedwood.com

POLE LINE HARDWARE**HUBBELL POWER SYSTEMS INC.**

Tel: (573) 682-5521
www.hubbellpowersystems.com

HUGHES BROTHERS INC.

Tel: (402) 643-2991
www.hughesbros.com

WINOLA INDUSTRIAL INC.

Tel: (570) 378-3808
www.winolaindustrial.com

POLES - DISTRIBUTION - COMPOSITE**LAKEPORT POWER LTD**

Tel: (905) 355-3281 • (800) 293-1909
www.lakeportpower.com

POLES - DISTRIBUTION - CONCRETE**VALMONT NEWMARK**

Tel: (205) 968-7200
www.valmont-newmark.com

POLES - DISTRIBUTION - STEEL**ROHN PRODUCTS**

Tel: (309) 697-4400
www.radiancorp.com

SABRE TUBULAR STRUCTURES

Tel: (817) 852-1700
www.sabretubularstructures.com

THOMAS & BETTS - STEEL STRUCTURES DIVISION

Tel: (901) 252-8115
www.tnb.com

UNION METAL CORPORATION

Tel: (330) 456-7653
www.unionmetal.com

VALMONT NEWMARK

Tel: (205) 968-7200
www.valmont-newmark.com

POLES - UTILITY**DIS-TRAN**

Tel: (318) 448-0274
www.distran.com

POWERTRUSION PRODUCTS

Tel: (814) 839-4186
www.powertrusion.com

ROHN PRODUCTS

Tel: (309) 697-4400
www.radiancorp.com

SABRE TUBULAR STRUCTURES

Tel: (817) 852-1700
www.sabretubularstructures.com

THOMAS & BETTS - STEEL STRUCTURES DIVISION

Tel: (901) 252-8115
www.tnb.com

VALMONT NEWMARK

Tel: (205) 968-7200
www.valmont-newmark.com

POWER DISTRIBUTION AND/OR TRANSMISSION POLES**DELTA STAR, INC.**

Tel: 1-800-368-3017
www.deltastar.com

DIS-TRAN

Tel: (318) 448-0274
www.distran.com

RELIAPOLE SOLUTIONS, INC.

Tel: (281) 290-8283
www.reliapole.com

THE OESER COMPANY

Tel: (360) 734-1480
oeserco.com

THOMAS & BETTS - STEEL STRUCTURES DIVISION

Tel: (901) 252-8115
www.tnb.com

VALMONT NEWMARK

Tel: (205) 968-7200
www.valmont-newmark.com

POWER SUPPLIES**ABSOPULSE ELECTRONICS LTD.**

Tel: (613) 836-3511
www.absopulse.com

PHOENIX CONTACT LTD.

Tel: (905) 890-2820
www.phoenixcontact.ca

POWER SUPPLIES - UNINTERRUPTIBLE**360 GENERATORS**

Tel: (888) 259-6598
www.360generators.com

ALPHA TECHNOLOGIES

Tel: (360) 392-2263
www.alpha.com

S&C ELECTRIC COMPANY

Tel: (773) 338-1000
www.sandc.com

REACTORS - AIR CORE**TRENCH LIMITED**

Tel: (416) 298-8108
www.trenchgroup.com

REACTORS - CURRENT - LIMITING**TRENCH LIMITED**

Tel: (416) 298-8108
www.trenchgroup.com

REACTORS - SERIES**TRENCH LIMITED**

Tel: (416) 298-8108
www.trenchgroup.com

REACTORS - SHUNT**TRENCH LIMITED**

Tel: (416) 298-8108
www.trenchgroup.com

REACTORS - SHUNT FILTER**TRENCH LIMITED**

Tel: (416) 298-8108
www.trenchgroup.com

RECLOSERS**G&W ELECTRIC CO.**

Tel: (708) 388-5010
www.gwelec.com

HUBBELL POWER SYSTEMS INC.

Tel: (573) 682-5521
www.hubbellpowersystems.com

S&C ELECTRIC COMPANY

Tel: (773) 338-1000
www.sandc.com

TAVRIDA ELECTRIC NORTH AMERICA INC.

Tel: (604) 540-6600
www.tavrada-na.com

THOMAS & BETTS - STEEL STRUCTURES DIVISION

Tel: (901) 252-8115
www.tnb.com

THOMAS & BETTS - UTILITY GROUP

Tel: (901) 252-8251
www.tnb.com

RECLOSERS - CONTROLS**S&C ELECTRIC COMPANY**

Tel: (773) 338-1000
www.sandc.com

DISTRIBUTION

SCHWEITZER ENGINEERING LABORATORIES INC.

Tel: (509) 332-1890
www.selinc.com

TAVRIDA ELECTRIC NORTH AMERICA INC.

Tel: (604) 540-6600
www.tavrda-na.com

RELAYS

AREVA T&D CANADA INC.

Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.

Tel: (484) 766-8100
www.areva-td.com

RUGGED COM INC.

Tel: (905) 856-5288 • (888) 264-0006
www.ruggedcom.com

SIEMENS POWER TRANSMISSION & DISTRIBUTION, INC.

Tel: (919) 325-7000
www.usa.siemens.com

RELAYS - GENERATOR PROTECTION

AREVA T&D CANADA INC.

Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.

Tel: (484) 766-8100
www.areva-td.com

SCHWEITZER ENGINEERING LABORATORIES INC.

Tel: (509) 332-1890
www.selinc.com

VIRELEC LTD.

Tel: (905) 569-8030
www.virelec.com

RELAYS - ISOLATION

AREVA T&D CANADA INC.

Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.

Tel: (484) 766-8100
www.areva-td.com

SOLID STATE INSTRUMENTS

Tel: (888) 272-9336
www.solidstateinstruments.com

RELAYS - LINE PROTECTION

AREVA T&D CANADA INC.

Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.

Tel: (484) 766-8100
www.areva-td.com

SCHWEITZER ENGINEERING LABORATORIES INC.

Tel: (509) 332-1890
www.selinc.com

VIRELEC LTD.

Tel: (905) 569-8030
www.virelec.com

RELAYS - MOTOR PROTECTION

AREVA T&D CANADA INC.

Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.

Tel: (484) 766-8100
www.areva-td.com

SCHWEITZER ENGINEERING LABORATORIES INC.

Tel: (509) 332-1890
www.selinc.com

RELAYS - PROTECTION

AREVA T&D CANADA INC.

Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.

Tel: (484) 766-8100
www.areva-td.com

GE MULTILIN

Tel: (905) 294-6222
www.gemultilin.com

GEORGE M. FRASER LTD (LACHUTE)

Tel: (450) 562-0771
www.gmfraser.com

GEORGE M. FRASER LTD (PICKERING)

Tel: (905) 420-6555
www.gmfraser.com

SCHWEITZER ENGINEERING LABORATORIES INC.

Tel: (509) 332-1890
www.selinc.com

TAVRIDA ELECTRIC NORTH AMERICA INC.

Tel: (604) 540-6600
www.tavrda-na.com

RELAYS - SUBSTATION AUTOMATION

ASAT SOLUTIONS INC.

Tel: (403) 569-1680
www.asatsolutions.com

S&C ELECTRIC COMPANY

Tel: (773) 338-1000
www.sandc.com

SCHWEITZER ENGINEERING LABORATORIES INC.

Tel: (509) 332-1890
www.selinc.com

VIRELEC LTD.

Tel: (905) 569-8030
www.virelec.com

ZIV P+C, S.L.

Tel: +34.94.403.74.00
www.zivpmasc.com

SCADA - ENERGY CONTROL SYSTEMS

OPEN SYSTEMS INTERNATIONAL INC.

Tel: (763) 551-0559
www.osii.com

SCADA SYSTEMS

AREVA T&D CANADA INC.

Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.

Tel: (484) 766-8100
www.areva-td.com

OPEN SYSTEMS INTERNATIONAL INC.

Tel: (763) 551-0559
www.osii.com

PROSOFT TECHNOLOGY

Tel: (661) 716-5100
www.prosoft-technology.com

TELVENT

Tel: (713) 939-9399
www.telvent.com

VIRELEC LTD.

Tel: (905) 569-8030
www.virelec.com

SF6 GAS INSULATED SWITCHGEAR

AREVA T&D CANADA INC.

Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.

Tel: (484) 766-8100
www.areva-td.com

S&C ELECTRIC COMPANY

Tel: (773) 338-1000
www.sandc.com

SOFTWARE - T&D LINE DESIGN

INTERGRAPH CORPORATION

Tel: (303) 785-9835
www.intergraph.com

STEEL - MANUFACTURERS

LOCWELD INC.

Tel: (450) 659-9661
www.locweld.com

SABRE TUBULAR STRUCTURES

Tel: (817) 852-1700
www.sabretubularstructures.com

SBB TOWERS

Tel: (450) 473-4247
www.sbb.ca

STEEL - STRUCTURAL**DIS-TRAN**

Tel: (318) 448-0274
www.distran.com

J & Y ENGINEERING SERVICES INC.

Tel: (440) 891-1130
www.jyengineering.com

SABRE TUBULAR STRUCTURES

Tel: (817) 852-1700
www.sabretubularstructures.com

**THOMAS & BETTS - STEEL STRUCTURES
DIVISION**

Tel: (901) 252-8115
www.tnb.com

**STEEL PRODUCTS - CUSTOM
FABRICATION****DIS-TRAN**

Tel: (318) 448-0274
www.distran.com

METALPOL

Tel: 52-871-750-0300
www.metalpol.com.mx

WINOLA INDUSTRIAL INC.

Tel: (570) 378-3808
www.winolaindustrial.com

STRUCTURE - PREFABRICATED**THOMAS & BETTS - STEEL STRUCTURES
DIVISION**

Tel: (901) 252-8115
www.tnb.com

SUBSTATION**AREVA T&D CANADA INC.**

Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.

Tel: (484) 766-8100
www.areva-td.com

**CANNON TECHNOLOGIES/COOPER POWER
SYSTEMS**

Tel: (763) 543-7772
www.cannontech.com

CIRCUIT BREAKER SALES CO. INC.

Tel: (940) 665-4444
www.cbsales.com

COOPER POWER SYSTEMS

Tel: (262) 524-3300
www.cooperpower.com

DELTA STAR, INC.

Tel: 1-800-368-3017
www.deltastar.com

DIS-TRAN

Tel: (318) 448-0274
www.distran.com

HAMBY YOUNG

Tel: (330) 562-8444 • (800) 726-8444
www.hambyyoung.com

MVA POWER INC.

Tel: (450) 589-0445
www.mvapower.qc.ca

S&C ELECTRIC COMPANY

Tel: (773) 338-1000
www.sandc.com

VALMONT NEWMARK

Tel: (205) 968-7200
www.valmont-newmark.com

SUBSTATION - GAS-INSULATED**AREVA T&D CANADA INC.**

Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.

Tel: (484) 766-8100
www.areva-td.com

SUBSTATION - METAL-ENCLOSED**S&C ELECTRIC COMPANY**

Tel: (773) 338-1000
www.sandc.com



DIS-TRAN
High-Voltage Specialists

4725 Hwy 28 E
Pineville, LA 71360
Phone: 318.448.0274

Packaged Substations

- Engineering & Project Management
- Equipment & Materials
- Manufacturing

Wood Products*

- Distribution Crossarms
- Transmission Assemblies & Braces
- Douglas Fir & Southern Yellow Pine

Steel Fabrication

- Substation Structures
- Transmission Towers
- Specialty Structures

Steel Pole

- Substation Structures
- Transmission Poles
- Wood Pole Equivalents

Visit our website **www.distran.com** to find out how

DIS-TRAN Can Make Your Project Happen

*Production Facilities is Pineville, LA & Vancouver, WA
FSC Certified

DISTRIBUTION

SUBSTATION - MOBILE

DELTA STAR, INC.
Tel: 1-800-368-3017
www.deltastar.com

DIS-TRAN
Tel: (318) 448-0274
www.distran.com

PAUWELS CANADA INC.
Tel: (204) 452-7446 • 1-800-665-9450
www.pauwels.com

SUBSTATION - PACKAGED ASSEMBLIES

DIS-TRAN
Tel: (318) 448-0274
www.distran.com

HAMBY YOUNG
Tel: (330) 562-8444 • (800) 726-8444
www.hambyyoung.com

TATMAN ASSOCIATES, INC.
Tel: (440) 248-0644
www.tatmansubstations.com

SUBSTATION - STEEL, STRUCTURE

DIS-TRAN
Tel: (318) 448-0274
www.distran.com

FWT INC.
Tel: (817) 255-2998
www.fwtinc.com

HAMBY YOUNG
Tel: (330) 562-8444 • (800) 726-8444
www.hambyyoung.com

J & Y ENGINEERING SERVICES INC.
Tel: (440) 891-1130
www.jyengineering.com

ROHN PRODUCTS
Tel: (309) 697-4400
www.radiancorp.com

SABRE TUBULAR STRUCTURES
Tel: (817) 852-1700
www.sabretubularstructures.com

SBB TOWERS
Tel: (450) 473-4247
www.sbb.ca

**THOMAS & BETTS - STEEL STRUCTURES
DIVISION**
Tel: (901) 252-8115
www.tnb.com

VALMONT NEWMARK
Tel: (205) 968-7200
www.valmont-newmark.com

SUBSTATION - SUBSTATION - HVDC

AREVA T&D CANADA INC.
Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.
Tel: (484) 766-8100
www.areva-td.com

SUBSTATION - WOOD, TREATED

HUGHES BROTHERS INC.
Tel: (402) 643-2991
www.hughesbros.com

SUBSTATION CONTROL BUILDINGS

FWT INC.
Tel: (817) 255-2998
www.fwtinc.com

SUSPENSION ARMS, POLE - STEEL

HUGHES BROTHERS INC.
Tel: (402) 643-2991
www.hughesbros.com

**THOMAS & BETTS - STEEL STRUCTURES
DIVISION**
Tel: (901) 252-8115
www.tnb.com

VALMONT NEWMARK
Tel: (205) 968-7200
www.valmont-newmark.com

SWITCHES - SUBSTATION, DISCONNECTING

AREVA T&D CANADA INC.
Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.
Tel: (484) 766-8100
www.areva-td.com

HUBBELL POWER SYSTEMS INC.
Tel: (573) 682-5521
www.hubbellpowersystems.com

S&C ELECTRIC COMPANY
Tel: (773) 338-1000
www.sandc.com

**THOMAS & BETTS - STEEL STRUCTURES
DIVISION**
Tel: (901) 252-8115
www.tnb.com

THOMAS & BETTS - UTILITY GROUP
Tel: (901) 252-8251
www.tnb.com

TAP CHANGERS - TRANSFORMERS - LOAD, NO-LOAD

HIGH VOLTAGE SUPPLY
Tel: (214) 637-4434 • (800) 338-5526
www.highvoltagesupply.com

PAUWELS CANADA INC.
Tel: (204) 452-7446 • 1-800-665-9450
www.pauwels.com

TOWER - TRELLIS AND TUBULAR

**THOMAS & BETTS - STEEL STRUCTURES
DIVISION**
Tel: (901) 252-8115
www.tnb.com

TOWERS - EMERGENCY T & D

SBB TOWERS
Tel: (450) 473-4247
www.sbb.ca

**THOMAS & BETTS - STEEL STRUCTURES
DIVISION**
Tel: (901) 252-8115
www.tnb.com

TOWER SOLUTIONS INC.
Tel: (905) 946-8789
www.implotech.ca

TOWERS - POLES

DIS-TRAN
Tel: (318) 448-0274
www.distran.com

FWT INC.
Tel: (817) 255-2998
www.fwtinc.com

ROHN PRODUCTS
Tel: (309) 697-4400
www.radiancorp.com

SABRE TUBULAR STRUCTURES
Tel: (817) 852-1700
www.sabretubularstructures.com

**THOMAS & BETTS - STEEL STRUCTURES
DIVISION**
Tel: (901) 252-8115
www.tnb.com

VALMONT NEWMARK
Tel: (205) 968-7200
www.valmont-newmark.com

TRANSMISSION AND DISTRIBUTION LINE

HAMBY YOUNG
Tel: (330) 562-8444 • (800) 726-8444
www.hambyyoung.com

TRENCH - CONCRETE

CONCAST INC.
Tel: (507) 732-4095
www.concastinc.com

TRENWA, INC
Tel: (859) 781-0831
www.trenwa.com

UNINTERRUPTIBLE POWER SUPPLIES

S&C ELECTRIC COMPANY
Tel: (773) 338-1000
www.sandc.com

UPS SYSTEMS AND SUPPLIES**S & C ELECTRIC CANADA LTD**

Tel: (416) 249-9171
www.sandc.com

S&C ELECTRIC COMPANY

Tel: (773) 338-1000
www.sandc.com

VAULTS, UNDERGROUND - CONCRETE**CONCAST INC.**

Tel: (507) 732-4095
www.concastinc.com

ENERGY SERVICES**AERIAL SURVEY****ARBORMETRICS SOLUTIONS LTD**

Tel: (407) 339-1733 • (866) 685-1880
www.arbormetricssolutions.com

W.I.R.E SERVICES, A DIVISION OF MANITOBA**HYDRO**

Tel: (204) 480-5800
www.wireservices.ca

BUSHING REPAIR**CK COMPOSITES INC.**

Tel: (724) 547-4581
www.ckcomposites.com

PCORE ELECTRIC COMPANY, INC.

Tel: (585) 768-1200
www.pcoreelectric.com

CALIBRATION SERVICES**FLIR SYSTEMS**

Tel: (978) 901-8000 • (800) 464-6372
www.goinfrared.com

CONSTRUCTION SERVICES**MACNAIR CONSTRUCTION PRODUCTS LTD.**

Tel: (780) 410-0256
www.mcpl.ca

UTILICON SOLUTIONS, LTD

Tel: (215) 784-1406 • (877) 884-5426
www.utiliconltd.com

CONSTRUCTION SPECIALIZED**APPALACHIAN ENERGY, LLC**

Tel: (866) 894-8023
www.appalachian-energy.com

CONSULTANTS - POWER QUALITY**S&C ELECTRIC COMPANY**

Tel: (773) 338-1000
www.sandc.com

CONSULTANTS - SCADA/EMS ENGINEERING**POWER ENGINEERS, INC.**

Tel: (208) 788-3456
www.powereng.com

CONSULTANTS - SUBSTATION DESIGN & ENGINEERING**J & Y ENGINEERING SERVICES INC.**

Tel: (440) 891-1130
www.jyengineering.com

POWER ENGINEERS, INC.

Tel: (208) 788-3456
www.powereng.com

PSD, INC.

Tel: (330) 452-4434
www.psdohio.com

SARGENT & LUNDY LLC

Tel: (312) 269-2000
www.sargentlundy.com

CONSULTANTS - T&D ENGINEERING**COMMONWEALTH ASSOCIATES, INC.**

Tel: (517) 788-3000
www.cai-engr.com

LEHMAN ENGINEERING COMPANY

Tel: (804) 360-9288
www.lehmanengineering.com

POWER ENGINEERS, INC.

Tel: (208) 788-3456
www.powereng.com

S&C ELECTRIC COMPANY

Tel: (773) 338-1000
www.sandc.com

SARGENT & LUNDY LLC

Tel: (312) 269-2000
www.sargentlundy.com

CONSULTANTS - UNDERGROUND AND UNDERWATER CABLE**IMCORP-POWER CABLE RELIABILITY**

Tel: (860) 427-7620
www.imcorpotech.com

POWER ENGINEERS, INC.

Tel: (208) 788-3456
www.powereng.com

SARGENT & LUNDY LLC

Tel: (312) 269-2000
www.sargentlundy.com

CONSULTING**GDS ASSOCIATES, INC.**

Tel: (770) 425-8100
www.gdsassociates.com

CONSULTING ENGINEERING**A.I. ORLOFF ELECTRICAL ENGINEER**

Tel: (949) 261-5491
www.members.aol.com/ocsee

S&C ELECTRIC COMPANY

Tel: (773) 338-1000
www.sandc.com

SARGENT & LUNDY LLC

Tel: (312) 269-2000
www.sargentlundy.com

CONTACTORS**TAVRIDA ELECTRIC NORTH AMERICA INC.**

Tel: (604) 540-6600
www.tavrida-na.com

CONTACTORS - DC/AC**GEORGE M. FRASER LTD (LACHUTE)**

Tel: (450) 562-0771
www.gmfraser.com

GEORGE M. FRASER LTD (PICKERING)

Tel: (905) 420-6555
www.gmfraser.com

CONTRACTORS - CONSTRUCTION**UTILICON SOLUTIONS, LTD**

Tel: (215) 784-1406 • (877) 884-5426
www.utiliconltd.com

CONTROL CENTER DESIGN**PRIMATE TECHNOLOGIES**

Tel: 321-821-2227
www.primate-tech.com

ENGINEERING**SARGENT & LUNDY LLC**

Tel: (312) 269-2000
www.sargentlundy.com

ENGINEERING - CONSULTANTS**GDS ASSOCIATES, INC.**

Tel: (770) 425-8100
www.gdsassociates.com

S&C ELECTRIC COMPANY

Tel: (773) 338-1000
www.sandc.com

SARGENT & LUNDY LLC

Tel: (312) 269-2000
www.sargentlundy.com

ENGINEERING - PROFESSIONAL SERVICES

ABB INC. (CORPORATE-CANADA)

Tel: (514) 856-6266
www.abb.ca

GDS ASSOCIATES, INC.

Tel: (770) 425-8100
www.gdsassociates.com

W.I.R.E SERVICES, A DIVISION OF MANITOBA HYDRO

Tel: (204) 480-5800
www.wireservices.ca

ENGINEERING - SERVICES

DIS-TRAN

Tel: (318) 448-0274
www.distran.com

W.I.R.E SERVICES, A DIVISION OF MANITOBA HYDRO

Tel: (204) 480-5800
www.wireservices.ca

ENGINEERING - SERVICES - T & D

AREVA T&D CANADA INC.

Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.

Tel: (484) 766-8100
www.areva-td.com

POWER ENGINEERS, INC.

Tel: (208) 788-3456
www.powereng.com

S&C ELECTRIC COMPANY

Tel: (773) 338-1000
www.sandc.com

SARGENT & LUNDY LLC

Tel: (312) 269-2000
www.sargentlundy.com

SNC-LAVALIN TRANSMISSION & DISTRIBUTION

Tel: (514) 334-6780
www.sncclavalin.com/td

ENVIRONMENTAL SERVICES

GREEN-PORT ENVIRONMENTAL MANAGERS (ONTARIO)

Tel: (905) 799-2777
www.green-port.com

POWER ENGINEERS, INC.

Tel: (208) 788-3456
www.powereng.com

FIELD INSTALLATION SERVICES

OLAMETER INC.

Tel: (905) 841-1167 • (800) 903-7003
www.olameter.com

GIS - ENGINEERING SERVICES

POWER ENGINEERS, INC.

Tel: (208) 788-3456
www.powereng.com

ROLTA INTERNATIONAL INC.

Tel: (678) 942-5000 • 1-888-997-6582
www.rolta.com

TELVENT MINER & MINER

Tel: (970) 223-1888
www.telvent.com/miner

INFRARED - SALES & SERVICES

FLIR SYSTEMS

Tel: (978) 901-8000 • (800) 464-6372
www.goinfrared.com

LUMASENSE TECHNOLOGIES

Tel: (408) 727-1600
www.lumasenseinc.com

OX CREEK ENERGY

Tel: (608) 589-5513 • (800) 531-6232
www.ox-creek-energy.com

RELIABILITY SERVICES, INC

Tel: (513) 265-1842
www.reliabilityservices.com

INSPECTION - FIELD SERVICES

OX CREEK ENERGY

Tel: (608) 589-5513 • (800) 531-6232
www.ox-creek-energy.com

INSPECTION SERVICES

ARBORMETRICS SOLUTIONS LTD

Tel: (407) 339-1733 • (866) 685-1880
www.arbormetricssolutions.com

POWER ENGINEERS, INC.

Tel: (208) 788-3456
www.powereng.com

INSULATORS - COATING SERVICES

GLOBAL INSULATOR GROUP

Tel: 7 343 2163577
www.gig-group.com

LIDAR - INSPECTION

ARBORMETRICS SOLUTIONS LTD

Tel: (407) 339-1733 • (866) 685-1880
www.arbormetricssolutions.com

W.I.R.E SERVICES, A DIVISION OF MANITOBA HYDRO

Tel: (204) 480-5800
www.wireservices.ca

LIDAR - SURVEY

ARBORMETRICS SOLUTIONS LTD

Tel: (407) 339-1733 • (866) 685-1880
www.arbormetricssolutions.com

OPTIMAL GEOMATICS INC.

Tel: (604) 654-1850
www.optimalgeo.com

W.I.R.E SERVICES, A DIVISION OF MANITOBA HYDRO

Tel: (204) 480-5800
www.wireservices.ca

MAINTENANCE - SERVICES AND PRODUCTS

AREVA T&D CANADA INC.

Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.

Tel: (484) 766-8100
www.areva-td.com

ESUNTECH, INC.

Tel: (519) 341-3586
www.esun-tech.com

NOVINIUM

Tel: (206) 529-4828
www.novinium.com

OSMOSE UTILITIES SERVICES, INC.

Tel: (716) 319-3460
www.osmoseutilities.com

METER - READING SERVICES

OLAMETER INC.

Tel: (905) 841-1167 • (800) 903-7003
www.olameter.com

METER SERVICES

BAY METAL INC.

Tel: (330) 523-0087
www.baymetal.com

UTILICON SOLUTIONS, LTD

Tel: (215) 784-1406 • (877) 884-5426
www.utiliconltd.com

METERING DATA - MANAGEMENT - MDM

ECOLOGIC ANALYTICS (FORMERLY WACS)

Tel: (952) 843-6000
www.ecologicanalytics.com

ENSPIRIA SOLUTIONS INC.

Tel: (303) 520-2513
www.enspiria.com

OLAMETER INC.

Tel: (905) 841-1167 • (800) 903-7003
www.olameter.com

OPERATION SUPPORT SYSTEMS**CSS GROUP**

Tel: (316) 269-9090
www.translore.com

PROJECT ENGINEERING**POWER ENGINEERS, INC.**

Tel: (208) 788-3456
www.powereng.com

SARGENT & LUNDY LLC

Tel: (312) 269-2000
www.sargentlundy.com

PROJECT MANAGEMENT AND CONSULTING**IMMAJ HOLDINGS PVT LTD**

Tel: 92 42 581-1222
www.immaj.com

S&C ELECTRIC COMPANY

Tel: (773) 338-1000
www.sandc.com

TEXIM SOLUTIONS INC. (CUBA)

Tel: (450) 672-3067
www.texim-solutions.com

TEXIM SOLUTIONS INTERNATIONAL (CANADA)

Tel: (450) 443-0450
www.texim-solutions.com

TRANZGRID SOLUTIONS

Tel: 006478295829
www.tranzgrid.co.nz

SOFTWARE - APPLICATION**FLIR SYSTEMS**

Tel: (978) 901-8000 • (800) 464-6372
www.goinfraed.com

SUN-NET CONSULTING

Tel: (408) 323-1318
www.snscsw.com

SOFTWARE - DESIGN**OPAL-RT**

Tel: (514) 935-2323
Web: www.opal-rt.com

POWEL INC.

Tel: (651) 251-3005
www.powelinc.com

SOFTWARE - ENGINEERING**ENSPIRIA SOLUTIONS INC.**

Tel: (303) 520-2513
www.enspiria.com

MANITOBA HVDC RESEARCH CENTRE INC.

Tel: (204) 989-1240
www.pscad.com

OPAL-RT

Tel: (514) 935-2323
Web: www.opal-rt.com

POWEL INC.

Tel: (651) 251-3005
www.powelinc.com

SOFTWARE INTEGRATION**ENSPIRIA SOLUTIONS INC.**

Tel: (303) 520-2513
www.enspiria.com

ESUNTECH, INC.

Tel: (519) 341-3586
www.esun-tech.com

SUBSTATION - CAD DRAFTING SUPPORT**DIS-TRAN**

Tel: (318) 448-0274
www.distran.com

SUBSTATION DESIGN & CONSTRUCTION**BETA ENGINEERING**

Tel: (318) 767-5564
www.betaengineering.com

MSE POWER SYSTEMS, INC.

Tel: (518) 452-7718
www.msepower.com

NAES POWER CONTRACTORS

Tel: (425) 961-4700
www.naes.com/npc

PSD, INC.

Tel: (330) 452-4434
www.psdohio.com

S&C ELECTRIC COMPANY

Tel: (773) 338-1000
www.sandc.com

TESTING SERVICES**POWER ENGINEERS, INC.**

Tel: (208) 788-3456
www.powereng.com

RTDS TECHNOLOGIES, INC.

Tel: (204) 989-9700
www.rtds.com

S&C ELECTRIC COMPANY

Tel: (773) 338-1000
www.sandc.com

TESTING SERVICES - CORONA LOCATING**OFIL LTD**

Tel: +972-8 9 407 953 • 1-866-279-8672
www.ofilsystems.com

OX CREEK ENERGY

Tel: (608) 589-5513 • (800) 531-6232
www.ox-creek-energy.com

TREE TRIMMING**ASPLUNDH TREE EXPERT CO.**

Tel: (800) 248-8733
www.asplundh.com

HUGHES BROTHERS INC.

Tel: (402) 643-2991
www.hughesbros.com

VEGETATION MANAGEMENT**ARBORMETRICS SOLUTIONS LTD**

Tel: (407) 339-1733 • (866) 685-1880
www.arbormetricssolutions.com

ASPLUNDH TREE EXPERT CO.

Tel: (800) 248-8733
www.asplundh.com

DAVEY TREE EXPERT COMPANY (THE)

Tel: (330) 673-9511 • 1-800-447-1667
www.davey.com

JARRAFF INDUSTRIES

Tel: (800) 767-7112
www.jarraff.com

POWEL INC.

Tel: (651) 251-3005
www.powelinc.com

VISUAL INSPECTION**ARBORMETRICS SOLUTIONS LTD**

Tel: (407) 339-1733 • (866) 685-1880
www.arbormetricssolutions.com

ENGINEERING & CONSULTANTS

ASSET MANAGEMENT

ADVANTICA INC.

Tel: (717) 724-1900
www.advanticaelectric.com

AUTODESK INC.

Tel: (415) 507-5000
www.autodesk.com

AXIA SOFTWARE CORPORATION

Tel: (604) 683-2942
www.searchsolvescore.com

B.L. ROBINSON SURVEY AND ENGINEERING

Tel: (330) 836-8487
www.blrobinson.com

CAMCODE DIVISION OF HORIZONS INC

Tel: (800) 627-3917
www.camcod.com/utility/utility.asp

CURRENT GROUP LLC

Tel: (301) 944-2727
www.currentgroup.com

ENSPIRIA SOLUTIONS INC.

Tel: (303) 520-2513
www.enspiria.com

INCON POWER RELIABILITY PRODUCTS

Tel: (207) 283-0156 • 1-800-872-3455
www.incon.com

INTERGRAPH CORPORATION

Tel: (303) 785-9835
www.intergraph.com

MINCOM INC.

Tel: (303) 446-9000
www.mincom.com

POWER ENGINEERS, INC.

Tel: (208) 788-3456
www.powereng.com

SAP AMERICAS

Tel: (610) 661-1000
www.sap.com

TOOLHOUND

Tel: (800) 387-8665
www.toolhound.com

CONSTRUCTION SERVICES

MACNAIR CONSTRUCTION PRODUCTS LTD.

Tel: (780) 410-0256
www.mcpl.ca

UTILICON SOLUTIONS, LTD

Tel: (215) 784-1406 • (877) 884-5426
www.utiliconltd.com

CONSTRUCTION SPECIALIZED

APPALACHIAN ENERGY, LLC

Tel: (866) 894-8023
www.appalachian-energy.com

CONSULTANTS - POWER QUALITY

S&C ELECTRIC COMPANY

Tel: (773) 338-1000
www.sandc.com

CONSULTANTS - SCADA/EMS ENGINEERING

POWER ENGINEERS, INC.

Tel: (208) 788-3456
www.powereng.com

CONSULTANTS - SUBSTATION DESIGN & ENGINEERING

J & Y ENGINEERING SERVICES INC.

Tel: (440) 891-1130
www.jyengineering.com

POWER ENGINEERS, INC.

Tel: (208) 788-3456
www.powereng.com

PSD, INC.

Tel: (330) 452-4434
www.psdohio.com

SARGENT & LUNDY LLC

Tel: (312) 269-2000
www.sargentlundy.com

CONSULTANTS - T&D ENGINEERING

COMMONWEALTH ASSOCIATES, INC.

Tel: (517) 788-3000
www.cai-engr.com

LEHMAN ENGINEERING COMPANY

Tel: (804) 360-9288
www.lehmanengineering.com

POWER ENGINEERS, INC.

Tel: (208) 788-3456
www.powereng.com

S&C ELECTRIC COMPANY

Tel: (773) 338-1000
www.sandc.com

SARGENT & LUNDY LLC

Tel: (312) 269-2000
www.sargentlundy.com

CONSULTANTS - UNDERGROUND AND UNDERWATER CABLE

IMCORP-POWER CABLE RELIABILITY

Tel: (860) 427-7620
www.imcorpotech.com

POWER ENGINEERS, INC.

Tel: (208) 788-3456
www.powereng.com

SARGENT & LUNDY LLC

Tel: (312) 269-2000
www.sargentlundy.com

CONSULTING

GDS ASSOCIATES, INC.

Tel: (770) 425-8100
www.gdsassociates.com

CONSULTING ENGINEERING

A.I. ORLOFF ELECTRICAL ENGINEER

Tel: (949) 261-5491
www.members.aol.com/ocsee

S&C ELECTRIC COMPANY

Tel: (773) 338-1000
www.sandc.com

SARGENT & LUNDY LLC

Tel: (312) 269-2000
www.sargentlundy.com

ENGINEERING

SARGENT & LUNDY LLC

Tel: (312) 269-2000
www.sargentlundy.com

ENGINEERING - CONSULTANTS

GDS ASSOCIATES, INC.

Tel: (770) 425-8100
www.gdsassociates.com

S&C ELECTRIC COMPANY

Tel: (773) 338-1000
www.sandc.com

SARGENT & LUNDY LLC

Tel: (312) 269-2000
www.sargentlundy.com

ENGINEERING - DESIGN

K-TEK ELECTRO SERVICES LTD

Tel: (905) 640-0660
www.k-line.ca

OPAL-RT

Tel: (514) 935-2323
Web: www.opal-rt.com

SARGENT & LUNDY LLC

Tel: (312) 269-2000
www.sargentlundy.com

ENGINEERING - PROFESSIONAL SERVICES

ABB INC. (CORPORATE-CANADA)

Tel: (514) 856-6266
www.abb.ca

GDS ASSOCIATES, INC.

Tel: (770) 425-8100
www.gdsassociates.com

W.I.R.E SERVICES, A DIVISION OF MANITOBA HYDRO

Tel: (204) 480-5800
www.wireservices.ca

ENGINEERING - SERVICES**DIS-TRAN**

Tel: (318) 448-0274
www.distran.com

W.I.R.E SERVICES, A DIVISION OF MANITOBA HYDRO

Tel: (204) 480-5800
www.wireservices.ca

ENGINEERING - SERVICES - T & D**AREVA T&D CANADA INC.**

Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.

Tel: (484) 766-8100
www.areva-td.com

POWER ENGINEERS, INC.

Tel: (208) 788-3456
www.powereng.com

S&C ELECTRIC COMPANY

Tel: (773) 338-1000
www.sandc.com

SARGENT & LUNDY LLC

Tel: (312) 269-2000
www.sargentlundy.com

SNC-LAVALIN TRANSMISSION & DISTRIBUTION

Tel: (514) 334-6780
www.snc-lavalin.com/td

ENGINEERING - STRUCTURAL**J & Y ENGINEERING SERVICES INC.**

Tel: (440) 891-1130
www.jyengineering.com

GIS - ENGINEERING SERVICES**POWER ENGINEERS, INC.**

Tel: (208) 788-3456
www.powereng.com

ROLTA INTERNATIONAL INC.

Tel: (678) 942-5000 • 1-888-997-6582
www.rolta.com

TELVENT MINER & MINER

Tel: (970) 223-1888
www.telvent.com/miner

INFORMATION TECHNOLOGY AND MANAGEMENT CONSULTING**ENSPERIA SOLUTIONS INC.**

Tel: (303) 520-2513
www.ensperia.com

MINCOM INC.

Tel: (303) 446-9000
www.mincom.com

UTILIPOINT INTERNATIONAL

Tel: (214) 923-4876
www.utilipoint.com

MANAGEMENT CONSULTING**BEARINGPOINT, INC.**

Tel: 1 866 BRNGPNT (+1 508 216 2523)
www.bearingpoint.com

BOREAS GROUP LLC

Tel: (303) 744-2108
www.boreasgroup.us

KEMA INC.

Tel: (781) 273-5700
www.kema.com

THE MCDONNELL GROUP, INC.

Tel: (404) 583-0003
www.themcdonnellgroup.com

THE STEADFAST GROUP

Tel: (253) 269-6569
www.thesteadfastgroup.com

PROJECT ENGINEERING**POWER ENGINEERS, INC.**

Tel: (208) 788-3456
www.powereng.com

SARGENT & LUNDY LLC

Tel: (312) 269-2000
www.sargentlundy.com

**Real-Time Digital Simulators
Rapid Control Prototyping
Hardware-in-the-Loop
ECU Testing**

**Power Systems
Electromechanical Systems
Power Electronics**

**Fully integrated with
EMTP-RV and
MATLAB/Simulink®**



Opal-RT products are designed to meet the Real-Time Simulation, Rapid Control Prototyping, and testing needs of engineers and researchers - from university researchers studying renewable energy sources to electrical utilities and manufacturers seeking ways to test and simulate the growing

Opal-RT Technologies
From Imagination to Real-Time
www.opal-rt.com

number of power electronic devices found in today's power systems.

Find out why companies like ABB, GE, Hitachi, Mitsubishi Electric, and Toyota, as well as countless universities and research facilities count on Opal-RT

Real-Time Digital Simulators to meet their electrical and power electronic test and simulation needs.

Learn how Opal-RT is changing the way engineers design, simulate, and test tomorrow's power systems.

**Visit us at CIGRE Paris,
Stand # 40**



If You Can Build It, We Can Simulate It...In Real-Time

PROJECT MANAGEMENT AND CONSULTING

IMMAJ HOLDINGS PVT LTD
Tel: 92 42 581-1222
www.immaj.com

S&C ELECTRIC COMPANY
Tel: (773) 338-1000
www.sandc.com

TEXIM SOLUTIONS INC. (CUBA)
Tel: (450) 672-3067
www.texim-solutions.com

TEXIM SOLUTIONS INTERNATIONAL (CANADA)
Tel: (450) 443-0450
www.texim-solutions.com

TRANZGRID SOLUTIONS
Tel: 006478295829
www.tranzgrid.co.nz

SOFTWARE - ENGINEERING

ENSPIRIA SOLUTIONS INC.
Tel: (303) 520-2513
www.enspiria.com

MANITOBA HVDC RESEARCH CENTRE INC.
Tel: (204) 989-1240
www.pscad.com

OPAL-RT
Tel: (514) 935-2323
Web: www.opal-rt.com

POWEL INC.
Tel: (651) 251-3005
www.powelinc.com

SOFTWARE INTEGRATION

ENSPIRIA SOLUTIONS INC.
Tel: (303) 520-2513
www.enspiria.com

ESUNTECH, INC.
Tel: (519) 341-3586
www.esun-tech.com

SUBSTATION - CAD DRAFTING SUPPORT

DIS-TRAN
Tel: (318) 448-0274
www.distran.com

SUBSTATION DESIGN & CONSTRUCTION

BETA ENGINEERING
Tel: (318) 767-5564
www.betaengineering.com

MSE POWER SYSTEMS, INC.
Tel: (518) 452-7718
www.msepower.com

NAES POWER CONTRACTORS
Tel: (425) 961-4700
www.naes.com/npc

PSD, INC.
Tel: (330) 452-4434
www.psdohio.com

S&C ELECTRIC COMPANY
Tel: (773) 338-1000
www.sandc.com

TELECOMMUNICATIONS - CONSULTING

BLACK & VEATCH
Tel: (913) 458-4626
www.bvtelecom.com

ENVIRONMENTAL PRODUCTS & SERVICES

ABSORBENTS

UESS BV. CANADA
Tel: (780) 542-2122
www.uessltd.com

BIRD CONTROL

BIRD-X
Tel: (312) 226-2473
www.bird-x.com

ENERGY SAVINGS PRODUCTS

DCS ENERGY
Tel: (860) 781-6666
www.dcsenergy.com

METRO POWER COMPANY
Tel: +61 8 9485 1121
www.metropower.com.au

ENVIRONMENTAL - MONITORING

FLIR SYSTEMS
Tel: (978) 901-8000 • (800) 464-6372
www.goinfraed.com

ENVIRONMENTAL SERVICES

GREEN-PORT ENVIRONMENTAL MANAGERS (ONTARIO)
Tel: (905) 799-2777
www.green-port.com

POWER ENGINEERS, INC.
Tel: (208) 788-3456
www.powereng.com

FILTRATION - LIQUID SYSTEMS

FILTRATION SOLUTIONS, INC.
Tel: (800) 598-1897
www.filtrationsolutions.com

FILTRATION SYSTEMS - OIL

BARON USA, INC.
Tel: (931) 528-8476
www.baronusa.com

GUARDS - ANIMAL AND BIRDS

INSULBOOT A DIV. OF PLASTIC DIP MOLDINGS
Tel: (215) 766-2020
www.insulboot.com

LUBRICANTS - ENVIRONMENT FRIENDLY

NYNAS CANADA INC.
Tel: (905) 804-8540
www.nynas.com

OIL - CONTAINMENT EQUIPMENT

OIL BARRIERS AUSTRALASIA
Tel: 006478295829
www.oilbarriers.co.nz

OIL PURIFYING - RECLAIMING SYSTEMS

ENSPIRIA SOLUTIONS INC.
Tel: (303) 520-2513
www.enspiria.com

OIL SPILL EQUIPMENT

BROCKTON EQUIPMENT - SPILLDAM INC.
Tel: (508) 583-7850
www.spilldam.com

POLE - WOOD / PRESERVATIVES

ARCH WOOD PROTECTION, INC.
Tel: (770) 801-6600
www.wolmanizedwood.com

SAFETY - ENVIRONMENTAL - EQUIPMENT

TPC TRANSFORMER PROTECTOR CORP.
Tel: (281) 358-9900
www.transproco.com

TANKS - STEEL

PENN SEPARATOR CORP
Tel: (814) 849-7328
www.pennseparator.com

TRANSFORMER DISPOSAL

ENVIRONMENTAL PROTECTION SERVICES
Tel: (304) 232-1590
www.envprotsvcs.com

LIGHTING

EMERGENCY & HAZARDOUS LOCATION LIGHTS

K & H INDUSTRIES INC.
Tel: (716) 549-0135
www.khindustries.com

EMERGENCY LIGHTING

K & H INDUSTRIES INC.
Tel: (716) 549-0135
www.khindustries.com

LED PRODUCTS

ELUMANATION | ENERGY EFFICIENT LED LIGHTING SOLUTIONS
Tel: Toll Free - 1.866.558.8270
www.elumanation.com

POLYBRITE INTERNATIONAL
Tel: (800) 320-3801
www.polybrite.com

LIGHTING

GOLIGHT INC
Tel: (308) 278-3131
www.golight.com

PAUL GRÉGOIRE LTÉE
Tel: (450) 454-2085
www.paulgregoire.com

LIGHTING - COMMERCIAL & INDUSTRIAL

HOLOPHANE
Tel: (740) 345-9631
www.holophane.com

LIGHTING - CONTROLS

RIPLEY LIGHTING CONTROLS
Tel: (803) 939-4700
www.ripleylc.com

LIGHTING - FIXTURES - MANUFACTURERS & WHOLESALERS

HOLOPHANE
Tel: (740) 345-9631
www.holophane.com

PAUL GRÉGOIRE LTÉE
Tel: (450) 454-2085
www.paulgregoire.com

LIGHTING - INDOOR

HOLOPHANE
Tel: (740) 345-9631
www.holophane.com

LIGHTING - OUTDOOR

HOLOPHANE
Tel: (740) 345-9631
www.holophane.com

LIGHTING - POLES, AREA STEEL ROUND, SQUARE AND ROUND TAPERED

MILLERBERND MANUFACTURING COMPANY
Tel: (320) 485-2111
www.millerberndmfg.com

VALMONT INDUSTRIES
Tel: 1-800-VALMONT
www.valmontstructures.com

LIGHTING - POLES, CONCRETE ROUND, SQUARE, OCTOGONAL & DECORATIVE

THE STRESSCRETE GROUP
Tel: (800) 268-7809
www.stresscrete.com

LIGHTS - AVIATION OBSTRUCTION

CICAME ENERGIE INC.
Tel: (450) 679-7778
www.cicame.ca

LIGHTS - EMERGENCY

K & H INDUSTRIES INC.
Tel: (716) 549-0135
www.khindustries.com

LIGHTS - PORTABLE

GOLIGHT INC
Tel: (308) 278-3131
www.golight.com

K & H INDUSTRIES INC.
Tel: (716) 549-0135
www.khindustries.com

LIGHTS - SPOT

GOLIGHT INC
Tel: (308) 278-3131
www.golight.com

K & H INDUSTRIES INC.
Tel: (716) 549-0135
www.khindustries.com

POLES - LIGHTING - ALUMINUM

POWER-LITE INDUSTRIES INC
Tel: (514) 875-1555
www.power-lite.ca

POLES - LIGHTING - STEEL

ROHN PRODUCTS
Tel: (309) 697-4400
www.radiancorp.com

THOMAS & BETTS - STEEL STRUCTURES DIVISION
Tel: (901) 252-8115
www.tnb.com

UNION METAL CORPORATION
Tel: (330) 456-7653
www.unionmetal.com

POLES - LIGHTING - WOOD, LAMINATED

HUGHES BROTHERS INC.
Tel: (402) 643-2991
www.hughesbros.com

TEST EQUIPMENT - LUMINAIRES AND BALLASTS

MANITOBA HVDC RESEARCH CENTRE INC.
Tel: (204) 989-1240
www.pscad.com

TOWER - TRELLIS AND TUBULAR

THOMAS & BETTS - STEEL STRUCTURES DIVISION
Tel: (901) 252-8115
www.tnb.com

LINE CONSTRUCTION & MAINTENANCE

AERIAL CABLE PLACING

NESCO INC.
Tel: (260) 824-6340 • 1-800-252-0043
www.nescosales.com

AERIAL PHOTOGRAPHY

W.I.R.E SERVICES, A DIVISION OF MANITOBA HYDRO
Tel: (204) 480-5800
www.wireservices.ca

AERIAL SURVEY

ARBORMETRICS SOLUTIONS LTD
Tel: (407) 339-1733 • (866) 685-1880
www.arbormetricssolutions.com

W.I.R.E SERVICES, A DIVISION OF MANITOBA

HYDRO

Tel: (204) 480-5800
www.wireservices.ca

ANCHORS - BOLTS

HUGHES BROTHERS INC.

Tel: (402) 643-2991
www.hughesbros.com

THOMAS & BETTS - STEEL STRUCTURES DIVISION

Tel: (901) 252-8115
www.tnb.com

ANCHORS - FOUNDATION

HUBBELL POWER SYSTEMS INC.

Tel: (573) 682-5521
www.hubbellpowersystems.com

AUGERS - DRILLING - EARTH AND ROCK

NESCO INC.

Tel: (260) 824-6340 • 1-800-252-0043
www.nescosales.com

BAYONETS - POLE EXTENSIONS

HUGHES BROTHERS INC.

Tel: (402) 643-2991
www.hughesbros.com

BRACES - CROSSARM

HUGHES BROTHERS INC.

Tel: (402) 643-2991
www.hughesbros.com

THOMAS & BETTS - STEEL STRUCTURES DIVISION

Tel: (901) 252-8115
www.tnb.com

CABLE - PULLING

NESCO INC.

Tel: (260) 824-6340 • 1-800-252-0043
www.nescosales.com

CONSTRUCTION SERVICES

MACNAIR CONSTRUCTION PRODUCTS LTD.

Tel: (780) 410-0256
www.mcpl.ca

UTILICON SOLUTIONS, LTD

Tel: (215) 784-1406 • (877) 884-5426
www.utiliconltd.com

CONSTRUCTION SPECIALIZED

APPALACHIAN ENERGY, LLC

Tel: (866) 894-8023
www.appalachian-energy.com

CONTRACTORS - CONSTRUCTION

UTILICON SOLUTIONS, LTD

Tel: (215) 784-1406 • (877) 884-5426
www.utiliconltd.com

CONTRACTORS - MECHANICAL

WINOLA INDUSTRIAL INC.

Tel: (570) 378-3808
www.winolaindustrial.com

CRANES

ALTEC INDUSTRIES, INC.

Tel: (205) 991-7733
www.altec.com

ELLIOTT EQUIPMENT COMPANY

Tel: (402) 592-4500
www.elliottequip.com

DIGGERS - DERRICKS

ALTEC INDUSTRIES, INC.

Tel: (205) 991-7733
www.altec.com

NESCO INC.

Tel: (260) 824-6340 • 1-800-252-0043
www.nescosales.com

MAINTENANCE - PREVENTIVE MAINTENANCE EQUIPMENT

FLIR SYSTEMS

Tel: (978) 901-8000 • (800) 464-6372
www.goinfraed.com

MAINTENANCE - SERVICES AND PRODUCTS

AREVA T&D CANADA INC.

Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.

Tel: (484) 766-8100
www.areva-td.com

ESUNTECH, INC.

Tel: (519) 341-3586
www.esun-tech.com

NOVINIUM

Tel: (206) 529-4828
www.novinium.com

OSMOSE UTILITIES SERVICES, INC.

Tel: (716) 319-3460
www.osmoseutilities.com

POLE - WOOD / PRESERVATIVES

ARCH WOOD PROTECTION, INC.

Tel: (770) 801-6600
www.wolmanizedwood.com

POLE MAINTENANCE

OSMOSE UTILITIES SERVICES, INC.

Tel: (716) 319-3460
www.osmoseutilities.com

UTILICON SOLUTIONS, LTD

Tel: (215) 784-1406 • (877) 884-5426
www.utiliconltd.com

POLE RESTORATION

OSMOSE UTILITIES SERVICES, INC.

Tel: (716) 319-3460
www.osmoseutilities.com

PROJECT ENGINEERING

POWER ENGINEERS, INC.

Tel: (208) 788-3456
www.powereng.com

SARGENT & LUNDY LLC

Tel: (312) 269-2000
www.sargentlundy.com

PROJECT MANAGEMENT AND CONSULTING

IMMAJ HOLDINGS PVT LTD

Tel: 92 42 581-1222
www.immaj.com

S&C ELECTRIC COMPANY

Tel: (773) 338-1000
www.sandc.com

TEXIM SOLUTIONS INC. (CUBA)

Tel: (450) 672-3067
www.texim-solutions.com

TEXIM SOLUTIONS INTERNATIONAL (CANADA)

Tel: (450) 443-0450
www.texim-solutions.com

TRANZGRID SOLUTIONS

Tel: 006478295829
www.tranzgrid.co.nz

SOFTWARE - T&D LINE DESIGN

INTERGRAPH CORPORATION

Tel: (303) 785-9835
www.intergraph.com

STEEL - STRUCTURAL

DIS-TRAN

Tel: (318) 448-0274
www.distran.com

J & Y ENGINEERING SERVICES INC.

Tel: (440) 891-1130
www.jyengineering.com

SABRE TUBULAR STRUCTURES

Tel: (817) 852-1700
www.sabretubularstructures.com

THOMAS & BETTS - STEEL STRUCTURES DIVISION

Tel: (901) 252-8115
www.tnb.com

STRUCTURE - PREFABRICATED

THOMAS & BETTS - STEEL STRUCTURES DIVISION

Tel: (901) 252-8115
www.tnb.com

SUBSTATION - PACKAGED ASSEMBLIES

DIS-TRAN

Tel: (318) 448-0274
www.distran.com

HAMBY YOUNG

Tel: (330) 562-8444 • (800) 726-8444
www.hambyyoung.com

TATMAN ASSOCIATES, INC.

Tel: (440) 248-0644
www.tatmansubstations.com

SUBSTATION DESIGN & CONSTRUCTION

BETA ENGINEERING

Tel: (318) 767-5564
www.betaengineering.com

MSE POWER SYSTEMS, INC.

Tel: (518) 452-7718
www.msepower.com

NAES POWER CONTRACTORS

Tel: (425) 961-4700
www.naes.com/npc

PSD, INC.

Tel: (330) 452-4434
www.psdohio.com

S&C ELECTRIC COMPANY

Tel: (773) 338-1000
www.sandc.com

TOWERS - EMERGENCY T & D

SBB TOWERS

Tel: (450) 473-4247
www.sbb.ca

THOMAS & BETTS - STEEL STRUCTURES DIVISION

Tel: (901) 252-8115
www.tnb.com

TOWER SOLUTIONS INC.

Tel: (905) 946-8789
www.implotech.ca

VEGETATION MANAGEMENT

ARBORMETRICS SOLUTIONS LTD

Tel: (407) 339-1733 • (866) 685-1880
www.arbormetricssolutions.com

ASPLUNDH TREE EXPERT CO.

Tel: (800) 248-8733
www.asplundh.com

DAVEY TREE EXPERT COMPANY (THE)

Tel: (330) 673-9511 • 1-800-447-1667
www.davey.com

JARRAFF INDUSTRIES

Tel: (800) 767-7112
www.jarraff.com

POWEL INC.

Tel: (651) 251-3005
www.powelinc.com

METERS & METERING DEVICES

ADVANCE METERING INFRASTRUCTURE - AMI

ACLARA

Tel: (800) 297-2728
www.aclaratech.com

EKA SYSTEMS, INC.

Tel: (301) 515-7118
www.ekasystems.com

ELSTER

Tel: (919) 212-4800
www.elster-eis.com

ENSPIRIA SOLUTIONS INC.

Tel: (303) 520-2513
www.enspiria.com

METERSMART

Tel: (817) 652-1933 • (866) 944-4868
www.metersmart.com

AUTOMATIC METER READING (AMR) - C&I

COMVERGE, INC.

Tel: (888) 565-5525
www.comverge.com

SENSUS METERING SYSTEMS

Tel: (724) 430-3956
www.sensus.com

AUTOMATIC METER READING (AMR) - COMMUNICATIONS

AZTECH ASSOCIATES INC.

Tel: (613) 384-9400
www.aztechmeter.com

CALAMP CORP.

Tel: (805) 987-9000
www.calamp.com

SENSUS METERING SYSTEMS

Tel: (724) 430-3956
www.sensus.com

TANTALUS SYSTEMS CORP.

Tel: (604) 299-0458
www.tantalus.com

AUTOMATIC METER READING (AMR) EQUIPMENT

BADGER METER, INC.

Tel: (800) 876-3837
www.badgermeter.com

COMVERGE, INC.

Tel: (888) 565-5525
www.comverge.com

ELSTER

Tel: (919) 212-4800
www.elster-eis.com

ESUNTECH, INC.

Tel: (519) 341-3586
www.esun-tech.com

SENSUS METERING SYSTEMS

Tel: (724) 430-3956
www.sensus.com

SPINWAVE SYSTEMS, INC.

Tel: (978) 392-9000
www.spinwavesystems.com

METER - READING SERVICES

OLAMETER INC.

Tel: (905) 841-1167 • (800) 903-7003
www.olameter.com

METER READING EQUIPMENT (AMR) - AUTOMATIC

BADGER METER, INC.

Tel: (800) 876-3837
www.badgermeter.com

CANNON TECHNOLOGIES/COOPER POWER SYSTEMS

Tel: (763) 543-7772
www.cannontech.com

COMVERGE, INC.

Tel: (888) 565-5525
www.comverge.com

COOPER POWER SYSTEMS

Tel: (262) 524-3300
www.cooperpower.com

LANDIS+GYR INC.

Tel: (765) 742-1001
www.landisgyr.us

METERS & METERING DEVICES

NURI TELECOM CO., LTD.

Tel: +82-2-78-0741
www.nuritelecom.com

SENSUS METERING SYSTEMS

Tel: (724) 430-3956
www.sensus.com

TELVENT

Tel: (713) 939-9399
www.telvent.com

TRILLIANT NETWORKS INC.

Tel: (650) 204-5050
www.trilliantnetworks.com

METER SERVICES

BAY METAL INC.

Tel: (330) 523-0087
www.baymetal.com

UTILICON SOLUTIONS, LTD

Tel: (215) 784-1406 • (877) 884-5426
www.utiliconltd.com

METER SOCKET - ACCESSORIES

BROOKS UTILITY PRODUCTS GROUP

(Brooks Ekstrom, Brooks Meter Devices,
Brooks Security Products)

Tel: (248) 477-0250 • 888-687-3008
www.brooksutility.com

METERING ACCESSORIES

BROOKS UTILITY PRODUCTS GROUP

(Brooks Ekstrom, Brooks Meter Devices,
Brooks Security Products)

Tel: (248) 477-0250 • 888-687-3008
www.brooksutility.com

INNER-TITE CORP.

Tel: (508) 829-6361
www.inner-tite.com

METERING RESIDENTIAL AND COMMERCIAL

BADGER METER, INC.

Tel: (800) 876-3837
www.badgermeter.com

ELSTER

Tel: (919) 212-4800
www.elster-eis.com

LANDIS+GYR INC.

Tel: (765) 742-1001
www.landisgyr.us

SENSUS METERING SYSTEMS

Tel: (724) 430-3956
www.sensus.com

METERING SYSTEMS - ELECTRONIC

ELSTER

Tel: (919) 212-4800
www.elster-eis.com

MICROTUX ELECTRONICS

Tel: (972) 479-1011
www.microtexelectronics.com

METERS

AREVA T&D INC.

Tel: (484) 766-8100
www.areva-td.com

BADGER METER, INC.

Tel: (800) 876-3837
www.badgermeter.com

ELSTER

Tel: (919) 212-4800
www.elster-eis.com

LANDIS+GYR INC.

Tel: (765) 742-1001
www.landisgyr.us

RUGGED COM INC.

Tel: (905) 856-5288 • (888) 264-0006
www.ruggedcom.com

SATEC

Tel: (908) 686-9510
www.oksatec.com

SENSUS METERING SYSTEMS

Tel: (724) 430-3956
www.sensus.com

METERS - ADAPTERS

BROOKS UTILITY PRODUCTS GROUP

(Brooks Ekstrom, Brooks Meter Devices,
Brooks Security Products)

Tel: (248) 477-0250 • 888-687-3008
www.brooksutility.com

SUSI ADAPTERS

Tel: (770) 448-6810
www.susiadapters.com

METERS - ENCLOSURES

BROOKS UTILITY PRODUCTS GROUP

(Brooks Ekstrom, Brooks Meter Devices,
Brooks Security Products)

Tel: (248) 477-0250 • 888-687-3008
www.brooksutility.com

METERS - GROUND RESISTANCE

AEMC INSTRUMENTS

Tel: (508) 698-2115
www.aemc.com

FLUKE CORPORATION

Tel: (800) 443-5853
www.fluke.com

METERS - KILOWATTHOUR

DENT INSTRUMENTS

Tel: (541) 388-4774
www.dentinstruments.com

LANDIS+GYR INC.

Tel: (765) 742-1001
www.landisgyr.us

SCHWEITZER ENGINEERING LABORATORIES INC.

Tel: (509) 332-1890
www.selinc.com

METERS - MAGNETIC FIELD

ENERTECH CONSULTANTS

Tel: (408) 866-7266 ext:21
www.enertech.net

METERS - MICRO-OHMMETER

PHENIX TECHNOLOGIES INC.

Tel: (301) 746-8118
www.phenixtech.com

METERS - PHASE

HASTINGS FIBERGLASS PRODUCTS INC.

Tel: (269) 945-9541
www.hfgp.com

METERS - POWER QUALITY

SCHWEITZER ENGINEERING LABORATORIES INC.

Tel: (509) 332-1890
www.selinc.com

METERS - TEST SETS - TEST EQUIPMENT

BROOKS UTILITY PRODUCTS GROUP

(Brooks Ekstrom, Brooks Meter Devices,
Brooks Security Products)

Tel: (248) 477-0250 • 888-687-3008
www.brooksutility.com

HD ELECTRIC COMPANY

Tel: (847) 473-4980
www.hdelectriccompany.com

PROBEWELL LAB INC.

Tel: (418) 626-1126
www.probewell.com

THE VON CORPORATION

Tel: (205) 788-2437
www.voncorp.com

METERS - TIME-OF-USE

SCHWEITZER ENGINEERING LABORATORIES INC.

Tel: (509) 332-1890
www.selinc.com

METERS - VOLT**HASTINGS FIBERGLASS PRODUCTS INC.**

Tel: (269) 945-9541
www.hfgp.com

SEALS**BROOKS UTILITY PRODUCTS GROUP**

(Brooks Ekstrom, Brooks Meter Devices,
Brooks Security Products)

Tel: (248) 477-0250 • 888-687-3008
www.brooksutility.com

SEALS - METERS**BROOKS UTILITY PRODUCTS GROUP**

(Brooks Ekstrom, Brooks Meter Devices,
Brooks Security Products)

Tel: (248) 477-0250 • 888-687-3008
www.brooksutility.com

INNER-TITE CORP.

Tel: (508) 829-6361
www.inner-tite.com

POWER MONITORING**ANALYZERS - POWER QUALITY****GEORGE M. FRASER LTD (LACHUTE)**

Tel: (450) 562-0771
www.gmfraser.com

GEORGE M. FRASER LTD (PICKERING)

Tel: (905) 420-6555
www.gmfraser.com

RCC ELECTRONICS

Tel: (905) 238-6848 • 1-800-668-6053
www.rcce.com

TECHNO-TEST INSTRUMENTS

Tel: (450) 681-5777
www.techno-test.com

CAPACITORS**AREVA T&D CANADA INC.**

Tel: (450) 659-8921
www.areva-td.com

CAPACITORS - CONTROLS**ACCURATE CONTROLS INC**

Tel: (617) 872-2510
www.accuratecontrolsinc.com

COMVERGE, INC.

Tel: (888) 565-5525
www.comverge.com

S&C ELECTRIC COMPANY

Tel: (773) 338-1000
www.sandc.com

CAPACITORS - POWER FACTOR CORRECTION**POWER SURVEY**

Tel: (514) 333-8392
www.powersurvey.com

CAPACITORS - SWITCHES**SOUTHERN STATES, LLC.**

Tel: (770) 946-4562
www.southernstatesllc.com

THOMAS & BETTS - STEEL STRUCTURES DIVISION

Tel: (901) 252-8115
www.tnb.com

THOMAS & BETTS - UTILITY GROUP

Tel: (901) 252-8251
www.tnb.com

YASKAWA ELECTRIC AMERICA, INC.

Tel: (847) 887-7000
www.yaskawa.com

CIRCUIT BREAKER COMPONENTS**CIRCUIT BREAKER SALES CO. INC.**

Tel: (940) 665-4444
www.cbsales.com

HIGH VOLTAGE SUPPLY

Tel: (214) 637-4434 • (800) 338-5526
www.highvoltagesupply.com

CIRCUIT BREAKERS**AREVA T&D CANADA INC.**

Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.

Tel: (484) 766-8100
www.areva-td.com

CIRCUIT BREAKER SALES CO. INC.

Tel: (940) 665-4444
www.cbsales.com

ELECTRICAL WORLD INDUSTRIAL SALES CORP.

Tel: (800) 422-0089
www.elecworld.com

ROMAC

Tel: (800) 843-5473
www.romacsupply.com

TAVRIDA ELECTRIC NORTH AMERICA INC.

Tel: (604) 540-6600
www.tavrida-na.com

CIRCUIT BREAKERS - MEDIUM AND HIGH VOLTAGE**BELYEA COMPANY, INC.**

Tel: (610) 515-8775
www.belyeapower.com

TAVRIDA ELECTRIC NORTH AMERICA INC.

Tel: (604) 540-6600
www.tavrida-na.com

CIRCUIT BREAKERS - MODIFICATION AND REPAIRS**BELYEA COMPANY, INC.**

Tel: (610) 515-8775
www.belyeapower.com

CIRCUIT BREAKERS - OIL**BELYEA COMPANY, INC.**

Tel: (610) 515-8775
www.belyeapower.com

CIRCUIT BREAKERS - OUTDOOR**TAVRIDA ELECTRIC NORTH AMERICA INC.**

Tel: (604) 540-6600
www.tavrida-na.com

CIRCUIT BREAKERS - SF6**HVB AE POWER SYSTEMS INC.**

Tel: (770) 495-1755
www.hvbi.com

CIRCUIT BREAKERS - VACUUM**CIRCUIT BREAKER SALES CO. INC.**

Tel: (940) 665-4444
www.cbsales.com

TAVRIDA ELECTRIC NORTH AMERICA INC.

Tel: (604) 540-6600
www.tavrida-na.com

CIRCUIT RECLOSERS, AUTOMATIC - THREE-PHASE**TAVRIDA ELECTRIC NORTH AMERICA INC.**

Tel: (604) 540-6600
www.tavrida-na.com

CIRCUIT SWITCHERS**GR POWER SWITCHGEAR LTD**

Tel: 91-040-23095589
www.grpsl.net

S&C ELECTRIC COMPANY

Tel: (773) 338-1000
www.sandc.com

SOUTHERN STATES, LLC.

Tel: (770) 946-4562
www.southernstatesllc.com

POWER MONITORING

CIRCUIT SWITCHERS - MOBILE

SOUTHERN STATES, LLC.

Tel: (770) 946-4562
www.southernstatesllc.com

COMMUNICATION SYSTEMS - PROTECTIVE RELAYS

RFL ELECTRONICS INC.

Tel: (973) 334-3100
www.rflect.com

RUGGED COM INC.

Tel: (905) 856-5288 • (888) 264-0006
www.ruggedcom.com

TAVRIDA ELECTRIC NORTH AMERICA INC.

Tel: (604) 540-6600
www.tavrida-na.com

CONDITION MONITORING EQUIPMENT

ASAT SOLUTIONS INC.

Tel: (403) 569-1680
www.asatsolutions.com

INCON POWER RELIABILITY PRODUCTS

Tel: (207) 283-0156 • 1-800-872-3455
www.incon.com

PROCESS SENSORS CORPORATION

Tel: (201) 485-8772
www.processsensors.com

CONSULTANTS - POWER QUALITY

S&C ELECTRIC COMPANY

Tel: (773) 338-1000
www.sandc.com

CONTROLLERS/CONTROLS - PROGRAMMABLE

SCHWEITZER ENGINEERING LABORATORIES INC.

Tel: (509) 332-1890
www.selinc.com

CONTROLS - LOAD

OPEN SYSTEMS INTERNATIONAL INC.

Tel: (763) 551-0559
www.osii.com

CONTROLS - PEAK DEMAND

BRAYDEN AUTOMATION CORP.

Tel: 1.888.BRAYDEN (272.9336)
www.brayden.com

NEOPTIX FIBER OPTIC SENSORS

Tel: (418) 687-2500
www.neoptix.com

OPEN SYSTEMS INTERNATIONAL INC.

Tel: (763) 551-0559
www.osii.com

CONTROLS - TEMPERATURE

KRENZ & COMPANY INCORPORATED

Tel: (262) 255-2310
www.krenzvent.com

LUMASENSE TECHNOLOGIES

Tel: (408) 727-1600
www.lumasenseinc.com

NEOPTIX FIBER OPTIC SENSORS

Tel: (418) 687-2500
www.neoptix.com

DEMAND SIDE MANAGEMENT

METERSMART

Tel: (817) 652-1933 • (866) 944-4868
www.metersmart.com

DIRECT LOAD CONTROL

CANNON TECHNOLOGIES/COOPER POWER SYSTEMS

Tel: (763) 543-7772
www.cannontech.com

COMVERGE, INC.

Tel: (888) 565-5525
www.comverge.com

COOPER POWER SYSTEMS

Tel: (262) 524-3300
www.cooperpower.com

METERSMART

Tel: (817) 652-1933 • (866) 944-4868
www.metersmart.com

ENERGY SAVINGS PRODUCTS

DCS ENERGY

Tel: (860) 781-6666
www.dcsenergy.com

METRO POWER COMPANY

Tel: +61 8 9485 1121
www.metropower.com.au

HYDROGENERATORS - MONITORING

INCON POWER RELIABILITY PRODUCTS

Tel: (207) 283-0156 • 1-800-872-3455
www.incon.com

INDICATORS - TEMPERATURE

FLIR SYSTEMS

Tel: (978) 901-8000 • (800) 464-6372
www.goingfrared.com

NEOPTIX FIBER OPTIC SENSORS

Tel: (418) 687-2500
www.neoptix.com

INDICATORS - VOLTAGE

THIES ELECTRICAL DISTRIBUTING CO.

Tel: (519) 621-2524
www.djinfo.com/TEDC

INDICATORS, PORTABLE - COMBUSTIBLE GAS

FLIR SYSTEMS

Tel: (978) 901-8000 • (800) 464-6372
www.goingfrared.com

INSTRUMENTATION AND CONTROLS

NEOPTIX FIBER OPTIC SENSORS

Tel: (418) 687-2500
www.neoptix.com

INVERTERS - DC/AC

MAJORPOWER CORPORATION

Tel: (919) 563-6610
www.majorpower.com

LIMITERS - CURRENT

BROOKS UTILITY PRODUCTS GROUP

(Brooks Ekstrom, Brooks Meter Devices,
Brooks Security Products)

Tel: (248) 477-0250 • 888-687-3008
www.brooksutility.com

LOAD MANAGEMENT

CANNON TECHNOLOGIES/COOPER POWER SYSTEMS

Tel: (763) 543-7772
www.cannontech.com

COMVERGE, INC.

Tel: (888) 565-5525
www.comverge.com

COOPER POWER SYSTEMS

Tel: (262) 524-3300
www.cooperpower.com

ENETICS, INC.

Tel: (585) 924-5010
www.enetics.com

OPEN SYSTEMS INTERNATIONAL INC.

Tel: (763) 551-0559
www.osii.com

LOAD MANAGEMENT - COMMUNICATIONS

CURRENT GROUP LLC

Tel: (301) 944-2727
www.currentgroup.com

MONITORING - COMMUNICATIONS

AEGIS TECHNOLOGIES

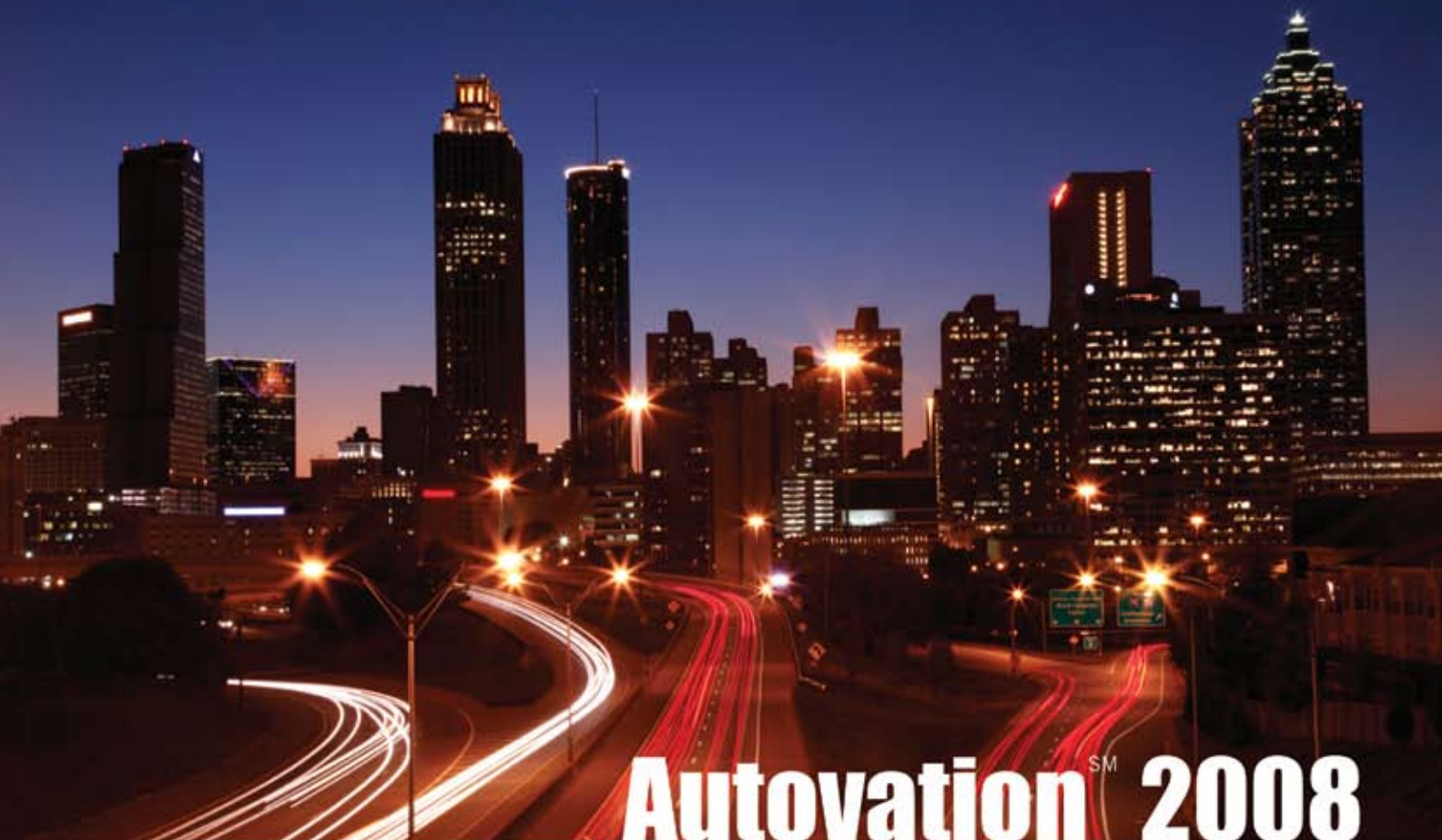
Tel: (602) 443-5000
www.aegistech.us

CURRENT GROUP LLC

Tel: (301) 944-2727
www.currentgroup.com

DYNAMIC RATINGS, INC.

Tel: (262) 746-1230
www.dynamicratings.com



AutovationSM 2008

The Utilimetrics International Symposium

September 7–10, 2008

Georgia World Congress Center/Omni Atlanta • Atlanta, GA

Plan to attend the premier conference focused on AMR and AMI solutions.

At AutovationSM 2008 you will:

- Meet colleagues and industry experts with practical success stories to share
- See the latest metering solutions compatible with the range of communication platforms
- Learn operational strategies to improve your project or leverage existing technologies with enterprise-wide applications
- Experience outstanding networking opportunities:
 - Utility-only peer forums
 - Special interest group (SIG) breakfast
 - Exhibit hall receptions

AutovationSM is recognized across the industry as the educational and networking event not to be missed.

For more information on
AutovationSM 2008,
visit www.utilimetrics.org.



Alliance for Advanced Metering & Data Management Solutions

Circle 43 on Reader Service Card

SENSUS METERING SYSTEMS

Tel: (724) 430-3956
www.sensus.com

MONITORING - EQUIPMENT**AEGIS TECHNOLOGIES**

Tel: (602) 443-5000
www.aegistech.us

**API-CAMILLE BAUER DIV. OF ABSOLUTE
PROCESS INSTRUMENTS**

Tel: (847) 918-3510
www.apicb.com

AREVA T&D CANADA INC.

Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.

Tel: (484) 766-8100
www.areva-td.com

LUMASENSE TECHNOLOGIES

Tel: (408) 727-1600
www.lumasenseinc.com

NEOPTIX FIBER OPTIC SENSORS

Tel: (418) 687-2500
www.neoptix.com

PLANAR SYSTEMS, INC.

Tel: (503) 748-1100
www.planarcontrolroom.com

RUGGED COM INC.

Tel: (905) 856-5288 • (888) 264-0006
www.ruggedcom.com

MONITORING - TRANSFORMERS**CURRENT GROUP LLC**

Tel: (301) 944-2727
www.currentgroup.com

INCON POWER RELIABILITY PRODUCTS

Tel: (207) 283-0156 • 1-800-872-3455
www.incon.com

LUMASENSE TECHNOLOGIES

Tel: (408) 727-1600
www.lumasenseinc.com

NEOPTIX FIBER OPTIC SENSORS

Tel: (418) 687-2500
www.neoptix.com

OPSENS FIBER OPTIC SENSORS

Tel: (418) 682-9996
www.opsens.com

SERVERON CORPORATION

Tel: (503) 924-3200 • (800) 880-2552
www.serveron.com

MONITORS - TEMPERATURE**FLIR SYSTEMS**

Tel: (978) 901-8000 • (800) 464-6372
www.goinfrared.com

NEOPTIX FIBER OPTIC SENSORS

Tel: (418) 687-2500
www.neoptix.com

**MULTIPLEXERS - DATA
COMMUNICATIONS****CXR LARUS CORPORATION**

Tel: (408) 573-2700 • 1-800-999-9946
www.cxrlarus.com

DATA COMM FOR BUSINESS INC.

Tel: (217) 897-6600
www.dcbnet.com

ON-LINE MONITORING**HV TECHNOLOGIES INC.**

Tel: (703) 365-2330
www.hvtechnologies.com

NEOPTIX FIBER OPTIC SENSORS

Tel: (418) 687-2500
www.neoptix.com

**PROGOS LTDA TRANSFORMADORES &
EQUIPOS ELECTRICOS**

Tel: 569 9872 7411
www.progos.cl

OUTAGE MANAGEMENT SYSTEMS**CURRENT GROUP LLC**

Tel: (301) 944-2727
www.currentgroup.com

ENSPERIA SOLUTIONS INC.

Tel: (303) 520-2513
www.ensperia.com

INTERGRAPH CORPORATION

Tel: (303) 785-9835
www.intergraph.com

OPEN SYSTEMS INTERNATIONAL INC.

Tel: (763) 551-0559
www.osii.com

SUN-NET CONSULTING

Tel: (408) 323-1318
www.snscsw.com

**W.I.R.E SERVICES, A DIVISION OF MANITOBA
HYDRO**

Tel: (204) 480-5800
www.wireservices.ca

**PARTIAL DISCHARGE ANALYSIS,
DETECTION****GEORGE M. FRASER LTD (LACHUTE)**

Tel: (450) 562-0771
www.gmfraser.com

GEORGE M. FRASER LTD (PICKERING)

Tel: (905) 420-6555
www.gmfraser.com

HIPOTRONICS INC.

Tel: (845) 279-3644
www.hipotronics.com

HV TECHNOLOGIES INC.

Tel: (703) 365-2330
www.hvtechnologies.com

OMICRON ELECTRONICS CORP. USA

Tel: 1-800-omicron
www.omicronusa.com

PHENIX TECHNOLOGIES INC.

Tel: (301) 746-8118
www.phenixtech.com

POWER - MANAGEMENT SYSTEM**CURRENT GROUP LLC**

Tel: (301) 944-2727
www.currentgroup.com

POWER CONVERSION**ANALYTIC SYSTEMS**

Tel: (800) 668-3884
www.analyticsystems.com

POWER QUALITY - ANALYZERS**ASTRO-MED, INC.**

Tel: (401) 828-4000
www.astro-med.com/tmindex.html

TECHNICAL SYSTEMS 2002 INC.

Tel: (905) 575-1941
www.technical-sys.com

POWER QUALITY - TEST EQUIPMENT**FLUKE CORPORATION**

Tel: (800) 443-5853
www.fluke.com

**POWER SUPPLIES AND STATIC
REGULATORS****ALPHA TECHNOLOGIES**

Tel: (360) 392-2263
www.alpha.com

RECLOSERS**G&W ELECTRIC CO.**

Tel: (708) 388-5010
www.gwelec.com

HUBBELL POWER SYSTEMS INC.

Tel: (573) 682-5521
www.hubbellpowersystems.com

S&C ELECTRIC COMPANY

Tel: (773) 338-1000
www.sandc.com

TAVRIDA ELECTRIC NORTH AMERICA INC.

Tel: (604) 540-6600
www.tavrida-na.com

**THOMAS & BETTS - STEEL STRUCTURES
DIVISION**

Tel: (901) 252-8115
www.tnb.com

THOMAS & BETTS - UTILITY GROUP

Tel: (901) 252-8251
www.tnb.com

RECLOSERS - CONTROLS**S&C ELECTRIC COMPANY**

Tel: (773) 338-1000
www.sandc.com

SCHWEITZER ENGINEERING LABORATORIES INC.

Tel: (509) 332-1890
www.selinc.com

TAVRIDA ELECTRIC NORTH AMERICA INC.

Tel: (604) 540-6600
www.tavrida-na.com

RECLOSERS - THREE-PHASE**TAVRIDA ELECTRIC NORTH AMERICA INC.**

Tel: (604) 540-6600
www.tavrida-na.com

RECORDERS - EVENT**RTK INSTRUMENTS LTD.**

Tel: (908) 688-6709
www.rtkinstruments.com

TECHNICAL SYSTEMS 2002 INC.

Tel: (905) 575-1941
www.technical-sys.com

RECORDERS - TEMPERATURE**NEOPTIX FIBER OPTIC SENSORS**

Tel: (418) 687-2500
www.neoptix.com

RELAYS**AREVA T&D CANADA INC.**

Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.

Tel: (484) 766-8100
www.areva-td.com

RUGGED COM INC.

Tel: (905) 856-5288 • (888) 264-0006
www.ruggedcom.com

SIEMENS POWER TRANSMISSION & DISTRIBUTION, INC.

Tel: (919) 325-7000
www.usa.siemens.com

RELAYS - AUXILIARY**AREVA T&D CANADA INC.**

Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.

Tel: (484) 766-8100
www.areva-td.com

RELAYS - FEEDER PROTECTION**AREVA T&D CANADA INC.**

Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.

Tel: (484) 766-8100
www.areva-td.com

SCHWEITZER ENGINEERING LABORATORIES INC.

Tel: (509) 332-1890
www.selinc.com

VIRELEC LTD.

Tel: (905) 569-8030
www.virelec.com

RELAYS - GENERATOR PROTECTION**AREVA T&D CANADA INC.**

Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.

Tel: (484) 766-8100
www.areva-td.com

SCHWEITZER ENGINEERING LABORATORIES INC.

Tel: (509) 332-1890
www.selinc.com

VIRELEC LTD.

Tel: (905) 569-8030
www.virelec.com

RELAYS - ISOLATION**AREVA T&D CANADA INC.**

Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.

Tel: (484) 766-8100
www.areva-td.com

SOLID STATE INSTRUMENTS

Tel: (888) 272-9336
www.solidstateinstruments.com

RELAYS - LINE PROTECTION**AREVA T&D CANADA INC.**

Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.

Tel: (484) 766-8100
www.areva-td.com

SCHWEITZER ENGINEERING LABORATORIES INC.

Tel: (509) 332-1890
www.selinc.com

VIRELEC LTD.

Tel: (905) 569-8030
www.virelec.com

RELAYS - MOTOR PROTECTION**AREVA T&D CANADA INC.**

Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.

Tel: (484) 766-8100
www.areva-td.com

SCHWEITZER ENGINEERING LABORATORIES INC.

Tel: (509) 332-1890
www.selinc.com

RELAYS - PROTECTION**AREVA T&D CANADA INC.**

Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.

Tel: (484) 766-8100
www.areva-td.com

GE MULTILIN

Tel: (905) 294-6222
www.gemultilin.com

GEORGE M. FRASER LTD (LACHUTE)

Tel: (450) 562-0771
www.gmfraser.com

GEORGE M. FRASER LTD (PICKERING)

Tel: (905) 420-6555
www.gmfraser.com

SCHWEITZER ENGINEERING LABORATORIES INC.

Tel: (509) 332-1890
www.selinc.com

TAVRIDA ELECTRIC NORTH AMERICA INC.

Tel: (604) 540-6600
www.tavrida-na.com

RELAYS - SUBSTATION AUTOMATION**ASAT SOLUTIONS INC.**

Tel: (403) 569-1680
www.asatsolutions.com

S&C ELECTRIC COMPANY

Tel: (773) 338-1000
www.sandc.com

SCHWEITZER ENGINEERING LABORATORIES INC.

Tel: (509) 332-1890
www.selinc.com

VIRELEC LTD.

Tel: (905) 569-8030
www.virelec.com

ZIV P+C, S.L.

Tel: +34.94.403.74.00
www.zivpmasc.com

POWER MONITORING

RELAYS - TRANSFORMER DIFFERENTIAL

AREVA T&D CANADA INC.
Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.
Tel: (484) 766-8100
www.areva-td.com

SCHWEITZER ENGINEERING LABORATORIES INC.
Tel: (509) 332-1890
www.selinc.com

RELAYS - TRANSFORMER OVERLOAD

SCHWEITZER ENGINEERING LABORATORIES INC.
Tel: (509) 332-1890
www.selinc.com

RELAYS - TRANSFORMER PROTECTION

VIRELEC LTD.
Tel: (905) 569-8030
www.virelec.com

REMOTE - SITE MONITORING

ALPHA TECHNOLOGIES
Tel: (360) 392-2263
www.alpha.com

ESUNTECH, INC.
Tel: (519) 341-3586
www.esun-tech.com

RESISTORS - POWER

FILNOR INC.
Tel: (330) 821-7667
www.filnor.com

SENSORS - CURRENT

CURRENT GROUP LLC
Tel: (301) 944-2727
www.currentgroup.com

TELEPATHX LTD
Tel: 61-3-955-111-55
www.telepathx.com

SF6 GAS INSULATED SWITCHGEAR

AREVA T&D CANADA INC.
Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.
Tel: (484) 766-8100
www.areva-td.com

S&C ELECTRIC COMPANY
Tel: (773) 338-1000
www.sandc.com

STATIC - VAR COMPENSATION

AREVA T&D CANADA INC.
Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.
Tel: (484) 766-8100
www.areva-td.com

SUPPRESSORS - SURGE

METER-TREATER INC.
Tel: (561) 845-2007 • 1-800-638-3788
www.metertrtreatr.com

SURGE PROTECTORS

BROOKS UTILITY PRODUCTS GROUP
(Brooks Ekstrom, Brooks Meter Devices,
Brooks Security Products)
Tel: (248) 477-0250 • 888-687-3008
www.brooksutility.com

METER-TREATER INC.
Tel: (561) 845-2007 • 1-800-638-3788
www.metertrtreatr.com

SWITCHES

GEORGE M. FRASER LTD (LACHUTE)
Tel: (450) 562-0771
www.gmfraser.com

GEORGE M. FRASER LTD (PICKERING)
Tel: (905) 420-6555
www.gmfraser.com

HUBBELL POWER SYSTEMS INC.
Tel: (573) 682-5521
www.hubbellpowersystems.com

RUGGED COM INC.
Tel: (905) 856-5288 • (888) 264-0006
www.ruggedcom.com

SWITCHES - AIR, GROUP-OPERATED

SOUTHERN STATES, LLC.
Tel: (770) 946-4562
www.southernstatesllc.com

SWITCHES - CAPACITORS

MAYSTEEL LLC
Tel: (262) 251-1632 • 1-800-255-1247
www.maysteel.com

SOUTHERN STATES, LLC.
Tel: (770) 946-4562
www.southernstatesllc.com

SWITCHES - DISCONNECT

SOUTHERN STATES, LLC.
Tel: (770) 946-4562
www.southernstatesllc.com

SWITCHES - DISCONNECT 25 TO 800KV

AREVA T&D CANADA INC.
Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.
Tel: (484) 766-8100
www.areva-td.com

SOUTHERN STATES, LLC.
Tel: (770) 946-4562
www.southernstatesllc.com

SWITCHES - HOOKSTICK, DISCONNECTING

SOUTHERN STATES, LLC.
Tel: (770) 946-4562
www.southernstatesllc.com

SWITCHES - METER DISCONNECT

COMVERGE, INC.
Tel: (888) 565-5525
www.comverge.com

SWITCHES - MOTOR-OPERATED

RICHARDS MANUFACTURING CO. SALES INC.
Tel: (973) 371-1771
www.richards-mfg.com

SWITCHES - PADMOUNTED

S & C ELECTRIC CANADA LTD
Tel: (416) 249-9171
www.sandc.com

SWITCHES - SUBMERSIBLE

RICHARDS MANUFACTURING CO. SALES INC.
Tel: (973) 371-1771
www.richards-mfg.com

SWITCHES - SUBSTATION, DISCONNECTING

AREVA T&D CANADA INC.
Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.
Tel: (484) 766-8100
www.areva-td.com

HUBBELL POWER SYSTEMS INC.
Tel: (573) 682-5521
www.hubbellpowersystems.com

S&C ELECTRIC COMPANY
Tel: (773) 338-1000
www.sandc.com

THOMAS & BETTS - STEEL STRUCTURES DIVISION
Tel: (901) 252-8115
www.tnb.com

THOMAS & BETTS - UTILITY GROUP

Tel: (901) 252-8251
www.tnb.com

SWITCHES - TEST**BROOKS UTILITY PRODUCTS GROUP**

(Brooks Ekstrom, Brooks Meter Devices,
Brooks Security Products)

Tel: (248) 477-0250 • 888-687-3008
www.brooksutility.com

GEORGE M. FRASER LTD (LACHUTE)

Tel: (450) 562-0771
www.gmfraser.com

GEORGE M. FRASER LTD (PICKERING)

Tel: (905) 420-6555
www.gmfraser.com

SECUCONTROL, INC.

Tel: (703) 838-7677
www.secucontrol.com

**SWITCHGEAR - ARC RESISTANT -
MEDIUM VOLTAGE****AREVA T&D CANADA INC.**

Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.

Tel: (484) 766-8100
www.areva-td.com

**SWITCHGEAR - MEDIUM VOLTAGE
RANGE UP TO 44 KV****AREVA T&D CANADA INC.**

Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.

Tel: (484) 766-8100
www.areva-td.com

TAVRIDA ELECTRIC NORTH AMERICA INC.

Tel: (604) 540-6600
www.tavrda-na.com

SWITCHGEAR - SF6**S & C ELECTRIC CANADA LTD**

Tel: (416) 249-9171
www.sandc.com

SWITCHGEAR - VACUUM**TAVRIDA ELECTRIC NORTH AMERICA INC.**

Tel: (604) 540-6600
www.tavrda-na.com

**TEST SYSTEMS/COMPONENTS - HIGH
VOLTAGE, HIGH CURRENT, HIGH
POWER****HV TECHNOLOGIES INC.**

Tel: (703) 365-2330
www.hvtechnologies.com

THE VON CORPORATION

Tel: (205) 788-2437
www.voncorp.com

TESTING - REGULATORS**RTDS TECHNOLOGIES, INC.**

Tel: (204) 989-9700
www.rtds.com

THERMOSTATS - ELECTRONIC**COMVERGE, INC.**

Tel: (888) 565-5525
www.comverge.com

TRANSDUCERS**TECHNICAL SYSTEMS 2002 INC.**

Tel: (905) 575-1941
www.technical-sys.com

TRANSDUCERS - AC POWER**TECHNICAL SYSTEMS 2002 INC.**

Tel: (905) 575-1941
www.technical-sys.com

TRANSDUCERS - CURRENT + VOLTAGE**TECHNICAL SYSTEMS 2002 INC.**

Tel: (905) 575-1941
www.technical-sys.com

TRANSDUCERS - ELECTRIC**FLEX-CORE DIV.**

Tel: (614) 889-6152
www.flex-core.com

TECHNICAL SYSTEMS 2002 INC.

Tel: (905) 575-1941
www.technical-sys.com

TRANSFORMER MONITORING**INCON POWER RELIABILITY PRODUCTS**

Tel: (207) 283-0156 • 1-800-872-3455
www.incon.com

NEOPTIX FIBER OPTIC SENSORS

Tel: (418) 687-2500
www.neoptix.com

PAUWELS CANADA INC.

Tel: (204) 452-7446 • 1-800-665-9450
www.pauwels.com

SAFETY & SECURITY**ABSORBENTS****UESS BV. CANADA**

Tel: (780) 542-2122
www.uessltd.com

ACCESS CONTROL**VIDEX INC.**

Tel: (541) 758-0521
www.videx.com/lock21

ALARM - DETECTION**TPC TRANSFORMER PROTECTOR CORP.**

Tel: (281) 358-9900
www.transproco.com

ALARM - REPORTING SYSTEMS**PRIMATE TECHNOLOGIES**

Tel: 321-821-2227
www.primate-tech.com

RTK INSTRUMENTS LTD.

Tel: (908) 688-6709
www.rtkinstruments.com

ANIMAL & WILD LIFE GUARDS**INSULBOOT A DIV. OF PLASTIC DIP
MOLDINGS**

Tel: (215) 766-2020
www.insulboot.com

ANNUNCIATORS**RTK INSTRUMENTS LTD.**

Tel: (908) 688-6709
www.rtkinstruments.com

**SCHWEITZER ENGINEERING LABORATORIES
INC.**

Tel: (509) 332-1890
www.selinc.com

BIRD CONTROL**BIRD-X**

Tel: (312) 226-2473
www.bird-x.com

**BREATHABLE, FLAME RESISTANT -
GARMENT****WORKRITE UNIFORM COMPANY**

Tel: (805) 483-0175 • 1-800-521-1888
www.workrite.com

CLOTHING**RANPRO, INC.**

Tel: (519) 426-1094
www.ranpro.com

SAFETY & SECURITY

CLOTHING - FLAME RESISTANT

BULWARK PROTECTIVE APPAREL,
Tel: (615) 565-5000
www.bulwark.com

CARHARTT, INC.
Tel: (313) 749-6612 • 1-800-217-2895
www.carharttfr.com

DUPONT PERSONAL PROTECTION
Tel: (800) 387-2122
www.personalprotection.dupont.ca

RANPRO, INC.
Tel: (519) 426-1094
www.ranpro.com

WESTEX INC.
Tel: (773) 523-7000
www.westexinc.com

WORKRITE UNIFORM COMPANY
Tel: (805) 483-0175 • 1-800-521-1888
www.workrite.com

COATINGS - ANIMAL GUARD

INSULBOOT A DIV. OF PLASTIC DIP MOLDINGS
Tel: (215) 766-2020
www.insulboot.com

CYBER SECURITY

N-DIMENSION SOLUTIONS INC.
Tel: (905) 707-8884
www.n-dimension.ca

EMERGENCY & HAZARDOUS LOCATION LIGHTS

K & H INDUSTRIES INC.
Tel: (716) 549-0135
www.khindustries.com

EMERGENCY LIGHTING

K & H INDUSTRIES INC.
Tel: (716) 549-0135
www.khindustries.com

FIRE PROTECTION EQUIPMENT

TPC TRANSFORMER PROTECTOR CORP.
Tel: (281) 358-9900
www.transproco.com

FLAME RESISTANT CLOTHING

BULWARK PROTECTIVE APPAREL,
Tel: (615) 565-5000
www.bulwark.com

RANPRO, INC.
Tel: (519) 426-1094
www.ranpro.com

SALISBURY ELECTRICAL SAFETY, LLC
Tel: (847) 679-6700
www.whsalisbury.com

TYNDALE COMPANY, INC.
Tel: (800) 356-3433
www.tyndaleusa.com

WORKRITE UNIFORM COMPANY
Tel: (805) 483-0175 • 1-800-521-1888
www.workrite.com

GARMENT - FLAME RESISTANT, BREATHABLE

WORKRITE UNIFORM COMPANY
Tel: (805) 483-0175 • 1-800-521-1888
www.workrite.com

GAS AND RELATED PRODUCTS - SF6 INSULATING

ADVANCED SPECIALTY GASES
Tel: (775) 356-5500
www.advancedspecialtygases.com

GAS DETECTION - SF6

OX CREEK ENERGY
Tel: (608) 589-5513 • (800) 531-6232
www.ox-creek-energy.com

GLOVES

KUNZ GLOVE CO.
Tel: (312) 733-8780
www.kunzglove.com

GLOVES - RUBBER

CICAME ENERGIE INC.
Tel: (450) 679-7778
www.cicame.ca

SALISBURY ELECTRICAL SAFETY, LLC
Tel: (847) 679-6700
www.whsalisbury.com

GLOVES - TESTING

PHENIX TECHNOLOGIES INC.
Tel: (301) 746-8118
www.phenixtech.com

THE VON CORPORATION
Tel: (205) 788-2437
www.voncorp.com

GROUND FAULT PROTECTION DEVICES

STARTCO ENGINEERING LTD.
Tel: (306) 373-5505
www.startco.ca

GROUND RODS - COPPERWELD

COMMSCOPE BIMETALS
Tel: (704) 883-8015 • (800) 982-1708
www.commscope.com

GROUNDING - EQUIPMENT

CICAME ENERGIE INC.
Tel: (450) 679-7778
www.cicame.ca

HASTINGS FIBERGLASS PRODUCTS INC.
Tel: (269) 945-9541
www.hfgp.com

HUBBELL POWER SYSTEMS INC.
Tel: (573) 682-5521
www.hubbellpowersystems.com

GUARDS - ANIMAL AND BIRDS

INSULBOOT A DIV. OF PLASTIC DIP MOLDINGS
Tel: (215) 766-2020
www.insulboot.com

HEALTH AND SAFETY PRODUCTS AND EQUIPMENT

WESTEX INC.
Tel: (773) 523-7000
www.westexinc.com

LABELS

CARLTON INDUSTRIES INC.
Tel: (800) 231-5988
www.carltonusa.com

ELECTROMARK CO.
Tel: (315) 594-8085 • 1-800-295-8247
www.electromark.com

WILLIAM FRICK & COMPANY
Tel: (847) 918-3700
www.fricknet.com

LIGHTNING CONDUCTORS - COPPER WIRE

COMMSCOPE BIMETALS
Tel: (704) 883-8015 • (800) 982-1708
www.commscope.com

LIGHTS - AVIATION OBSTRUCTION

CICAME ENERGIE INC.
Tel: (450) 679-7778
www.cicame.ca

LIGHTS - EMERGENCY

K & H INDUSTRIES INC.
Tel: (716) 549-0135
www.khindustries.com

LOCKING DEVICES

BROOKS UTILITY PRODUCTS GROUP
(Brooks Ekstrom, Brooks Meter Devices, Brooks Security Products)
Tel: (248) 477-0250 • 888-687-3008
www.brooksutility.com

HERCULES INDUSTRIES INC.
Tel: (800) 345-2590
www.herculock.com

INNER-TITE CORP.
Tel: (508) 829-6361
www.inner-tite.com



World Energy Engineering Congress returns to nation's capital in 2008!

Presented by



Hosted by



Featuring



October 1-3, 2008

Gaylord National Convention Center

on the Potomac

Washington, DC

The key opportunity of the year for end users and decision-makers from business, industry, and government sectors to learn about the newest technologies, hear industry's leading experts, and network

The Association of Energy Engineers (AEE) is very pleased to bring the **WORLD ENERGY ENGINEERING CONGRESS (WEEC)** to Washington, DC for 2008—and to an extraordinary new venue—the Gaylord National Convention Center on the Potomac. Now in its 31st year, the **WEEC** is well-recognized as the most important energy event of national scope for end users and energy professionals in all areas of the energy field. It is the one truly comprehensive forum where you can fully assess the "big picture" – and see exactly how the economic and market forces, new technologies, regulatory developments and industry trends all merge to shape your critical decisions on your organization's energy and economic future.

The **WEEC** conference and expo target the complete spectrum of technologies and services of greatest importance to our delegates in attendance, including, but not limited to:

*energy management • combined heat & power / cogeneration / distributed generation • lighting efficiency
thermal storage and load management • integrated building automation • industrial energy strategies
boilers and combustion controls • green & sustainable initiatives • geoechange technologies
renewable and alternative energy management • HVAC systems and controls
energy services and project financing • solar and fuel cell technologies
applications specific to federal energy management programs*

WEEC's highly acclaimed **GreenStreet expo showcase**, introduced in 2007 and co-presented by the U.S. EPA's **ENERGY STAR®**, will again be a prominent part of the **WEEC** for 2008. Here you can examine firsthand the latest green / sustainable / environmentally friendly energy technologies now available for both new design and retrofit projects.

Government Energy Leaders



Red Star Energy Leaders

Raytheon



CHRYSLER

Jeep

DODGE

Brands of Chrysler LLC

White Star Energy Leaders

TOYOTA



Lilly



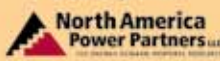
Platinum Sponsor



Gold Sponsor



Bronze Sponsor



www.energycongress.com

Circle 5 on Reader Service Card

SAFETY & SECURITY

LOCKOUT SYSTEMS

HERCULES INDUSTRIES INC.
Tel: (800) 345-2590
www.herculock.com

LOCKOUTS

HERCULES INDUSTRIES INC.
Tel: (800) 345-2590
www.herculock.com

LOCKOUTS - SAFETY

HERCULES INDUSTRIES INC.
Tel: (800) 345-2590
www.herculock.com

MAGNETIC SHIELDS

MAGNETIC SHIELD CORP.
Tel: (630) 766-7800 • 1-800-304-5665
www.magnetic-shield.com

MAINTENANCE - PREVENTIVE MAINTENANCE EQUIPMENT

FLIR SYSTEMS
Tel: (978) 901-8000 • (800) 464-6372
www.goinfraed.com

MARKERS - POLES

PREMAX, LP
Tel: (763) 478-9251
www.premaxlp.com

MARKERS - TRANSMISSION POLES

UTICOM SYSTEMS, INC.
Tel: (800) 548-5321

MONITORING SECURITY SYSTEMS

AEGIS TECHNOLOGIES
Tel: (602) 443-5000
www.aegistech.us

PADLOCKS

BROOKS UTILITY PRODUCTS GROUP
(Brooks Ekstrom, Brooks Meter Devices,
Brooks Security Products)
Tel: (248) 477-0250 • 888-687-3008
www.brooksutility.com

HERCULES INDUSTRIES INC.
Tel: (800) 345-2590
www.herculock.com

PLATFORMS - LINEMAN'S

HASTINGS FIBERGLASS PRODUCTS INC.
Tel: (269) 945-9541
www.hfgp.com

POLE - WOOD / PRESERVATIVES

ARCH WOOD PROTECTION, INC.
Tel: (770) 801-6600
www.wolmanizedwood.com

PROTECTION AND CONTROL

AEGIS TECHNOLOGIES
Tel: (602) 443-5000
www.aegistech.us

AREVA T&D CANADA INC.
Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.
Tel: (484) 766-8100
www.areva-td.com

RTDS TECHNOLOGIES, INC.
Tel: (204) 989-9700
www.rtds.com

RUGGED COM INC.
Tel: (905) 856-5288 • (888) 264-0006
www.ruggedcom.com

**SCHWEITZER ENGINEERING LABORATORIES
INC.**
Tel: (509) 332-1890
www.selinc.com

TPC TRANSFORMER PROTECTOR CORP.
Tel: (281) 358-9900
www.transproco.com

VIRELEC LTD.
Tel: (905) 569-8030
www.virelec.com

PROTECTIVE CLOTHING - DISPOSABLE GARMENTS

BULWARK PROTECTIVE APPAREL,
Tel: (615) 565-5000
www.bulwark.com

PROTECTIVE GLOVES AND CLOTHING

BULWARK PROTECTIVE APPAREL,
Tel: (615) 565-5000
www.bulwark.com

RANPRO, INC.
Tel: (519) 426-1094
www.ranpro.com

WESTEX INC.
Tel: (773) 523-7000
www.westexinc.com

SAFETY - CONSULTING & TRAINING

ALTEC INDUSTRIES, INC.
Tel: (205) 991-7733
www.altec.com

SAFETY - ENVIRONMENTAL - EQUIPMENT

TPC TRANSFORMER PROTECTOR CORP.
Tel: (281) 358-9900
www.transproco.com

SAFETY - EQUIPMENT

BROOKS UTILITY PRODUCTS GROUP
(Brooks Ekstrom, Brooks Meter Devices,
Brooks Security Products)
Tel: (248) 477-0250 • 888-687-3008
www.brooksutility.com

HERCULES INDUSTRIES INC.
Tel: (800) 345-2590
www.herculock.com

TPC TRANSFORMER PROTECTOR CORP.
Tel: (281) 358-9900
www.transproco.com

SAFETY - FALL PROTECTION EQUIPMENT

MILLER FALL PROTECTION
Tel: (800) 873-5242
www.millerfallprotection.com

SAFETY - FIRST AID TRAINING

WESTEX INC.
Tel: (773) 523-7000
www.westexinc.com

SAFETY - FLAME RESISTANT, BREATHABLE GARMENTS

NASCO INDUSTRIES INC.
Tel: (800) 767-4288 • 812-254-6476
www.nascoinc.com

WORKRITE UNIFORM COMPANY
Tel: (805) 483-0175 • 1-800-521-1888
www.workrite.com

SAFETY - LINEMEN EQUIPMENT

CICAME ENERGIE INC.
Tel: (450) 679-7778
www.cicame.ca

HALL'S SAFETY EQUIPMENT CORP
Tel: (800) 227-4255
www.hallssafety.com

HASTINGS FIBERGLASS PRODUCTS INC.
Tel: (269) 945-9541
www.hfgp.com

THIES ELECTRICAL DISTRIBUTING CO.
Tel: (519) 621-2524
www.djinfo.com/TEDC

SAFETY - SUPPLIES

WATER-JEL TECHNOLOGIES
Tel: (201) 507-8300 • (800) 275-3433
www.waterjel.com

SAFETY - TOOLS

BROOKS UTILITY PRODUCTS GROUP
(Brooks Ekstrom, Brooks Meter Devices,
Brooks Security Products)
Tel: (248) 477-0250 • 888-687-3008
www.brooksutility.com

SALISBURY ELECTRICAL SAFETY, LLC

Tel: (847) 679-6700
www.whsalisbury.com

SAFETY ATTACHMENT DEVICES**WINOLA INDUSTRIAL INC.**

Tel: (570) 378-3808
www.winolaindustrial.com

SAFETY EQUIPMENT - PERSONAL**WESTEX INC.**

Tel: (773) 523-7000
www.westexinc.com

SEALS

BROOKS UTILITY PRODUCTS GROUP
(Brooks Ekstrom, Brooks Meter Devices,
Brooks Security Products)
Tel: (248) 477-0250 • 888-687-3008
www.brooksutility.com

SEALS - METERS

BROOKS UTILITY PRODUCTS GROUP
(Brooks Ekstrom, Brooks Meter Devices,
Brooks Security Products)
Tel: (248) 477-0250 • 888-687-3008
www.brooksutility.com

INNER-TITE CORP.

Tel: (508) 829-6361
www.inner-tite.com

SEALS - SECURITY

BROOKS UTILITY PRODUCTS GROUP
(Brooks Ekstrom, Brooks Meter Devices,
Brooks Security Products)
Tel: (248) 477-0250 • 888-687-3008
www.brooksutility.com

CARLTON INDUSTRIES INC.

Tel: (800) 231-5988
www.carltonusa.com

INNER-TITE CORP.

Tel: (508) 829-6361
www.inner-tite.com

SEMIPLAS SECURITY SEALS

Tel: 0090 216 415 71 48
www.semiplas.com

SECURITY - EQUIPMENT**AEGIS TECHNOLOGIES**

Tel: (602) 443-5000
www.aegistech.us

BROOKS UTILITY PRODUCTS GROUP
(Brooks Ekstrom, Brooks Meter Devices,
Brooks Security Products)
Tel: (248) 477-0250 • 888-687-3008
www.brooksutility.com

DATA COMM FOR BUSINESS INC.

Tel: (217) 897-6600
www.dcbnet.com

INNER-TITE CORP.

Tel: (508) 829-6361
www.inner-tite.com

SCHWEITZER ENGINEERING LABORATORIES INC.

Tel: (509) 332-1890
www.selinc.com

SIGNS**CARLTON INDUSTRIES INC.**

Tel: (800) 231-5988
www.carltonusa.com

SIGNS - WARNING**ALMETEK INDUSTRIES, INC.**

Tel: (908) 850-9700
www.almetek.com

QUANTUM MARKETING GROUP

Tel: (714) 563-9749
www.quantummarkers.com

SLEEVES - RUBBER, LINEMAN'S**SALISBURY ELECTRICAL SAFETY, LLC**

Tel: (847) 679-6700
www.whsalisbury.com

STAND BY POWER SYSTEMS**STORAGE BATTERY SYSTEMS INC.**

Tel: (262) 703-5800 • 1-800-554-2243
www.sbsbattery.com

SURGE PROTECTION DEVICES**METER-TREATER INC.**

Tel: (561) 845-2007 • 1-800-638-3788
www.metertreater.com

SURGE PROTECTION EQUIPMENT**METER-TREATER INC.**

Tel: (561) 845-2007 • 1-800-638-3788
www.metertreater.com

TAGS**CARLTON INDUSTRIES INC.**

Tel: (800) 231-5988
www.carltonusa.com

TEST EQUIPMENT - SAFETY AND INSTRUMENTS

BROOKS UTILITY PRODUCTS GROUP
(Brooks Ekstrom, Brooks Meter Devices,
Brooks Security Products)
Tel: (248) 477-0250 • 888-687-3008
www.brooksutility.com

TRANSFORMERS - FALL PROTECTION**HAZ-MAT RESPONSE TECHNOLOGIES INC.**

Tel: (858) 274-4585
www.rubberizer.com

TRANSFORMERS - GROUNDING**R. E. UPTGRAFF MANUFACTURING**

Tel: (724) 887-7700
www.uptegraff.com

UNIFORMS - FLAME RESISTANT, BREATHABLE**WESTEX INC.**

Tel: (773) 523-7000
www.westexinc.com

WORKRITE UNIFORM COMPANY

Tel: (805) 483-0175 • 1-800-521-1888
www.workrite.com

SUBSTATION MANAGEMENT & MAINTENANCE**ANIMAL & WILD LIFE GUARDS****INSULBOOT A DIV. OF PLASTIC DIP MOLDINGS**

Tel: (215) 766-2020
www.insulboot.com

BIRD CONTROL**BIRD-X**

Tel: (312) 226-2473
www.bird-x.com

CLOCKS AND TIME DISPLAYS**SCHWEITZER ENGINEERING LABORATORIES INC.**

Tel: (509) 332-1890
www.selinc.com

COATINGS - ANIMAL GUARD

INSULBOOT A DIV. OF PLASTIC DIP MOLDINGS
Tel: (215) 766-2020
www.insulboot.com

CONNECTORS - GROUNDING

IMPLO TECHNOLOGIES
Tel: (905) 513-9084
www.implotech.ca

THOMAS & BETTS - STEEL STRUCTURES DIVISION
Tel: (901) 252-8115
www.tnb.com

THOMAS & BETTS - UTILITY GROUP
Tel: (901) 252-8251
www.tnb.com

CONNECTORS - SUBSTATION

ACA CONDUCTOR ACCESSORIES
Tel: (864) 433-0333
www.acasolutions.com

HUBBELL POWER SYSTEMS INC.
Tel: (573) 682-5521
www.hubbellpowersystems.com

IMPLO TECHNOLOGIES
Tel: (905) 513-9084
www.implotech.ca

THOMAS & BETTS - STEEL STRUCTURES DIVISION
Tel: (901) 252-8115
www.tnb.com

THOMAS & BETTS - UTILITY GROUP
Tel: (901) 252-8251
www.tnb.com

CONSOLES - SCADA CONTROL CENTERS

PRIMATE TECHNOLOGIES
Tel: 321-821-2227
www.primate-tech.com

CONSOLES - T&D CONTROL CENTERS

PRIMATE TECHNOLOGIES
Tel: 321-821-2227
www.primate-tech.com

CONSULTANTS - SUBSTATION DESIGN & ENGINEERING

J & Y ENGINEERING SERVICES INC.
Tel: (440) 891-1130
www.jyengineering.com

POWER ENGINEERS, INC.
Tel: (208) 788-3456
www.powereng.com

PSD, INC.
Tel: (330) 452-4434
www.psdohio.com

SARGENT & LUNDY LLC
Tel: (312) 269-2000
www.sargentlundy.com

CYBER SECURITY

N-DIMENSION SOLUTIONS INC.
Tel: (905) 707-8884
www.n-dimension.ca

GLOBAL POSITIONING SYSTEMS - SUBSTATION SYNCHRONIZATION

CXR LARUS CORPORATION
Tel: (408) 573-2700 • 1-800-999-9946
www.cxrlarus.com

RELAYS

AREVA T&D CANADA INC.
Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.
Tel: (484) 766-8100
www.areva-td.com

RUGGED COM INC.
Tel: (905) 856-5288 • (888) 264-0006
www.ruggedcom.com

SIEMENS POWER TRANSMISSION & DISTRIBUTION, INC.
Tel: (919) 325-7000
www.usa.siemens.com

RELAYS - GENERATOR PROTECTION

AREVA T&D CANADA INC.
Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.
Tel: (484) 766-8100
www.areva-td.com

SCHWEITZER ENGINEERING LABORATORIES INC.
Tel: (509) 332-1890
www.selinc.com

VIRELEC LTD.
Tel: (905) 569-8030
www.virelec.com

RELAYS - ISOLATION

AREVA T&D CANADA INC.
Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.
Tel: (484) 766-8100
www.areva-td.com

SOLID STATE INSTRUMENTS
Tel: (888) 272-9336
www.solidstateinstruments.com

RELAYS - LINE PROTECTION

AREVA T&D CANADA INC.
Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.
Tel: (484) 766-8100
www.areva-td.com

SCHWEITZER ENGINEERING LABORATORIES INC.
Tel: (509) 332-1890
www.selinc.com

VIRELEC LTD.
Tel: (905) 569-8030
www.virelec.com

RELAYS - MOTOR PROTECTION

AREVA T&D CANADA INC.
Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.
Tel: (484) 766-8100
www.areva-td.com

SCHWEITZER ENGINEERING LABORATORIES INC.
Tel: (509) 332-1890
www.selinc.com

RELAYS - PROTECTION

AREVA T&D CANADA INC.
Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.
Tel: (484) 766-8100
www.areva-td.com

GE MULTILIN
Tel: (905) 294-6222
www.gemultilin.com

GEORGE M. FRASER LTD (LACHUTE)
Tel: (450) 562-0771
www.gmfraser.com

GEORGE M. FRASER LTD (PICKERING)
Tel: (905) 420-6555
www.gmfraser.com

SCHWEITZER ENGINEERING LABORATORIES INC.
Tel: (509) 332-1890
www.selinc.com

TAVRIDA ELECTRIC NORTH AMERICA INC.
Tel: (604) 540-6600
www.tavrida-na.com

RELAYS - SUBSTATION AUTOMATION

ASAT SOLUTIONS INC.
Tel: (403) 569-1680
www.asatsolutions.com

S&C ELECTRIC COMPANY

Tel: (773) 338-1000
www.sandc.com

SCHWEITZER ENGINEERING LABORATORIES INC.

Tel: (509) 332-1890
www.selinc.com

VIRELEC LTD.

Tel: (905) 569-8030
www.virelec.com

ZIV P+C, S.L.

Tel: +34.94.403.74.00
www.zivpmasc.com

REMOTE TERMINAL UNITS**ASAT SOLUTIONS INC.**

Tel: (403) 569-1680
www.asatsolutions.com

OPEN SYSTEMS INTERNATIONAL INC.

Tel: (763) 551-0559
www.osii.com

RUGGED COM INC.

Tel: (905) 856-5288 • (888) 264-0006
www.ruggedcom.com

SCHWEITZER ENGINEERING LABORATORIES INC.

Tel: (509) 332-1890
www.selinc.com

TELVENT

Tel: (713) 939-9399
www.telvent.com

VIRELEC LTD.

Tel: (905) 569-8030
www.virelec.com

SCADA - ENERGY CONTROL SYSTEMS**OPEN SYSTEMS INTERNATIONAL INC.**

Tel: (763) 551-0559
www.osii.com

SCADA SYSTEMS**AREVA T&D CANADA INC.**

Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.

Tel: (484) 766-8100
www.areva-td.com

OPEN SYSTEMS INTERNATIONAL INC.

Tel: (763) 551-0559
www.osii.com

PROSOFT TECHNOLOGY

Tel: (661) 716-5100
www.prosoft-technology.com

TELVENT

Tel: (713) 939-9399
www.telvent.com

VIRELEC LTD.

Tel: (905) 569-8030
www.virelec.com

STEEL - STRUCTURAL**DIS-TRAN**

Tel: (318) 448-0274
www.distran.com

J & Y ENGINEERING SERVICES INC.

Tel: (440) 891-1130
www.jyengineering.com

SABRE TUBULAR STRUCTURES

Tel: (817) 852-1700
www.sabretubularstructures.com

THOMAS & BETTS - STEEL STRUCTURES DIVISION

Tel: (901) 252-8115
www.tnb.com

STRUCTURE - PREFABRICATED**THOMAS & BETTS - STEEL STRUCTURES DIVISION**

Tel: (901) 252-8115
www.tnb.com

SUBSTATION**AREVA T&D CANADA INC.**

Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.

Tel: (484) 766-8100
www.areva-td.com

CANNON TECHNOLOGIES/COOPER POWER SYSTEMS

Tel: (763) 543-7772
www.cannontech.com

CIRCUIT BREAKER SALES CO. INC.

Tel: (940) 665-4444
www.cbsales.com

COOPER POWER SYSTEMS

Tel: (262) 524-3300
www.cooperpower.com

DELTA STAR, INC.

Tel: 1-800-368-3017
www.deltastar.com

DIS-TRAN

Tel: (318) 448-0274
www.distran.com

HAMBY YOUNG

Tel: (330) 562-8444 • (800) 726-8444
www.hambyyoung.com

MVA POWER INC.

Tel: (450) 589-0445
www.mvapower.qc.ca

S&C ELECTRIC COMPANY

Tel: (773) 338-1000
www.sandc.com

VALMONT NEWMARK

Tel: (205) 968-7200
www.valmont-newmark.com

SUBSTATION - CAD DRAFTING SUPPORT**DIS-TRAN**

Tel: (318) 448-0274
www.distran.com

SUBSTATION - COMMUNICATION EQUIPMENT**AEGIS TECHNOLOGIES**

Tel: (602) 443-5000
www.aegistech.us

CURRENT GROUP LLC

Tel: (301) 944-2727
www.currentgroup.com

GARRETTCOM INC.

Tel: (510) 438-9071
www.garrettcom.com

OPEN SYSTEMS INTERNATIONAL INC.

Tel: (763) 551-0559
www.osii.com

RUGGED COM INC.

Tel: (905) 856-5288 • (888) 264-0006
www.ruggedcom.com

SUBSTATION - COMMUNICATIONS**AEGIS TECHNOLOGIES**

Tel: (602) 443-5000
www.aegistech.us

CURRENT GROUP LLC

Tel: (301) 944-2727
www.currentgroup.com

SUBNET SOLUTIONS INC.

Tel: (403) 270-8885
www.subnetsolutions.com

TELTONE CORPORATION

Tel: (425) 951-3006
www.teltone.com

SUBSTATION - GAS-INSULATED**AREVA T&D CANADA INC.**

Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.

Tel: (484) 766-8100
www.areva-td.com

SUBSTATION - METAL-ENCLOSED**S&C ELECTRIC COMPANY**

Tel: (773) 338-1000
www.sandc.com

SUBSTATION - MOBILE**DELTA STAR, INC.**

Tel: 1-800-368-3017
www.deltastar.com

SUBSTATION MANAGEMENT & MAINTENANCE – TEST & MEASUREMENT

DIS-TRAN

Tel: (318) 448-0274
www.distran.com

PAUWELS CANADA INC.

Tel: (204) 452-7446 • 1-800-665-9450
www.pauwels.com

SUBSTATION - PACKAGED ASSEMBLIES

DIS-TRAN

Tel: (318) 448-0274
www.distran.com

HAMBY YOUNG

Tel: (330) 562-8444 • (800) 726-8444
www.hambyyoung.com

TATMAN ASSOCIATES, INC.

Tel: (440) 248-0644
www.tatmansubstations.com

SUBSTATION - STEEL, STRUCTURE

DIS-TRAN

Tel: (318) 448-0274
www.distran.com

FWT INC.

Tel: (817) 255-2998
www.fwtinc.com

HAMBY YOUNG

Tel: (330) 562-8444 • (800) 726-8444
www.hambyyoung.com

J & Y ENGINEERING SERVICES INC.

Tel: (440) 891-1130
www.jyengineering.com

ROHN PRODUCTS

Tel: (309) 697-4400
www.radiancorp.com

SABRE TUBULAR STRUCTURES

Tel: (817) 852-1700
www.sabretubularstructures.com

SBB TOWERS

Tel: (450) 473-4247
www.sbb.ca

THOMAS & BETTS - STEEL STRUCTURES DIVISION

Tel: (901) 252-8115
www.tnb.com

VALMONT NEWMARK

Tel: (205) 968-7200
www.valmont-newmark.com

SUBSTATION - SUBSTATION - HVDC

AREVA T&D CANADA INC.

Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.

Tel: (484) 766-8100
www.areva-td.com

SUBSTATION - WOOD, TREATED

HUGHES BROTHERS INC.

Tel: (402) 643-2991
www.hughesbros.com

SUBSTATION AUTOMATION

AEGIS TECHNOLOGIES

Tel: (602) 443-5000
www.aegistech.us

AREVA T&D CANADA INC.

Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.

Tel: (484) 766-8100
www.areva-td.com

ASAT SOLUTIONS INC.

Tel: (403) 569-1680
www.asatsolutions.com

COOPER POWER SYSTEMS - CYBECTEC

Tel: (418) 834-0009
www.cybectec.com

GARRETTCOM INC.

Tel: (510) 438-9071
www.garrettcom.com

OPEN SYSTEMS INTERNATIONAL INC.

Tel: (763) 551-0559
www.osii.com

SCHWEITZER ENGINEERING LABORATORIES INC.

Tel: (509) 332-1890
www.selinc.com

SUBNET SOLUTIONS INC.

Tel: (403) 270-8885
www.subnetsolutions.com

TELVENT

Tel: (713) 939-9399
www.telvent.com

SUBSTATION CONTROL BUILDINGS

FWT INC.

Tel: (817) 255-2998
www.fwtinc.com

SWITCHES - SUBSTATION, DISCONNECTING

AREVA T&D CANADA INC.

Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.

Tel: (484) 766-8100
www.areva-td.com

HUBBELL POWER SYSTEMS INC.

Tel: (573) 682-5521
www.hubbellpowersystems.com

S&C ELECTRIC COMPANY

Tel: (773) 338-1000
www.sandc.com

THOMAS & BETTS - STEEL STRUCTURES DIVISION

Tel: (901) 252-8115
www.tnb.com

THOMAS & BETTS - UTILITY GROUP

Tel: (901) 252-8251
www.tnb.com

TEST & MEASUREMENT

AERIAL LIFTS - TESTING & INSPECTION

THE VON CORPORATION

Tel: (205) 788-2437
www.voncorp.com

ANALYZERS - POWER QUALITY

GEORGE M. FRASER LTD (LACHUTE)

Tel: (450) 562-0771
www.gmfraser.com

GEORGE M. FRASER LTD (PICKERING)

Tel: (905) 420-6555
www.gmfraser.com

RCC ELECTRONICS

Tel: (905) 238-6848 • 1-800-668-6053
www.rcce.com

TECHNO-TEST INSTRUMENTS

Tel: (450) 681-5777
www.techno-test.com

BATTERIES - CONDUCTANCE/OHMIC TESTING

STORAGE BATTERY SYSTEMS INC.

Tel: (262) 703-5800 • 1-800-554-2243
www.sbsbattery.com

BATTERY CAPACITY AND MONITORING EQUIPMENT

ALBER

Tel: (954) 623-6660
www.alber.com

PHENIX TECHNOLOGIES INC.

Tel: (301) 746-8118
www.phenixtech.com

CABLE FAULT LOCATING - EQUIPMENT

HIPOTRONICS INC.

Tel: (845) 279-3644
www.hipotronics.com

INNOVATIVE UTILITY PRODUCTS CORP.

Tel: (479) 410-2098
www.iupcorp.com

PHENIX TECHNOLOGIES INC.

Tel: (301) 746-8118
www.phenixtech.com

RCC ELECTRONICS

Tel: (905) 238-6848 • 1-800-668-6053
www.rcce.com

T.I. CHEN ASSOCIATES LLC.

Tel: (253) 678-2661
www.tichenassociates.com/fl/

THE VON CORPORATION

Tel: (205) 788-2437
www.voncorp.com

CALIBRATION**FLIR SYSTEMS**

Tel: (978) 901-8000 • (800) 464-6372
www.goinfrared.com

CALIBRATION - TEST AND MEASURE INSTRUMENT**FLIR SYSTEMS**

Tel: (978) 901-8000 • (800) 464-6372
www.goinfrared.com

POWERCOMM SOLUTIONS, LLC

Tel: (908) 806-7025
www.powercommsolutions.com

SIGNALCRAFTERS TECH, INC

Tel: (800) 523-5815
www.signalcrafters.com

CALIBRATION AND TEST EQUIPMENT**FLIR SYSTEMS**

Tel: (978) 901-8000 • (800) 464-6372
www.goinfrared.com

FLUKE CORPORATION

Tel: (800) 443-5853
www.fluke.com

OPAL-RT

Tel: (514) 935-2323
Web: www.opal-rt.com

CALIBRATION SERVICES**FLIR SYSTEMS**

Tel: (978) 901-8000 • (800) 464-6372
www.goinfrared.com

CALIBRATORS - ELECTRICAL STANDARDS**TECHNICAL SYSTEMS 2002 INC.**

Tel: (905) 575-1941
www.technical-sys.com

CALIBRATORS - INSTRUMENT**FLIR SYSTEMS**

Tel: (978) 901-8000 • (800) 464-6372
www.goinfrared.com

TECHNICAL SYSTEMS 2002 INC.

Tel: (905) 575-1941
www.technical-sys.com

CALIBRATORS - METERS**FLIR SYSTEMS**

Tel: (978) 901-8000 • (800) 464-6372
www.goinfrared.com

TECHNICAL SYSTEMS 2002 INC.

Tel: (905) 575-1941
www.technical-sys.com

CALIBRATORS - PRESSURE**TECHNICAL SYSTEMS 2002 INC.**

Tel: (905) 575-1941
www.technical-sys.com

CALIBRATORS - TRANSDUCERS**TECHNICAL SYSTEMS 2002 INC.**

Tel: (905) 575-1941
www.technical-sys.com

CONDITION MONITORING EQUIPMENT**ASAT SOLUTIONS INC.**

Tel: (403) 569-1680
www.asatsolutions.com

INCON POWER RELIABILITY PRODUCTS

Tel: (207) 283-0156 • 1-800-872-3455
www.incon.com

PROCESS SENSORS CORPORATION

Tel: (201) 485-8772
www.processsensors.com

CONTROLS - TEMPERATURE**KRENZ & COMPANY INCORPORATED**

Tel: (262) 255-2310
www.krenzvent.com

LUMASENSE TECHNOLOGIES

Tel: (408) 727-1600
www.lumasenseinc.com

NEOPTIX FIBER OPTIC SENSORS

Tel: (418) 687-2500
www.neoptix.com

CORONA EQUIPMENT - SALES**OX CREEK ENERGY**

Tel: (608) 589-5513 • (800) 531-6232
www.ox-creek-energy.com

DETECTORS - CABLE FAULT LOCATING**THE VON CORPORATION**

Tel: (205) 788-2437
www.voncorp.com

DETECTORS - FAULT**SCHWEITZER ENGINEERING LABORATORIES INC.**

Tel: (509) 332-1890
www.selinc.com

THE VON CORPORATION

Tel: (205) 788-2437
www.voncorp.com

DETECTORS - GAS**FLIR SYSTEMS**

Tel: (978) 901-8000 • (800) 464-6372
www.goinfrared.com

INDUSTRIAL SCIENTIFIC CORPORATION (CANADA)

Tel: (905) 727-5595
www.indsci.com

INDUSTRIAL SCIENTIFIC CORPORATION (USA)

Tel: (412) 788-4353
www.indsci.com

DETECTORS - INFRARED**QWIP TECHNOLOGIES INC.**

Tel: 714-529-7947
www.qwip.com

DETECTORS - PARTIAL DISCHARGE**OX CREEK ENERGY**

Tel: (608) 589-5513 • (800) 531-6232
www.ox-creek-energy.com

DETECTORS - VOLTAGE**CICAME ENERGIE INC.**

Tel: (450) 679-7778
www.cicame.ca

THIES ELECTRICAL DISTRIBUTING CO.

Tel: (519) 621-2524
www.djinfo.com/TEDC

DIAGNOSTIC EQUIPMENT**NEOPTIX FIBER OPTIC SENSORS**

Tel: (418) 687-2500
www.neoptix.com

FAULT ANALYSIS**CURRENT GROUP LLC**

Tel: (301) 944-2727
www.currentgroup.com

FLOODLIGHTS (SEE ALSO LIGHTS)**GOLIGHT INC**

Tel: (308) 278-3131
www.golight.com

TEST & MEASUREMENT

GAGES - SOLID LEVEL

**AUTOMATION PRODUCTS, INC. -
DYNATROL® DIVISION**
Tel: (713) 869-0361 • 1-800-231-2067
www.dynatrolusa.com

GAUGES - TEMPERATURE

FISO TECHNOLOGIES
Tel: (418) 688-8065 X 241
www.fiso.com

NEOPTIX FIBER OPTIC SENSORS
Tel: (418) 687-2500
www.neoptix.com

OPSENS FIBER OPTIC SENSORS
Tel: (418) 682-9996
www.opsens.com

GLOVES - TESTING

PHENIX TECHNOLOGIES INC.
Tel: (301) 746-8118
www.phenixtech.com

THE VON CORPORATION
Tel: (205) 788-2437
www.voncorp.com

INDICATORS - TEMPERATURE

FLIR SYSTEMS
Tel: (978) 901-8000 • (800) 464-6372
www.goinfraed.com

NEOPTIX FIBER OPTIC SENSORS
Tel: (418) 687-2500
www.neoptix.com

INDICATORS - VOLTAGE

THIES ELECTRICAL DISTRIBUTING CO.
Tel: (519) 621-2524
www.djinfo.com/TEDC

INDICATORS, PORTABLE - COMBUSTIBLE GAS

FLIR SYSTEMS
Tel: (978) 901-8000 • (800) 464-6372
www.goinfraed.com

INDICATORS, PORTABLE - PHASE SEQUENCE

ORIGO CORPORATION
Tel: (480) 473-1995
www.origocorp.com

INDICATORS, PORTABLE - TEMPERATURE

FLIR SYSTEMS
Tel: (978) 901-8000 • (800) 464-6372
www.goinfraed.com

NEOPTIX FIBER OPTIC SENSORS
Tel: (418) 687-2500
www.neoptix.com

INFRARED - IMAGING

FLIR SYSTEMS
Tel: (978) 901-8000 • (800) 464-6372
www.goinfraed.com

FLUKE CORPORATION
Tel: (800) 443-5853
www.fluke.com

HAWK IR INTERNATIONAL INC
Tel: 1-877-4-hawkir
www.hawk-ir.com

LUMASENSE TECHNOLOGIES
Tel: (408) 727-1600
www.lumasenseinc.com

INFRARED - SALES & SERVICES

FLIR SYSTEMS
Tel: (978) 901-8000 • (800) 464-6372
www.goinfraed.com

LUMASENSE TECHNOLOGIES
Tel: (408) 727-1600
www.lumasenseinc.com

OX CREEK ENERGY
Tel: (608) 589-5513 • (800) 531-6232
www.ox-creek-energy.com

RELIABILITY SERVICES, INC
Tel: (513) 265-1842
www.reliabilityservices.com

INSPECTION

FLIR SYSTEMS
Tel: (978) 901-8000 • (800) 464-6372
www.goinfraed.com

INSPECTION - FIELD SERVICES

OX CREEK ENERGY
Tel: (608) 589-5513 • (800) 531-6232
www.ox-creek-energy.com

INSPECTION SERVICES

ARBORMETRICS SOLUTIONS LTD
Tel: (407) 339-1733 • (866) 685-1880
www.arbormetricssolutions.com

POWER ENGINEERS, INC.
Tel: (208) 788-3456
www.powereng.com

INSTRUMENTATION

**DOMINIC DROLET INSTRUMENTATION INC.
(DDINS)**
Tel: (514) 768-7676
www.ddins.com

INSTRUMENTATION AND CONTROLS

NEOPTIX FIBER OPTIC SENSORS
Tel: (418) 687-2500
www.neoptix.com

INSTRUMENTS TRANSFORMERS - CURRENT AND VOLTAGE FOR ANALOGUE METERS

ELECTROMAGNETIC CORP
Tel: (215) 949-1900
www.electrictestingcorp.com

**TEC - INSTRUMENT TRANSFORMER
EQUIPMENT CORPORATION**
Tel: (704) 282-4331
www.itec-ctvt.com

TRENCH LIMITED
Tel: (416) 298-8108
www.trenchgroup.com

TSTM
Tel: (605) 334-2924
www.ts-tm.com

LABORATORY EQUIPMENT AND SUPPLIES

RTDS TECHNOLOGIES, INC.
Tel: (204) 989-9700
www.rtds.com

LEVEL, DENSITY, WEIGHT, MOISTURE

INCON POWER RELIABILITY PRODUCTS
Tel: (207) 283-0156 • 1-800-872-3455
www.incon.com

LIDAR - INSPECTION

ARBORMETRICS SOLUTIONS LTD
Tel: (407) 339-1733 • (866) 685-1880
www.arbormetricssolutions.com

**W.I.R.E SERVICES, A DIVISION OF MANITOBA
HYDRO**
Tel: (204) 480-5800
www.wireservices.ca

LIDAR - SURVEY

ARBORMETRICS SOLUTIONS LTD
Tel: (407) 339-1733 • (866) 685-1880
www.arbormetricssolutions.com

OPTIMAL GEOMATICS INC.
Tel: (604) 654-1850
www.optimalgeo.com

**W.I.R.E SERVICES, A DIVISION OF MANITOBA
HYDRO**
Tel: (204) 480-5800
www.wireservices.ca

LOCATORS - FAULT

THE VON CORPORATION
Tel: (205) 788-2437
www.voncorp.com

LOCATORS - RADIO INTERFERENCE**RADAR ENGINEERS**

Tel: (503) 256-3417
radarengineers.com

MAGNETIC FIELD MEASUREMENT**ENERTECH CONSULTANTS**

Tel: (408) 866-7266 ext:21
www.enertech.net

**MAINTENANCE - PREVENTIVE
MAINTENANCE EQUIPMENT****FLIR SYSTEMS**

Tel: (978) 901-8000 • (800) 464-6372
www.goinfraed.com

MEASURE INSTRUMENTS**FLIR SYSTEMS**

Tel: (978) 901-8000 • (800) 464-6372
www.goinfraed.com

NEOPTIX FIBER OPTIC SENSORS

Tel: (418) 687-2500
www.neoptix.com

TEST EQUIPMENT CONNECTION

Tel: (407) 804-1299
www.testequipmentconnection.com

METERS - ENCLOSURES**BROOKS UTILITY PRODUCTS GROUP**

(Brooks Ekstrom, Brooks Meter Devices,
Brooks Security Products)
Tel: (248) 477-0250 • 888-687-3008
www.brooksutility.com

METERS - GROUND RESISTANCE**AEMC INSTRUMENTS**

Tel: (508) 698-2115
www.aemc.com

FLUKE CORPORATION

Tel: (800) 443-5853
www.fluke.com

METERS - KILOWATTHOUR**DENT INSTRUMENTS**

Tel: (541) 388-4774
www.dentinstruments.com

LANDIS+GYR INC.

Tel: (765) 742-1001
www.landisgyr.us

**SCHWEITZER ENGINEERING LABORATORIES
INC.**

Tel: (509) 332-1890
www.selinc.com

METERS - MAGNETIC FIELD**ENERTECH CONSULTANTS**

Tel: (408) 866-7266 ext:21
www.enertech.net

METERS - MICRO-OHMMETER**PHENIX TECHNOLOGIES INC.**

Tel: (301) 746-8118
www.phenixtech.com

METERS - PHASE**AVISTAR**

Tel: (800) 687-4196 • 1-800-687-4196
www.avistarinc.com

HASTINGS FIBERGLASS PRODUCTS INC.

Tel: (269) 945-9541
www.hfgp.com

METERS - POWER QUALITY**SCHWEITZER ENGINEERING LABORATORIES
INC.**

Tel: (509) 332-1890
www.selinc.com

**METERS - TEST SETS - TEST
EQUIPMENT****BROOKS UTILITY PRODUCTS GROUP**

(Brooks Ekstrom, Brooks Meter Devices,
Brooks Security Products)
Tel: (248) 477-0250 • 888-687-3008
www.brooksutility.com

HD ELECTRIC COMPANY

Tel: (847) 473-4980
www.hdelectriccompany.com

PROBEWELL LAB INC.

Tel: (418) 626-1126
www.probewell.com

THE VON CORPORATION

Tel: (205) 788-2437
www.voncorp.com

METERS - TIME-OF-USE**SCHWEITZER ENGINEERING LABORATORIES
INC.**

Tel: (509) 332-1890
www.selinc.com

METROLOGY**MEASUREMENT SYSTEMS INTERNATIONAL
(MSI)**

Tel: (206) 433-0199
www.msiscals.com

NEOPTIX FIBER OPTIC SENSORS

Tel: (418) 687-2500
www.neoptix.com

MONITORING SECURITY SYSTEMS**AEGIS TECHNOLOGIES**

Tel: (602) 443-5000
www.aegistech.us

MONITORS - TEMPERATURE**FLIR SYSTEMS**

Tel: (978) 901-8000 • (800) 464-6372
www.goinfraed.com

NEOPTIX FIBER OPTIC SENSORS

Tel: (418) 687-2500
www.neoptix.com

NONDESTRUCTIVE - TESTING**PHYSICAL ACOUSTICS CORPORATION**

Tel: 609-716-4000
www.pacndt.com

**PARTIAL DISCHARGE ANALYSIS,
DETECTION****GEORGE M. FRASER LTD (LACHUTE)**

Tel: (450) 562-0771
www.gmfraser.com

GEORGE M. FRASER LTD (PICKERING)

Tel: (905) 420-6555
www.gmfraser.com

HIPOTRONICS INC.

Tel: (845) 279-3644
www.hipotronics.com

HV TECHNOLOGIES INC.

Tel: (703) 365-2330
www.hvtechnologies.com

OMICRON ELECTRONICS CORP. USA

Tel: 1-800-omicron
www.omicronusa.com

PHENIX TECHNOLOGIES INC.

Tel: (301) 746-8118
www.phenixtech.com

POWER QUALITY - ANALYZERS**ASTRO-MED, INC.**

Tel: (401) 828-4000
www.astro-med.com/tminindex.html

TECHNICAL SYSTEMS 2002 INC.

Tel: (905) 575-1941
www.technical-sys.com

POWER QUALITY - TEST EQUIPMENT**FLUKE CORPORATION**

Tel: (800) 443-5853
www.fluke.com

PROCESS CONTROL INSTRUMENTATION**AEGIS TECHNOLOGIES**

Tel: (602) 443-5000
www.aegistech.us

GARRETTCOM INC.

Tel: (510) 438-9071
www.garrettcom.com

PROTECTION AND CONTROL

AEGIS TECHNOLOGIES

Tel: (602) 443-5000
www.aegistech.us

AREVA T&D CANADA INC.

Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.

Tel: (484) 766-8100
www.areva-td.com

RTDS TECHNOLOGIES, INC.

Tel: (204) 989-9700
www.rtds.com

RUGGED COM INC.

Tel: (905) 856-5288 • (888) 264-0006
www.ruggedcom.com

SCHWEITZER ENGINEERING LABORATORIES INC.

Tel: (509) 332-1890
www.selinc.com

TPC TRANSFORMER PROTECTOR CORP.

Tel: (281) 358-9900
www.transproco.com

VIRELEC LTD.

Tel: (905) 569-8030
www.virelec.com

RECORDERS - TEMPERATURE

NEOPTIX FIBER OPTIC SENSORS

Tel: (418) 687-2500
www.neoptix.com

SENSORS - CURRENT

CURRENT GROUP LLC

Tel: (301) 944-2727
www.currentgroup.com

TELEPATHX LTD

Tel: 61-3-955-111-55
www.telepathx.com

SENSORS - CURRENT + VOLTAGE

SENSORLINK CORPORATION

Tel: (360) 595-1000
www.sensorlink.com

SENSORS - FIBER OPTIC

FISO TECHNOLOGIES

Tel: (418) 688-8065 X 241
www.fiso.com

LUMASENSE TECHNOLOGIES

Tel: (408) 727-1600
www.lumasenseinc.com

NEOPTIX FIBER OPTIC SENSORS

Tel: (418) 687-2500
www.neoptix.com

OPSENS FIBER OPTIC SENSORS

Tel: (418) 682-9996
www.opsens.com

SENSORS - TEMPERATURE

FISO TECHNOLOGIES

Tel: (418) 688-8065 X 241
www.fiso.com

LUMASENSE TECHNOLOGIES

Tel: (408) 727-1600
www.lumasenseinc.com

NEOPTIX FIBER OPTIC SENSORS

Tel: (418) 687-2500
www.neoptix.com

SWITCHES - TEST

BROOKS UTILITY PRODUCTS GROUP

(Brooks Ekstrom, Brooks Meter Devices, Brooks Security Products)

Tel: (248) 477-0250 • 888-687-3008
www.brooksutility.com

GEORGE M. FRASER LTD (LACHUTE)

Tel: (450) 562-0771
www.gmfraser.com

GEORGE M. FRASER LTD (PICKERING)

Tel: (905) 420-6555
www.gmfraser.com

SECUCONTROL, INC.

Tel: (703) 838-7677
www.secucontrol.com

TEMPERATURE MONITORING

FISO TECHNOLOGIES

Tel: (418) 688-8065 X 241
www.fiso.com

FLIR SYSTEMS

Tel: (978) 901-8000 • (800) 464-6372
www.goainfrared.com

LUMASENSE TECHNOLOGIES

Tel: (408) 727-1600
www.lumasenseinc.com

NEOPTIX FIBER OPTIC SENSORS

Tel: (418) 687-2500
www.neoptix.com

OPSENS FIBER OPTIC SENSORS

Tel: (418) 682-9996
www.opsens.com

TEST - MEASURING EQUIPMENT

FLIR SYSTEMS

Tel: (978) 901-8000 • (800) 464-6372
www.goainfrared.com

FLUKE CORPORATION

Tel: (800) 443-5853
www.fluke.com

NEOPTIX FIBER OPTIC SENSORS

Tel: (418) 687-2500
www.neoptix.com

TEST EQUIPMENT

B+K PRECISION

Tel: (714) 921-9095
www.bkprecision.com

DUNCAN INSTRUMENTS CANADA LTD

Tel: (416) 742-4448 • 1-877-742-4448
www.duncaninstr.com

FLIR SYSTEMS

Tel: (978) 901-8000 • (800) 464-6372
www.goainfrared.com

GEORGE M. FRASER LTD (LACHUTE)

Tel: (450) 562-0771
www.gmfraser.com

GEORGE M. FRASER LTD (PICKERING)

Tel: (905) 420-6555
www.gmfraser.com

OMICRON ELECTRONICS CORP. USA

Tel: 1-800-omicron
www.omicronusa.com

OPAL-RT

Tel: (514) 935-2323
Web: www.opal-rt.com

PCORE ELECTRIC COMPANY, INC.

Tel: (585) 768-1200
www.pcoreelectric.com

RTDS TECHNOLOGIES, INC.

Tel: (204) 989-9700
www.rtds.com

TEST EQUIPMENT - AERIAL LIFT

PHENIX TECHNOLOGIES INC.

Tel: (301) 746-8118
www.phenixtech.com

TEST EQUIPMENT - BATTERIES

STORAGE BATTERY SYSTEMS INC.

Tel: (262) 703-5800 • 1-800-554-2243
www.sbsbattery.com

TEST EQUIPMENT - BLANKET

THE VON CORPORATION

Tel: (205) 788-2437
www.voncorp.com

TEST EQUIPMENT - CAPACITANCE

STORAGE BATTERY SYSTEMS INC.

Tel: (262) 703-5800 • 1-800-554-2243
www.sbsbattery.com

TEST EQUIPMENT - CIRCUIT BREAKER

HIGH VOLTAGE INC.

Tel: (518) 329-3275
www.hvinc.com

PHENIX TECHNOLOGIES INC.

Tel: (301) 746-8118
www.phenixtech.com

ZENSOL AUTOMATION INC.

Tel: (514) 333-3488 X 226
www.zensol.com

TEST EQUIPMENT - CURRENT TRANSFORMER TESTERS**OMICRON ELECTRONICS CORP. USA**

Tel: 1-800-omicon
www.omicronusa.com

TEST EQUIPMENT - ELECTRICAL**HIGH VOLTAGE INC.**

Tel: (518) 329-3275
www.hvinc.com

HIPOTRONICS INC.

Tel: (845) 279-3644
www.hipotronics.com

TEQAL INC.

Tel: (450) 659-4500
www.teqal.com

TEST EQUIPMENT - FAULT**HIGH VOLTAGE INC.**

Tel: (518) 329-3275
www.hvinc.com

THE VON CORPORATION

Tel: (205) 788-2437
www.voncorp.com

TEST EQUIPMENT - GLOVE**PHENIX TECHNOLOGIES INC.**

Tel: (301) 746-8118
www.phenixtech.com

THE VON CORPORATION

Tel: (205) 788-2437
www.voncorp.com

TEST EQUIPMENT - HIGH VOLTAGE**HASTINGS FIBERGLASS PRODUCTS INC.**

Tel: (269) 945-9541
www.hfgp.com

HIGH VOLTAGE INC.

Tel: (518) 329-3275
www.hvinc.com

HIPOTRONICS INC.

Tel: (845) 279-3644
www.hipotronics.com

MANITOBA HVDC RESEARCH CENTRE INC.

Tel: (204) 989-1240
www.pscad.com

PHENIX TECHNOLOGIES INC.

Tel: (301) 746-8118
www.phenixtech.com

THE VON CORPORATION

Tel: (205) 788-2437
www.voncorp.com

TEST EQUIPMENT - HV IMPULSE**HIPOTRONICS INC.**

Tel: (845) 279-3644
www.hipotronics.com

HV TECHNOLOGIES INC.

Tel: (703) 365-2330
www.hvtechnologies.com

PHENIX TECHNOLOGIES INC.

Tel: (301) 746-8118
www.phenixtech.com

THE VON CORPORATION

Tel: (205) 788-2437
www.voncorp.com

TEST EQUIPMENT - HV TEST SETS, PORTABLE**HASTINGS FIBERGLASS PRODUCTS INC.**

Tel: (269) 945-9541
www.hfgp.com

HIGH VOLTAGE INC.

Tel: (518) 329-3275
www.hvinc.com

High Voltage, Inc. offers the smallest, lightest, reliable, and most economical high voltage test equipment available.

For all your testing needs . . . HIGH VOLTAGE[®]
VLF HIPOT INSTRUMENTS INC.

VLF Patent # US 6,169,406

**Very Low Frequency (VLF) AC Hipots**

Used for high voltage AC field-testing of cables and generators/motors

- Models from 25 kVac - 200 kVac
- Load ratings from 0.4μF - 50 μF
- Sine wave output
- Tan delta testing option
- Years of proven design experience

**AC Hipots**

- Nearly half the size of others
- One piece shielded cable output up to 50 kV
- Most rugged design
- Guard / Ground circuit
- Anti-static meters
- 10 kVac - 300 kVac

**DC Hipot / Megohmmeter**

Twice the power and features - smaller size - lower cost

- 10 mA continuous duty
- Built in HV megohmmeter
- +/- 1% input line regulator
- Anti-static, transit protected meters
- Durable packaging
- 37.5 kVdc - 300 kVdc



Oil Dielectric Testers
60 kV • 100 kV

**Thumpers & Radar**

- 3 output taps
- 5/10/20 kV • 9/18/36 kV
- 1000 joules • 1600 joules
- 3200 joules
- 400 mA burn
- Built in arc reflection filter
- Radar



Aerial Lift Tester
60/120 kVac@7kVA
0-200 kVac@6kVA

High Voltage, Inc. can serve your needs for testing all types of substation apparatus, aerial lifts, and cable. Our VLF technology, AC and DC Hipots, Oil Testers, and Fault Locators, all offer superior design and features not found elsewhere.



31 County Rt. 7A • Copake, NY 12516 • Tel.: (518) 329-3275 • Fax: (518) 329-3271 • E-Mail: sales@hvinc.com • Web: www.hvinc.com

HIPOTRONICS INC.
Tel: (845) 279-3644
www.hipotronics.com

PHENIX TECHNOLOGIES INC.
Tel: (301) 746-8118
www.phenixtech.com

RCC ELECTRONICS
Tel: (905) 238-6848 • 1-800-668-6053
www.rcce.com

THE VON CORPORATION
Tel: (205) 788-2437
www.voncorp.com

TEST EQUIPMENT - INSULATION

HIGH VOLTAGE INC.
Tel: (518) 329-3275
www.hvinc.com

HIPOTRONICS INC.
Tel: (845) 279-3644
www.hipotronics.com

PHENIX TECHNOLOGIES INC.
Tel: (301) 746-8118
www.phenixtech.com

THE VON CORPORATION
Tel: (205) 788-2437
www.voncorp.com

TEST EQUIPMENT - LIGHTNING ARRESTERS

HIGH VOLTAGE INC.
Tel: (518) 329-3275
www.hvinc.com

TEST EQUIPMENT - LUMINAIRES AND BALLASTS

MANITOBA HVDC RESEARCH CENTRE INC.
Tel: (204) 989-1240
www.pscad.com

TEST EQUIPMENT - METER TEST BOARDS

BROOKS UTILITY PRODUCTS GROUP
(Brooks Ekstrom, Brooks Meter Devices, Brooks Security Products)
Tel: (248) 477-0250 • 888-687-3008
www.brooksutility.com

TEST EQUIPMENT - METER TEST SETS

OMICRON ELECTRONICS CORP. USA
Tel: 1-800-omicron
www.omicronusa.com

TEST EQUIPMENT - MOISTURE

FLIR SYSTEMS
Tel: (978) 901-8000 • (800) 464-6372
www.goinfrared.com

TEST EQUIPMENT - OIL

HIGH VOLTAGE INC.
Tel: (518) 329-3275
www.hvinc.com

HIPOTRONICS INC.
Tel: (845) 279-3644
www.hipotronics.com

TEST EQUIPMENT - RECLOSERS

HIGH VOLTAGE INC.
Tel: (518) 329-3275
www.hvinc.com

PHENIX TECHNOLOGIES INC.
Tel: (301) 746-8118
www.phenixtech.com

ZENSOL AUTOMATION INC.
Tel: (514) 333-3488 X 226
www.zensol.com

TEST EQUIPMENT - RELAY

ENOSERV LLC.
Tel: (918) 622-4530
www.enoserv.com

HIPOTRONICS INC.
Tel: (845) 279-3644
www.hipotronics.com

MANITOBA HVDC RESEARCH CENTRE INC.
Tel: (204) 989-1240
www.pscad.com

NORAM-SMC, INC.
Tel: (918) 622-5725
www.noramsmc.com

OMICRON ELECTRONICS CORP. USA
Tel: 1-800-omicron
www.omicronusa.com

RTDS TECHNOLOGIES, INC.
Tel: (204) 989-9700
www.rtds.com

TEST EQUIPMENT - SAFETY AND INSTRUMENTS

BROOKS UTILITY PRODUCTS GROUP
(Brooks Ekstrom, Brooks Meter Devices, Brooks Security Products)
Tel: (248) 477-0250 • 888-687-3008
www.brooksutility.com

HAEFELY 
HIGH VOLTAGE TEST
Solutions for Transformer Testing

TMS 580
High Accuracy Loss Measuring

SGV Series
BIL Testing

MSR Series
Applied Voltage Testing

*Now Hiring for Engineering Positions
Seeking Additional Representatives in North America*

HIPOTRONICS
THE MEASURE OF A LEADER

HUBBELL High Voltage Test Business

Ph: 1 (800) 727-HIPO 1650 Rte 22 N
Email: sales@hipotronics.com Brewster, NY
Fx: (845) 279-2467 10509

Circle 20 on Reader Service Card

TEST EQUIPMENT - SLEEVE, RUBBER**PHENIX TECHNOLOGIES INC.**

Tel: (301) 746-8118
www.phenixtech.com

THE VON CORPORATION

Tel: (205) 788-2437
www.voncorp.com

TEST EQUIPMENT - TRANSFORMERS**DIGILOG INSTRUMENTS, INC**

Tel: (972) 294-0033
www.framitononline.com

HIGH VOLTAGE INC.

Tel: (518) 329-3275
www.hvinc.com

HIPOTRONICS INC.

Tel: (845) 279-3644
www.hipotronics.com

**MEASUREMENTS INTERNATIONAL INC.
(U.S.A)**

Tel: (760) 798-2535
www.mintl.com

OMICRON ELECTRONICS CORP. USA

Tel: 1-800-omicron
www.omicronusa.com

PHENIX TECHNOLOGIES INC.

Tel: (301) 746-8118
www.phenixtech.com

RCC ELECTRONICS

Tel: (905) 238-6848 • 1-800-668-6053
www.rcce.com

ZENSOL AUTOMATION INC.

Tel: (514) 333-3488 X 226
www.zensol.com

**TEST SYSTEMS/COMPONENTS - HIGH
VOLTAGE, HIGH CURRENT, HIGH
POWER****HV TECHNOLOGIES INC.**

Tel: (703) 365-2330
www.hvtechnologies.com

THE VON CORPORATION

Tel: (205) 788-2437
www.voncorp.com

TESTING - REGULATORS**RTDS TECHNOLOGIES, INC.**

Tel: (204) 989-9700
www.rtds.com

TESTING - TRANSFORMERS, LIQUID**NEOPTIX FIBER OPTIC SENSORS**

Tel: (418) 687-2500
www.neoptix.com

TESTING INSTRUMENTATION**HIGHLAND TECHNOLOGY, INC.**

Tel: (415) 551-1700
www.highlandtechnology.com

TESTING SERVICES**POWER ENGINEERS, INC.**

Tel: (208) 788-3456
www.powereng.com

RTDS TECHNOLOGIES, INC.

Tel: (204) 989-9700
www.rtds.com

S&C ELECTRIC COMPANY

Tel: (773) 338-1000
www.sandc.com

**TESTING SERVICES - CORONA
LOCATING****OFIL LTD**

Tel: +972-8 9 407 953 • 1-866-279-8672
www.ofilsystems.com

OX CREEK ENERGY

Tel: (608) 589-5513 • (800) 531-6232
www.ox-creek-energy.com

**TESTING SERVICES - SALES & RENTAL
OF TEST INSTRUMENTS****OX CREEK ENERGY**

Tel: (608) 589-5513 • (800) 531-6232
www.ox-creek-energy.com

THERMAL MANAGEMENT**FLIR SYSTEMS**

Tel: (978) 901-8000 • (800) 464-6372
www.goinfrared.com

THERMOCOUPLES**NEOPTIX FIBER OPTIC SENSORS**

Tel: (418) 687-2500
www.neoptix.com

PYCO INC

Tel: (215) 757-3704
www.pyco.com

THERMOGRAPHIC - EQUIPMENT SALES**FLIR SYSTEMS**

Tel: (978) 901-8000 • (800) 464-6372
www.goinfrared.com

LUMASENSE TECHNOLOGIES

Tel: (408) 727-1600
www.lumasenseinc.com

THERMOMETERS - DIGITAL**NEOPTIX FIBER OPTIC SENSORS**

Tel: (418) 687-2500
www.neoptix.com

THERMOMETERS - INFRARED**FLIR SYSTEMS**

Tel: (978) 901-8000 • (800) 464-6372
www.goinfrared.com

LUMASENSE TECHNOLOGIES

Tel: (408) 727-1600
www.lumasenseinc.com

TRANSDUCERS - AC POWER**TECHNICAL SYSTEMS 2002 INC.**

Tel: (905) 575-1941
www.technical-sys.com

TRANSDUCERS - CURRENT + VOLTAGE**TECHNICAL SYSTEMS 2002 INC.**

Tel: (905) 575-1941
www.technical-sys.com

TRANSDUCERS - ELECTRIC**FLEX-CORE DIV.**

Tel: (614) 889-6152
www.flex-core.com

TECHNICAL SYSTEMS 2002 INC.

Tel: (905) 575-1941
www.technical-sys.com

TRANSFORMERS - INSTRUMENT**FLEX-CORE DIV.**

Tel: (614) 889-6152
www.flex-core.com

NXTPHASE T&D CORPORATION

Tel: 604-215-9822 x 343
www.nxtphase.com

TRENCH LIMITED

Tel: (416) 298-8108
www.trenchgroup.com

**TRANSFORMERS - INSTRUMENT,
CURRENT****FLEX-CORE DIV.**

Tel: (614) 889-6152
www.flex-core.com

OHIO SEMITRONICS INC.

Tel: (614) 777-1005 • 1-800-537-0277
www.ohiosemi.com

TRENCH LIMITED

Tel: (416) 298-8108
www.trenchgroup.com

TRANSFORMERS - TEST EQUIPMENT**ADWEL INTERNATIONAL LTD.**

Tel: (416) 321-1988 • 1-800-463-9371
www.adwel.com

NEOPTIX FIBER OPTIC SENSORS

Tel: (418) 687-2500
www.neoptix.com

REPTAME EQUIPMENT INC.

Tel: (905) 936-6979
www.reptame.com

VISUAL INSPECTION

ARBORMETRICS SOLUTIONS LTD

Tel: (407) 339-1733 • (866) 685-1880
www.arbormetricssolutions.com

TOOLS & SUPPLIES

AUGERS - DRILLING - EARTH AND ROCK

NESCO INC.

Tel: (260) 824-6340 • 1-800-252-0043
www.nescosales.com

BATTERIES

STORAGE BATTERY SYSTEMS INC.

Tel: (262) 703-5800 • 1-800-554-2243
www.sbsbattery.com

BATTERIES - CONDUCTANCE/OHMIC TESTING

STORAGE BATTERY SYSTEMS INC.

Tel: (262) 703-5800 • 1-800-554-2243
www.sbsbattery.com

BATTERIES - DC SUPPLY FOR SWITCHGEAR

STORAGE BATTERY SYSTEMS INC.

Tel: (262) 703-5800 • 1-800-554-2243
www.sbsbattery.com

BATTERIES - STATIONARY

STORAGE BATTERY SYSTEMS INC.

Tel: (262) 703-5800 • 1-800-554-2243
www.sbsbattery.com

BATTERIES - TELECOMMUNICATION

ENXERGY

Tel: (608) 565-6290
www.enxergy.com

BATTERY CAPACITY AND MONITORING EQUIPMENT

ALBER

Tel: (954) 623-6660
www.alber.com

PHENIX TECHNOLOGIES INC.

Tel: (301) 746-8118
www.phenixtech.com

BATTERY CHARGERS

STORAGE BATTERY SYSTEMS INC.

Tel: (262) 703-5800 • 1-800-554-2243
www.sbsbattery.com

BAYONETS - POLE EXTENSIONS

HUGHES BROTHERS INC.

Tel: (402) 643-2991
www.hughesbros.com

BLOCKS - HOIST

HUGHES BROTHERS INC.

Tel: (402) 643-2991
www.hughesbros.com

BRACKETS - ARRESTER

HUGHES BROTHERS INC.

Tel: (402) 643-2991
www.hughesbros.com

BRACKETS - CABLE

HUGHES BROTHERS INC.

Tel: (402) 643-2991
www.hughesbros.com

WINOLA INDUSTRIAL INC.

Tel: (570) 378-3808
www.winolaindustrial.com

BRACKETS - CAPACITOR

HUGHES BROTHERS INC.

Tel: (402) 643-2991
www.hughesbros.com

BRACKETS - CLUSTER-MOUNT

HUGHES BROTHERS INC.

Tel: (402) 643-2991
www.hughesbros.com

BRACKETS - CROSSARMS

HUGHES BROTHERS INC.

Tel: (402) 643-2991
www.hughesbros.com

BRACKETS - CUTOUT

HUGHES BROTHERS INC.

Tel: (402) 643-2991
www.hughesbros.com

BRACKETS - EXTENSION

HUGHES BROTHERS INC.

Tel: (402) 643-2991
www.hughesbros.com

BRACKETS - INSULATOR

HUGHES BROTHERS INC.

Tel: (402) 643-2991
www.hughesbros.com

BRACKETS - POTHEAD

HUGHES BROTHERS INC.

Tel: (402) 643-2991
www.hughesbros.com

BRACKETS - TRANSFORMER

HUGHES BROTHERS INC.

Tel: (402) 643-2991
www.hughesbros.com

BRACKETS - TRANSFORMER, MOUNTING

HUGHES BROTHERS INC.

Tel: (402) 643-2991
www.hughesbros.com

BREATHABLE, FLAME RESISTANT - GARMENT

WORKRITE UNIFORM COMPANY

Tel: (805) 483-0175 • 1-800-521-1888
www.workrite.com

BUILDING - PREFABRICATED

360 MOBILE OFFICE

Tel: (512) 342-8800
www.360mobileoffice.com/

BUILDINGS - PRE-ENGINEERED

VIRELEC LTD.

Tel: (905) 569-8030
www.virelec.com

CABLE - JUMPER

HASTINGS FIBERGLASS PRODUCTS INC.

Tel: (269) 945-9541
www.hfgp.com

CABLE - POWER, JOINT - TERMINATION FILLING COMPOUNDS

AMERICAN WIRE GROUP, INC.

Tel: (954) 455-3050 • (800) 342-7215
www.buyawg.com

CABLE - PULLING

NESCO INC.

Tel: (260) 824-6340 • 1-800-252-0043
www.nescosales.com

CABLE - RESTORATION

NOVINIUM

Tel: (206) 529-4828
www.novinium.com

CABLE ACCESSORIES - URD

HUBBELL POWER SYSTEMS INC.

Tel: (573) 682-5521
www.hubbellpowersystems.com

CABLE FAULT LOCATING - EQUIPMENT

HIPOTRONICS INC.

Tel: (845) 279-3644
www.hipotronics.com

INNOVATIVE UTILITY PRODUCTS CORP.

Tel: (479) 410-2098
www.iupcorp.com

PHENIX TECHNOLOGIES INC.

Tel: (301) 746-8118
www.phenixtech.com

RCC ELECTRONICS

Tel: (905) 238-6848 • 1-800-668-6053
www.rcce.com

T.I. CHEN ASSOCIATES LLC.

Tel: (253) 678-2661
www.tichenassociates.com/fl/

THE VON CORPORATION

Tel: (205) 788-2437
www.voncorp.com

CLAMPS - GROUND

HASTINGS FIBERGLASS PRODUCTS INC.

Tel: (269) 945-9541
www.hfgp.com

CLAMPS - HOT LINE

HASTINGS FIBERGLASS PRODUCTS INC.

Tel: (269) 945-9541
www.hfgp.com

HUBBELL POWER SYSTEMS INC.

Tel: (573) 682-5521
www.hubbellpowersystems.com

RICHARDS MANUFACTURING CO. SALES INC.

Tel: (973) 371-1771
www.richards-mfg.com

CLAMPS - STIRRUP

RICHARDS MANUFACTURING CO. SALES INC.

Tel: (973) 371-1771
www.richards-mfg.com

CLAMPS - TEMPORARY GROUND

HASTINGS FIBERGLASS PRODUCTS INC.

Tel: (269) 945-9541
www.hfgp.com

CLOTHING

RANPRO, INC.

Tel: (519) 426-1094
www.ranpro.com

CLOTHING - FLAME RESISTANT

BULWARK PROTECTIVE APPAREL,

Tel: (615) 565-5000
www.bulwark.com

CARHARTT, INC.

Tel: (313) 749-6612 • 1-800-217-2895
www.carharttfr.com

DUPONT PERSONAL PROTECTION

Tel: (800) 387-2122
www.personalprotection.dupont.ca

Spar Arm Rebuild

Let Hughes Brothers, Inc.
engineering team
design a solution
to fix your
Spar Arm structures.

Whether it's Steel, Wood, or Fiberglass,
you can depend on Hughes Brothers!
Contact your local Hughes Brothers
representative or e-mail
Tim@HughesBros.com today!

Hughes

Brothers

www.hughesbros.com

210 N. 13th Street • Seward, NE 68434 • 402.643.2991

TOOLS & SUPPLIES

RANPRO, INC.

Tel: (519) 426-1094
www.ranpro.com

WESTEX INC.

Tel: (773) 523-7000
www.westexinc.com

WORKRITE UNIFORM COMPANY

Tel: (805) 483-0175 • 1-800-521-1888
www.workrite.com

COATINGS - ANIMAL GUARD

INSULBOOT A DIV. OF PLASTIC DIP MOLDINGS

Tel: (215) 766-2020
www.insulboot.com

COATINGS - CORROSION PREVENTION

LOCWELD INC.

Tel: (450) 659-9661
www.locweld.com

COATINGS - SILICONE

DOW CORNING CORPORATION

Tel: (989) 496-4400
www.dowcorning.com/power

COMPOUNDS - WIRE-AND-CABLE-PULLING

AMERICAN POLYWATER CORP.

Tel: (651) 430-2270
www.polywater.com

COMPRESSION/CRIMP TERMINALS

RICHARDS MANUFACTURING CO. SALES INC.

Tel: (973) 371-1771
www.richards-mfg.com

CONDUIT - POLYETHYLENE, CONTINUOUS

ARNCO CORPORATION

Tel: (800) 321-7914
www.arncocorp.com

CONNECTORS - COMPRESSION, DISTRIBUTION

HUBBELL POWER SYSTEMS INC.

Tel: (573) 682-5521
www.hubbellpowersystems.com

RICHARDS MANUFACTURING CO. SALES INC.

Tel: (973) 371-1771
www.richards-mfg.com

CONNECTORS - COMPRESSION, TRANSMISSION

CICAME ENERGIE INC.

Tel: (450) 679-7778
www.cicame.ca

DMC

Tel: (310) 323-6200
www.dmcusa.com

IMPL0 TECHNOLOGIES

Tel: (905) 513-9084
www.implotech.ca

CONNECTORS - DEADEND, TRANSMISSION

CICAME ENERGIE INC.

Tel: (450) 679-7778
www.cicame.ca

IMPL0 TECHNOLOGIES

Tel: (905) 513-9084
www.implotech.ca

CONNECTORS - ELECTRICAL

K & H INDUSTRIES INC.

Tel: (716) 549-0135
www.khindustries.com

PENN-UNION

Tel: (814) 734-1631
www.penn-union.com

RICHARDS MANUFACTURING CO. SALES INC.

Tel: (973) 371-1771
www.richards-mfg.com

CONNECTORS - SUBSTATION

ACA CONDUCTOR ACCESSORIES

Tel: (864) 433-0333
www.acasolutions.com

HUBBELL POWER SYSTEMS INC.

Tel: (573) 682-5521
www.hubbellpowersystems.com

IMPL0 TECHNOLOGIES

Tel: (905) 513-9084
www.implotech.ca

THOMAS & BETTS - STEEL STRUCTURES DIVISION

Tel: (901) 252-8115
www.tnb.com

THOMAS & BETTS - UTILITY GROUP

Tel: (901) 252-8251
www.tnb.com

CONNECTORS, UNDERGROUND - TERMINATING

RICHARDS MANUFACTURING CO. SALES INC.

Tel: (973) 371-1771
www.richards-mfg.com

THOMAS & BETTS - STEEL STRUCTURES DIVISION

Tel: (901) 252-8115
www.tnb.com

THOMAS & BETTS - UTILITY GROUP

Tel: (901) 252-8251
www.tnb.com

COOLERS - TRANSFORMER OIL

TRANTECH RADIATOR PRODUCTS INC.

Tel: (803) 637-3166
www.trantechradiators.com

CRANES

ALTEC INDUSTRIES, INC.

Tel: (205) 991-7733
www.altec.com

ELLIOTT EQUIPMENT COMPANY

Tel: (402) 592-4500
www.elliottequip.com

CUTTERS - CABLE AND WIRE

SEATEK CO. INC.

Tel: (203) 324-0067
www.seatekco.com

DAMPERS - VIBRATION

HUBBELL POWER SYSTEMS INC.

Tel: (573) 682-5521
www.hubbellpowersystems.com

DIGGERS - DERRICKS

ALTEC INDUSTRIES, INC.

Tel: (205) 991-7733
www.altec.com

NESCO INC.

Tel: (260) 824-6340 • 1-800-252-0043
www.nescosales.com

FASTENERS

SOLON MANUFACTURING COMPANY

Tel: (440) 286-7149
www.solonmfg.com

WINOLA INDUSTRIAL INC.

Tel: (570) 378-3808
www.winolaindustrial.com

FASTENERS - SPECIAL

WINOLA INDUSTRIAL INC.

Tel: (570) 378-3808
www.winolaindustrial.com

GRIPS - CABLE-PULLING

HASTINGS FIBERGLASS PRODUCTS INC.

Tel: (269) 945-9541
www.hfgp.com

IMPLOSIVE CONNECTORS

IMPL0 TECHNOLOGIES

Tel: (905) 513-9084
www.implotech.ca

INSULATED HAND TOOLS

CICAME ENERGIE INC.

Tel: (450) 679-7778
www.cicame.ca

From Strategy to Technology

energy & environment SERIES

Call For Papers

This is your chance to speak at one of the most exclusive and high-level congress of the Middle East's utility industry.

Please submit your draft proposal to the Event Producer not later than August 15.

Featured Industry - Elite Speakers



Basil Scarsella,
Chief Executive Officer,
Northern Gas Networks
Limited, UK



Felix Wass,
CTO/CIO,
Fal Dete
Telecommunications



Dr. Jose Antonio,
Vanderhorst - Silverio
Systemic Consultant,
Electricity,
Grupo Millenium
Hispaniola



Abdula Al Subaie,
Director of Technical
Affairs,
KAHRAMAA

Utility Tech Congress is an arena for 150 of the biggest names of the **Power, Water, Telecoms & Gas** sectors, as they take an in-depth look at the current challenges they face, and how innovations & technologies will help them deal with these issues.

As the Middle Eastern utilities industries are at an important juncture, **Utility Tech Congress** is the only event in the region focusing on comprehensive technology that will revolutionize Middle East's utility industry.

Pre-Scheduled Business Meetings

- ▶ One-to-one meetings with a high-calibre audience of buyers who are aggressively seeking solutions.
- ▶ You choose who you want to meet!

Highly Selected Buyers

- ▶ Meet up to 150 extensively pre-qualified decision makers.
- ▶ All delegates are guaranteed to be purchasing authorities and have a budget to spend.

Cutting-Edge Conference

- ▶ Keynote addresses by an industry-elite panel of visionaries and luminaries designed to encourage debate and to provide authoritative insights into the industry's most pressing challenges.

Silver Sponsors



Media Partners

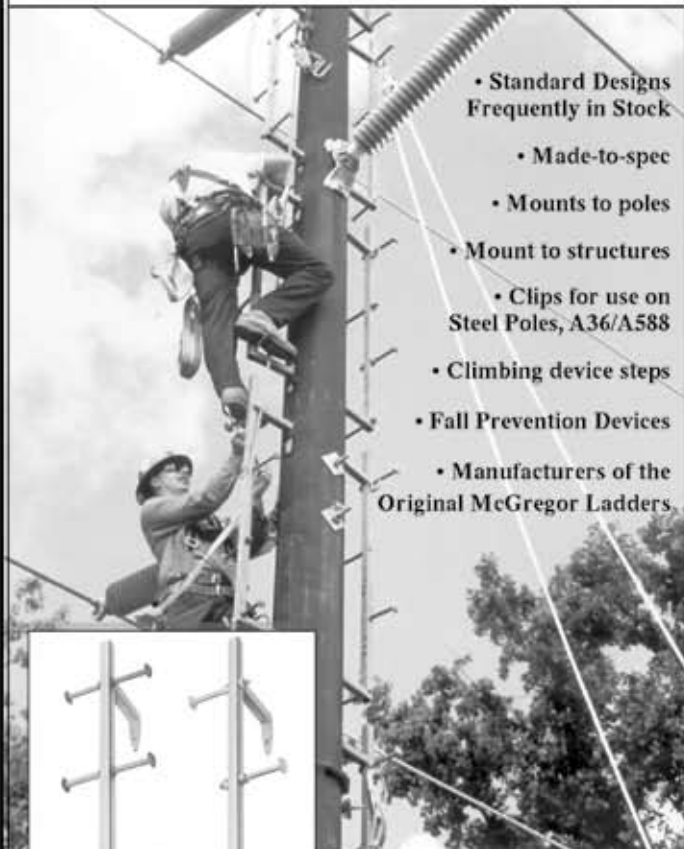


- ▶ For further information, please contact: **Saudin Dungog, Event Producer**.
P.O.Box: 500 563, Boutique Villa No: 5, Dubai Media City, Dubai - UAE
Tel: +971 4 367 1376 - Fax: +971 4 367 2764 - saudind@naseba.com

SUCCESS IS A CHOICE
naseba
www.naseba.com

STEEL LADDERS and ACCESSORIES

We fabricate sturdy, dependable climbing devices and related hardware to suit any special operating needs.



- Standard Designs Frequently in Stock
- Made-to-spec
- Mounts to poles
- Mount to structures
- Clips for use on Steel Poles, A36/A588
- Climbing device steps
- Fall Prevention Devices
- Manufacturers of the Original McGregor Ladders



Visit our website at www.winolaindustrial.com

Winola Industrial Inc. Climbing Device Division

RR 1, Box 1070 • Factoryville, PA 18419
Tel.: 570-378-3808 • Fax: 570-378-2597 • E-mail: winola@epix.net

HUBBELL POWER SYSTEMS INC.

Tel: (573) 682-5521
www.hubbellpowersystems.com

JUMPERS

BROOKS UTILITY PRODUCTS GROUP

(Brooks Ekstrom, Brooks Meter Devices, Brooks Security Products)

Tel: (248) 477-0250 • 888-687-3008
www.brooksutility.com

KITS - CABLE - SPLICING

LPS LABORATORIES/PT TECHNOLOGIES

Tel: (800) 241-8334
www.lpslabs.com

LADDERS

WINOLA INDUSTRIAL INC.

Tel: (570) 378-3808
www.winolaindustrial.com

LADDERS - INDUSTRIAL

HASTINGS FIBERGLASS PRODUCTS INC.

Tel: (269) 945-9541
www.hfgp.com

WINOLA INDUSTRIAL INC.

Tel: (570) 378-3808
www.winolaindustrial.com

LADDERS - MANHOLE

WINOLA INDUSTRIAL INC.

Tel: (570) 378-3808
www.winolaindustrial.com

LADDERS - TOWERS

WINOLA INDUSTRIAL INC.

Tel: (570) 378-3808
www.winolaindustrial.com

LANYARDS, SHOCK ABSORBING

HASTINGS FIBERGLASS PRODUCTS INC.

Tel: (269) 945-9541
www.hfgp.com

LOCATORS - CABLE

RADIO DETECTION

Tel: (207) 647-9495
www.radiodetection.com

LUBE OIL

NYNAS CANADA INC.

Tel: (905) 804-8540
www.nynas.com

LUBRICANTS

NYNAS CANADA INC.

Tel: (905) 804-8540
www.nynas.com

LUBRICANTS - ENVIRONMENT FRIENDLY

NYNAS CANADA INC.
Tel: (905) 804-8540
www.nynas.com

PADS - BOX

CONCAST INC.
Tel: (507) 732-4095
www.concastinc.com

PLATFORMS - LINEMAN'S

HASTINGS FIBERGLASS PRODUCTS INC.
Tel: (269) 945-9541
www.hfgp.com

POLE LINE HARDWARE

HUBBELL POWER SYSTEMS INC.
Tel: (573) 682-5521
www.hubbellpowersystems.com

HUGHES BROTHERS INC.
Tel: (402) 643-2991
www.hughesbros.com

WINOLA INDUSTRIAL INC.
Tel: (570) 378-3808
www.winolaindustrial.com

POWER SUPPLIES

ABSOPULSE ELECTRONICS LTD.
Tel: (613) 836-3511
www.absopulse.com

PHOENIX CONTACT LTD.
Tel: (905) 890-2820
www.phoenixcontact.ca

POWER SUPPLIES - UNINTERRUPTIBLE

360 GENERATORS
Tel: (888) 259-6598
www.360generators.com

ALPHA TECHNOLOGIES
Tel: (360) 392-2263
www.alpha.com

S&C ELECTRIC COMPANY
Tel: (773) 338-1000
www.sandc.com

PULLERS - CABLE

LUG-ALL CORPORATION
Tel: (877) 658-4255
www.lug-all.com

PULLERS - CABLE, AERIAL

ALTEC INDUSTRIES, INC.
Tel: (205) 991-7733
www.altec.com

NESCO INC.
Tel: (260) 824-6340 • 1-800-252-0043
www.nescosales.com

RACKS

UNDERGROUND DEVICES INC.
Tel: (847) 205-9000
www.udevices.com

REELS - CABLE

K & H INDUSTRIES INC.
Tel: (716) 549-0135
www.khindustries.com

THE VON CORPORATION
Tel: (205) 788-2437
www.voncorp.com

REELS - WIRE, GROUNDING

COMMSCOPE BIMETALS
Tel: (704) 883-8015 • (800) 982-1708
www.commscope.com

HASTINGS FIBERGLASS PRODUCTS INC.
Tel: (269) 945-9541
www.hfgp.com

SAFETY - SUPPLIES

WATER-JEL TECHNOLOGIES
Tel: (201) 507-8300 • (800) 275-3433
www.waterjel.com

SAFETY - TOOLS

BROOKS UTILITY PRODUCTS GROUP
(Brooks Ekstrom, Brooks Meter Devices,
Brooks Security Products)
Tel: (248) 477-0250 • 888-687-3008
www.brooksutility.com

SALISBURY ELECTRICAL SAFETY, LLC
Tel: (847) 679-6700
www.whsalisbury.com

SAFETY ATTACHMENT DEVICES

WINOLA INDUSTRIAL INC.
Tel: (570) 378-3808
www.winolaindustrial.com

SEALS

BROOKS UTILITY PRODUCTS GROUP
(Brooks Ekstrom, Brooks Meter Devices,
Brooks Security Products)
Tel: (248) 477-0250 • 888-687-3008
www.brooksutility.com

SILICONES GREASE AND COMPOUNDS

DOW CORNING CORPORATION
Tel: (989) 496-4400
www.dowcorning.com/power

SLEEVES - RUBBER, LINEMAN'S

SALISBURY ELECTRICAL SAFETY, LLC
Tel: (847) 679-6700
www.whsalisbury.com

SPACER - DAMPERS - BUNDLED CONDUCTOR

CICAME ENERGIE INC.
Tel: (450) 679-7778
www.cicame.ca

SPACERS - BUNDLED CONDUCTOR

UNDERGROUND DEVICES INC.
Tel: (847) 205-9000
www.udevices.com

SPACERS - DUCT

UNDERGROUND DEVICES INC.
Tel: (847) 205-9000
www.udevices.com

SPACERS - UNDERGROUND CABLE AND CONDUIT

UNDERGROUND DEVICES INC.
Tel: (847) 205-9000
www.udevices.com

SPLICES & ACCESSORIES - COMPRESSION JOINT

IMPL0 TECHNOLOGIES
Tel: (905) 513-9084
www.implotech.ca

RICHARDS MANUFACTURING CO. SALES INC.
Tel: (973) 371-1771
www.richards-mfg.com

SPLICES & ACCESSORIES - MOLDED

3M CANADA COMPANY
Tel: (800) 937-0042
www.3m.com

RICHARDS MANUFACTURING CO. SALES INC.
Tel: (973) 371-1771
www.richards-mfg.com

SPLICES & ACCESSORIES - TENSION

HUBBELL POWER SYSTEMS INC.
Tel: (573) 682-5521
www.hubbellpowersystems.com

IMPL0 TECHNOLOGIES
Tel: (905) 513-9084
www.implotech.ca

STICKS - DISCONNECT

HASTINGS FIBERGLASS PRODUCTS INC.
Tel: (269) 945-9541
www.hfgp.com

STICKS - HOT

HASTINGS FIBERGLASS PRODUCTS INC.
Tel: (269) 945-9541
www.hfgp.com

STRIPPERS - CABLE INSULATION

GREENBERG ENGINEERING CO.
Tel: (610) 660-0655

SUSPENSION ARMS, POLE - STEEL

HUGHES BROTHERS INC.
Tel: (402) 643-2991
www.hughesbros.com

THOMAS & BETTS - STEEL STRUCTURES DIVISION
Tel: (901) 252-8115
www.tnb.com

VALMONT NEWMARK
Tel: (205) 968-7200
www.valmont-newmark.com

SWITCHES - HOOKSTICK, DISCONNECTING

SOUTHERN STATES, LLC.
Tel: (770) 946-4562
www.southernstatesllc.com

TAPE

CARLTON INDUSTRIES INC.
Tel: (800) 231-5988
www.carltonusa.com

TEST - MEASURING EQUIPMENT

FLIR SYSTEMS
Tel: (978) 901-8000 • (800) 464-6372
www.goifrared.com

FLUKE CORPORATION
Tel: (800) 443-5853
www.fluke.com

NEOPTIX FIBER OPTIC SENSORS
Tel: (418) 687-2500
www.neoptix.com

TOOLS

STRIDER-RESOURCE DIVISION OF THE O'ROURKE MARKETING CORPORATION LTD.
Tel: (905) 778-1960
www.strider-resource.com

TOOLS - EQUIPMENT/RENTAL

FLIR SYSTEMS
Tel: (978) 901-8000 • (800) 464-6372
www.goifrared.com

TOOLS - WIRE & CABLE

RIPLEY
Tel: (860) 635-2200
www.ripley-tools.com

TOOLS CABLE - UNDERGROUND CABLE INSTALLATION

VITALDRIVE LTD.
Tel: +357-24-821788
www.vitaldrive.net

TREE TRIMMING EQUIPMENT

ASPLUNDH TREE EXPERT CO.
Tel: (800) 248-8733
www.asplundh.com

KERSHAW
Tel: (866) 537-7429
www.kershawusa.com

UNINTERRUPTIBLE POWER SUPPLIES

S&C ELECTRIC COMPANY
Tel: (773) 338-1000
www.sandc.com

UPS SYSTEMS AND SUPPLIES

S & C ELECTRIC CANADA LTD
Tel: (416) 249-9171
www.sandc.com

S&C ELECTRIC COMPANY
Tel: (773) 338-1000
www.sandc.com

VEGETATION MANAGEMENT

ARBORMETRICS SOLUTIONS LTD
Tel: (407) 339-1733 • (866) 685-1880
www.arbormetricssolutions.com

ASPLUNDH TREE EXPERT CO.
Tel: (800) 248-8733
www.asplundh.com

DAVEY TREE EXPERT COMPANY (THE)
Tel: (330) 673-9511 • 1-800-447-1667
www.davey.com

JARRAFF INDUSTRIES
Tel: (800) 767-7112
www.jarraff.com

POWEL INC.
Tel: (651) 251-3005
www.powelinc.com

WIRE - SEALS

BROOKS UTILITY PRODUCTS GROUP
(Brooks Ekstrom, Brooks Meter Devices, Brooks Security Products)
Tel: (248) 477-0250 • 888-687-3008
www.brooksutility.com

INNER-TITE CORP.
Tel: (508) 829-6361
www.inner-tite.com

WIRING DEVICES AND SYSTEMS

K & H INDUSTRIES INC.
Tel: (716) 549-0135
www.khindustries.com

TRAINING

FIRST AID TRAINING

MEDIC FIRST AID INTERNATIONAL
Tel: (800) 800-7099
www.medicfirstaid.com

SAFETY - CONSULTING & TRAINING

ALTEC INDUSTRIES, INC.
Tel: (205) 991-7733
www.altec.com

SAFETY - FIRST AID TRAINING

WESTEX INC.
Tel: (773) 523-7000
www.westexinc.com

TRAINING

BISMARCK STATE COLLEGE NATIONAL ENERGY CENTER OF EXCELLENCE
Tel: (701) 224-2445
www.bismarckstate.edu/energy

EXCEL THRU LEARNING
Tel: (905) 789-1467
www.excelthrulearning.com

TRAINING - GIS

INTERGRAPH CORPORATION
Tel: (303) 785-9835
www.intergraph.com

Full course descriptions, updated schedules and more information is available on our website.

Schedule is subject to change.

1-866-TRAIN-IR (1-866-872 4647)

www.infraredtraining.com

For Canada classes, please call Nancy at 1 800 613 0507, ext. 24

JULY 2008

7 - 10	LEVEL I	Saskatoon, SK
7 - 11	LEVEL II	Billerica, MA
14 - 18	LEVEL I	Billerica, MA
14 - 17	LEVEL I	Ottawa, ON
15 - 18	LEVEL I	St. Louis, MO
15 - 18	LEVEL II	Green Bay, WI
22 - 25	BUILDING SCIENCE	Billerica, MA
24 - 25	ELECTRICAL	Green Bay, WI
28 - 31	LEVEL I	Green Bay, WI
29 - 1	LEVEL I	Salt Lake City, UT

AUGUST 2008

4 - 8	LEVEL II	Billerica, MA
5 - 8	LEVEL I	Dayton, OH
5 - 8	LEVEL I	San Diego, CA
5 - 8	LEVEL I	Toronto, ON
11 - 13	FUGITIVE EMISSIONS	Toronto, ON
11 - 15	LEVEL I	Billerica, MA
12 - 15	BUILDING SCIENCE	Chicago, IL
12 - 15	LEVEL I	Denver, CO
14 - 15	BUILDING	Toronto, ON
19 - 21	GASFINDIR	Denver, CO
19 - 22	LEVEL II	Chicago, IL
25 - 28	LEVEL I	Chicago, IL

SEPTEMBER 2008

3 - 6	LEVEL III	Toronto, ON
8 - 11	LEVEL I	Moncton, NB
8 - 12	LEVEL I	Billerica, MA
9 - 12	LEVEL I	Savannah, GA
9 - 12	LEVEL II	Minneapolis, MN
9 - 12	BUILDING SCIENCE	Fremont, CA
16 - 18	GASFINDIR	Houston, TX
16 - 19	LEVEL I	Las Vegas, NV
16 - 19	LEVEL I	Lyndhurst, NJ
16 - 19	WEATHERIZATION	Minneapolis, MN
22 - 25	LEVEL I	Las Vegas, NV
22 - 25	LEVEL I	Clarksville, TN
23 - 26	LEVEL I	Minneapolis, MN
23 - 26	R&D	Billerica, MA
29 - 30	ELECTRICAL APPLICATIONS	Billerica, MA
29 - 2	LEVEL I	Grand Rapids, MI
29 - 2	LEVEL I	Santa Clara, CA
30 - 3	LEVEL I	Denver, CO
30 - 3	LEVEL I	Houston, TX

OCTOBER 2008

1 - 2	ROOFING	Billerica, MA
6 - 9	LEVEL I	Edmonton, AB
7 - 10	WEATHERIZATION	Syracuse, NY
7 - 10	LEVEL I	Ft. Lauderdale, FL
8 - 10	GASFINDIR	Dallas, TX
13 - 16	LEVEL I	Memphis, TN
13 - 17	LEVEL I	Billerica, MA
14 - 17	LEVEL I	Toronto, ON
21 - 24	LEVEL II	Denver, CO
21 - 24	LEVEL I	Springfield, MO
21 - 24	LEVEL I	York, PA
23 - 24	BUILDING	Edmonton, AB

NOVEMBER 2008

10 - 13	LEVEL II	Cincinnati, OH
10 - 13	LEVEL I	Vienna, VA
11 - 14	BUILDING SCIENCE	Billerica, MA
13 - 14	BUILDING	Calgary, AB
17 - 20	LEVEL III	Billerica, MA
17 - 20	LEVEL I	Montreal, QC
24 - 26	BUILDING	Toronto, ON

DECEMBER 2008

1 - 5	LEVEL II	Billerica, MA
1 - 4	LEVEL I	Las Vegas, NV
1 - 4	LEVEL I	Vancouver, BC
2 - 5	LEVEL I	Denver, CO
8 - 12	LEVEL I	Billerica, MA
8 - 11	LEVEL I	Kansas
8 - 11	LEVEL II	Toronto, ON
15 - 18	LEVEL I	Toronto, ON

NEW State-of-the-Art Training Facility!

- > Stadium Seating!
- > New Computers!
- > Expanded Labs!



TRANSFORMERS

CONTROL TRANSFORMERS

HAMMOND POWER SOLUTIONS INC.

Tel: (519) 822-2441
www.hammondpowersolutions.com

CONTROLS - LTC TRANSFORMER

INCON POWER RELIABILITY PRODUCTS

Tel: (207) 283-0156 • 1-800-872-3455
www.incon.com

COOLERS - TRANSFORMER OIL

TRANTECH RADIATOR PRODUCTS INC.

Tel: (803) 637-3166
www.trantechradiators.com

FANS

KRENZ & COMPANY INCORPORATED

Tel: (262) 255-2310
www.krenzvent.com

FANS - INSPECTION, REPAIRS & PARTS

KRENZ & COMPANY INCORPORATED

Tel: (262) 255-2310
www.krenzvent.com

FANS - TRANSFORMER-COOLING

CALIFORNIA TURBO

Tel: (909) 854-2800
www.californiaturbo.com

KRENZ & COMPANY INCORPORATED

Tel: (262) 255-2310
www.krenzvent.com

FIBER OPTIC - SENSORS

FISO TECHNOLOGIES

Tel: (418) 688-8065 X 241
www.fiso.com

NEOPTIX FIBER OPTIC SENSORS

Tel: (418) 687-2500
www.neoptix.com

OPSENS FIBER OPTIC SENSORS

Tel: (418) 682-9996
www.opsens.com

PHOTON CONTROL INC.

Tel: (604) 422-8861
www.photon-control.com

HEAT EXCHANGERS

TRANTECH RADIATOR PRODUCTS INC.

Tel: (803) 637-3166
www.trantechradiators.com

INSTRUMENTS TRANSFORMERS - CURRENT AND VOLTAGE FOR ANALOGUE METERS

ELECTROMAGNETIC CORP

Tel: (215) 949-1900
www.electrictestingcorp.com

TEC - INSTRUMENT TRANSFORMER EQUIPMENT CORPORATION

Tel: (704) 282-4331
www.itec-ctvt.com

TRENCH LIMITED

Tel: (416) 298-8108
www.trenchgroup.com

TSTM

Tel: (605) 334-2924
www.ts-tm.com

INSULATING OIL

DOW CORNING CORPORATION

Tel: (989) 496-4400
www.dowcorning.com/power

NYNAS CANADA INC.

Tel: (905) 804-8540
www.nynas.com

LEAK CONTROL

ANDAX INDUSTRIES LLC

Tel: (800) 999-1358
www.andax.com

TPC TRANSFORMER PROTECTOR CORP.

Tel: (281) 358-9900
www.transproco.com

MONITORING - TRANSFORMERS

CURRENT GROUP LLC

Tel: (301) 944-2727
www.currentgroup.com

INCON POWER RELIABILITY PRODUCTS

Tel: (207) 283-0156 • 1-800-872-3455
www.incon.com

LUMASENSE TECHNOLOGIES

Tel: (408) 727-1600
www.lumasenseinc.com

NEOPTIX FIBER OPTIC SENSORS

Tel: (418) 687-2500
www.neoptix.com

OPSENS FIBER OPTIC SENSORS

Tel: (418) 682-9996
www.opsens.com

SERVERON CORPORATION

Tel: (503) 924-3200 • 800 880-2552
www.serveron.com

OIL - LUBRIFICATION

NYNAS CANADA INC.

Tel: (905) 804-8540
www.nynas.com

OIL PURIFYING - RECLAIMING SYSTEMS

ENSPIRIA SOLUTIONS INC.

Tel: (303) 520-2513
www.enspiria.com

PLATFORMS - TRANSFORMERS

HUGHES BROTHERS INC.

Tel: (402) 643-2991
www.hughesbros.com

RADIATORS - TRANSFORMER

TRANTECH RADIATOR PRODUCTS INC.

Tel: (803) 637-3166
www.trantechradiators.com

RELAYS - TRANSFORMER DIFFERENTIAL

AREVA T&D CANADA INC.

Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.

Tel: (484) 766-8100
www.areva-td.com

SCHWEITZER ENGINEERING LABORATORIES INC.

Tel: (509) 332-1890
www.selinc.com

RELAYS - TRANSFORMER OVERLOAD

SCHWEITZER ENGINEERING LABORATORIES INC.

Tel: (509) 332-1890
www.selinc.com

RELAYS - TRANSFORMER PROTECTION

VIRELEC LTD.

Tel: (905) 569-8030
www.virelec.com

SENSORS - FIBER OPTIC

FISO TECHNOLOGIES

Tel: (418) 688-8065 X 241
www.fiso.com

LUMASENSE TECHNOLOGIES

Tel: (408) 727-1600
www.lumasenseinc.com

NEOPTIX FIBER OPTIC SENSORS

Tel: (418) 687-2500
www.neoptix.com

OPSENS FIBER OPTIC SENSORS

Tel: (418) 682-9996
www.opsens.com

TAP CHANGERS - CONTROLS**NEOPTIX FIBER OPTIC SENSORS**

Tel: (418) 687-2500
www.neoptix.com

TAP CHANGERS - TRANSFORMERS - LOAD, NO-LOAD**HIGH VOLTAGE SUPPLY**

Tel: (214) 637-4434 • (800) 338-5526
www.highvoltageupply.com

PAUWELS CANADA INC.

Tel: (204) 452-7446 • 1-800-665-9450
www.pauwels.com

TEST EQUIPMENT - CURRENT TRANSFORMER TESTERS**OMICRON ELECTRONICS CORP. USA**

Tel: 1-800-omicron
www.omicronusa.com

TEST EQUIPMENT - OIL**HIGH VOLTAGE INC.**

Tel: (518) 329-3275
www.hvinc.com

HIPOTRONICS INC.

Tel: (845) 279-3644
www.hipotronics.com

TEST EQUIPMENT - TRANSFORMERS**DIGILOG INSTRUMENTS, INC**

Tel: (972) 294-0033
www.framitonline.com

HIGH VOLTAGE INC.

Tel: (518) 329-3275
www.hvinc.com

HIPOTRONICS INC.

Tel: (845) 279-3644
www.hipotronics.com

MEASUREMENTS INTERNATIONAL INC.

(U.S.A)
Tel: (760) 798-2535
www.mintl.com

OMICRON ELECTRONICS CORP. USA

Tel: 1-800-omicron
www.omicronusa.com

PHENIX TECHNOLOGIES INC.

Tel: (301) 746-8118
www.phenixtech.com

RCC ELECTRONICS

Tel: (905) 238-6848 • 1-800-668-6053
www.rcce.com

ZENSOL AUTOMATION INC.

Tel: (514) 333-3488 X 226
www.zensol.com

TESTING - TRANSFORMERS, LIQUID**NEOPTIX FIBER OPTIC SENSORS**

Tel: (418) 687-2500
www.neoptix.com

THERMAL MANAGEMENT**FLIR SYSTEMS**

Tel: (978) 901-8000 • (800) 464-6372
www.goifrared.com

TRANSFORMER - OIL**NYNAS CANADA INC.**

Tel: (905) 804-8540
www.nynas.com

TRANSFORMER - UNIT DISTRIBUTION SUBSTATIONS**DELTA STAR, INC.**

Tel: 1-800-368-3017
www.deltastar.com

TRANSFORMER COMPONENTS**HEARTLAND SOLUTIONS, INC.**

Tel: (800) 957-3493
www.heartlandsolutionsinc.com

HIGH VOLTAGE SUPPLY

Tel: (214) 637-4434 • (800) 338-5526
www.highvoltageupply.com

TRANSFORMER DISPOSAL**ENVIRONMENTAL PROTECTION SERVICES**

Tel: (304) 232-1590
www.envprotsvc.com

TRANSFORMER MONITORING**INCON POWER RELIABILITY PRODUCTS**

Tel: (207) 283-0156 • 1-800-872-3455
www.incon.com

NEOPTIX FIBER OPTIC SENSORS

Tel: (418) 687-2500
www.neoptix.com

PAUWELS CANADA INC.

Tel: (204) 452-7446 • 1-800-665-9450
www.pauwels.com

TRANSFORMER MOUNTING PADS**CONCAST INC.**

Tel: (507) 732-4095
www.concastinc.com

TRANSFORMERS**AREVA T&D CANADA INC.**

Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.

Tel: (484) 766-8100
www.areva-td.com

CIRCUIT BREAKER SALES CO. INC.

Tel: (940) 665-4444
www.cbsales.com

DELTA STAR, INC.

Tel: 1-800-368-3017
www.deltastar.com

HAMMOND POWER SOLUTIONS INC.

Tel: (519) 822-2441
www.hammondpowersolutions.com

MOLONEY ELECTRIC, INC.

Tel: (416) 534-9226
www.moloney-electric.com

PAUWELS CANADA INC.

Tel: (204) 452-7446 • 1-800-665-9450
www.pauwels.com

T & R ELECTRIC SUPPLY COMPANY INC.

Tel: (605) 534-3555 • 1-800-843-7994
www.t-r.com

WAUKESHA ELECTRIC SYSTEMS

Tel: (800) 835-2732
www.waukeshaelectric.com

TRANSFORMERS - AUTO TRANSFORMERS**AREVA T&D CANADA INC.**

Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.

Tel: (484) 766-8100
www.areva-td.com

WAUKESHA ELECTRIC SYSTEMS

Tel: (800) 835-2732
www.waukeshaelectric.com

TRANSFORMERS - CONTROLS**INDUCTIVE COMPONENTS MFG. INC.**

Tel: (513) 752-4731
www.icmlinc.com

NEOPTIX FIBER OPTIC SENSORS

Tel: (418) 687-2500
www.neoptix.com

PAUWELS CANADA INC.

Tel: (204) 452-7446 • 1-800-665-9450
www.pauwels.com

TRANSFORMERS - DISTRIBUTION**DELTA STAR, INC.**

Tel: 1-800-368-3017
www.deltastar.com

HAMMOND POWER SOLUTIONS INC.

Tel: (519) 822-2441
www.hammondpowersolutions.com

KONČAR D&ST INC.

Tel: +385 1 3783732
www.koncar-dst.hr

MOLONEY ELECTRIC, INC.

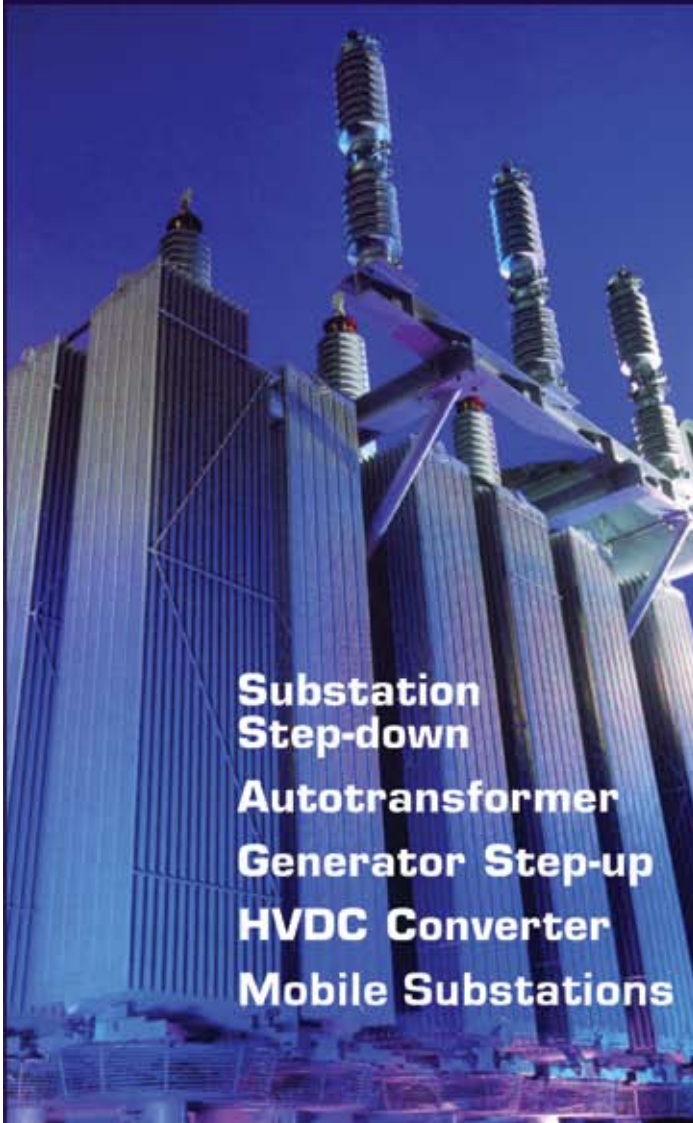
Tel: (416) 534-9226
www.moloney-electric.com



**Crompton
Greaves**

EVERYDAY SOLUTIONS

World Class Manufacturer of Power Transformers for the North American Electrical Industry



**Substation
Step-down
Autotransformer
Generator Step-up
HVDC Converter
Mobile Substations**

Pauwels Canada Inc.
101 Rockman Street
Winnipeg, Manitoba R3T 0L7
Telephone: (204) 452-7446
Fax: (204) 453-8644
www.pauwels.com

QUALITY IS OUR MISSION

Circle 29 on Reader Service Card

SYNERGY ENERGY INC.

Tel: (866) 866-5822
www.synergyenergyinc.com

T & R ELECTRIC SUPPLY COMPANY INC.

Tel: (605) 534-3555 • 1-800-843-7994
www.t-r.com

TRANSFORMERS - DISTRIBUTION, PADMOUNTED

DELTA STAR, INC.

Tel: 1-800-368-3017
www.deltastar.com

LAKEPORT POWER LTD

Tel: (905) 355-3281 • (800) 293-1909
www.lakeportpower.com

MOLONEY ELECTRIC, INC.

Tel: (416) 534-9226
www.moloney-electric.com

T & R ELECTRIC SUPPLY COMPANY INC.

Tel: (605) 534-3555 • 1-800-843-7994
www.t-r.com

TRANSFORMERS - DISTRIBUTION, POLE-TYPE

MOLONEY ELECTRIC, INC.

Tel: (416) 534-9226
www.moloney-electric.com

T & R ELECTRIC SUPPLY COMPANY INC.

Tel: (605) 534-3555 • 1-800-843-7994
www.t-r.com

TRANSFORMERS - DISTRIBUTION, SUBSTATION-TYPE

BELYEA COMPANY, INC.

Tel: (610) 515-8775
www.belyeapower.com

DELTA STAR, INC.

Tel: 1-800-368-3017
www.deltastar.com

MOLONEY ELECTRIC, INC.

Tel: (416) 534-9226
www.moloney-electric.com

R. E. UPTGRAFF MANUFACTURING

Tel: (724) 887-7700
www.uptegraff.com

T & R ELECTRIC SUPPLY COMPANY INC.

Tel: (605) 534-3555 • 1-800-843-7994
www.t-r.com

TRANSFORMERS - DISTRIBUTION, SUBSURFACE

MOLONEY ELECTRIC, INC.

Tel: (416) 534-9226
www.moloney-electric.com

TRANSFORMERS - DRY TYPE

BELYEA COMPANY, INC.

Tel: (610) 515-8775
www.belyeapower.com

HAMMOND POWER SOLUTIONS INC.

Tel: (519) 822-2441
www.hammondpowersolutions.com

TRANSFORMERS - FALL PROTECTION**HAZ-MAT RESPONSE TECHNOLOGIES INC.**

Tel: (858) 274-4585
www.rubberizer.com

TRANSFORMERS - FURNACE**MOLONEY ELECTRIC, INC.**

Tel: (416) 534-9226
www.moloney-electric.com

TRANSFORMERS - GROUNDING**R. E. UPTGRAFF MANUFACTURING**

Tel: (724) 887-7700
www.uptegraff.com

TRANSFORMERS - INSTRUMENT**FLEX-CORE DIV.**

Tel: (614) 889-6152
www.flex-core.com

NXTPHASE T&D CORPORATION

Tel: 604-215-9822 x 343
www.nxtphase.com

TRENCH LIMITED

Tel: (416) 298-8108
www.trenchgroup.com

TRANSFORMERS - INSTRUMENT, CURRENT**FLEX-CORE DIV.**

Tel: (614) 889-6152
www.flex-core.com

OHIO SEMITRONICS INC.

Tel: (614) 777-1005 • 1-800-537-0277
www.ohiosemi.com

TRENCH LIMITED

Tel: (416) 298-8108
www.trenchgroup.com

TRANSFORMERS - LARGE POWER**DELTA STAR, INC.**

Tel: 1-800-368-3017
www.deltastar.com

PAUWELS CANADA INC.

Tel: (204) 452-7446 • 1-800-665-9450
www.pauwels.com

TRANSFORMERS - LARGE POWER, 10,001 KVA AND LARGER**DELTA STAR, INC.**

Tel: 1-800-368-3017
www.deltastar.com

PAUWELS CANADA INC.

Tel: (204) 452-7446 • 1-800-665-9450
www.pauwels.com

WAUKESHA ELECTRIC SYSTEMS

Tel: (800) 835-2732
www.waukeshaelectric.com

TRANSFORMERS - LEAK SEALING SERVICES**COLT ATLANTIC SERVICES**

Tel: (770) 831-8135 • (800) 229-2658
www.coltonline.com

TRANSFORMERS - MAINTENANCE/REPAIRS**POWER SUBSTATION SERVICES**

Tel: (304) 232-1590
www.powersubsvcs.com

T & R ELECTRIC SUPPLY COMPANY INC.

Tel: (605) 534-3555 • 1-800-843-7994
www.t-r.com



DELTA STAR INCORPORATED



Still more than current after a century!

Delta Star is proudly celebrating 100 years of customer service in the power industry. Our century of expertise is built into every medium-power transformer and mobile substation we produce.

Delta Star is the innovation leader in custom-engineered design. Each transformer is handmade by craftsmen who understand that quality has made Delta Star the choice for power companies around the world.



3550 Mayflower Drive
Lynchburg, VA 24501
800-368-3017

270 Industrial Road
San Carlos, CA 94070
800-892-8673

www.DeltaStar.com

TRANSFORMERS

WAUKESHA ELECTRIC SYSTEMS

Tel: (800) 835-2732
www.waukeshaelectric.com

TRANSFORMERS - MEDIUM & LARGE POWER

AREVA T&D CANADA INC.

Tel: (450) 659-8921
www.aveva-t-d.com

AREVA T&D INC.

Tel: (484) 766-8100
www.aveva-t-d.com

BELYEA COMPANY, INC.

Tel: (610) 515-8775
www.belyeapower.com

DELTA STAR, INC.

Tel: 1-800-368-3017
www.deltastar.com

PAUWELS CANADA INC.

Tel: (204) 452-7446 • 1-800-665-9450
www.pauwels.com

T & R ELECTRIC SUPPLY COMPANY INC.

Tel: (605) 534-3555 • 1-800-843-7994
www.t-r.com

WAUKESHA ELECTRIC SYSTEMS

Tel: (800) 835-2732
www.waukeshaelectric.com

TRANSFORMERS - MOBILE

DELTA STAR, INC.

Tel: 1-800-368-3017
www.deltastar.com

PAUWELS CANADA INC.

Tel: (204) 452-7446 • 1-800-665-9450
www.pauwels.com

T & R ELECTRIC SUPPLY COMPANY INC.

Tel: (605) 534-3555 • 1-800-843-7994
www.t-r.com

TRANSFORMERS - MONITORS

AREVA T&D CANADA INC.

Tel: (450) 659-8921
www.aveva-t-d.com

AREVA T&D INC.

Tel: (484) 766-8100
www.aveva-t-d.com

NEOPTIX FIBER OPTIC SENSORS

Tel: (418) 687-2500
www.neoptix.com

TRANSFORMERS - NETWORK

RICHARDS MANUFACTURING CO. SALES INC.

Tel: (973) 371-1771
www.richards-mfg.com

TRANSFORMERS - NONFLAMMABLE LIQUID-FILLED

MOLONEY ELECTRIC, INC.

Tel: (416) 534-9226
www.moloney-electric.com

T & R ELECTRIC SUPPLY COMPANY INC.

Tel: (605) 534-3555 • 1-800-843-7994
www.t-r.com

TRANSFORMERS - POWER

DELTA STAR, INC.

Tel: 1-800-368-3017
www.deltastar.com

MOLONEY ELECTRIC, INC.

Tel: (416) 534-9226
www.moloney-electric.com

WAUKESHA ELECTRIC SYSTEMS

Tel: (800) 835-2732
www.waukeshaelectric.com

TRANSFORMERS - PROTECTION

TPC TRANSFORMER PROTECTOR CORP.

Tel: (281) 358-9900
www.transproco.com

TRANSFORMERS DISTRIBUTION AND SUBSTATION



Modern Rewind Facilities
More than 61 Acres Inventory
Prompt Delivery-Coast to Coast

CALL TOLL-FREE
800-843-7994
FAX 605-534-3861
E-Mail: t-r@t-r.com
Internet: www.t-r.com



BUY - SELL - RENT

Complete Outdoor
Substations,
Circuit Breakers,
Regulators,
and Switchgear

TRANSFORMERS - REBUILD

T & R ELECTRIC SUPPLY COMPANY INC.
Tel: (605) 534-3555 • 1-800-843-7994
www.t-r.com

TRANSFORMERS - REBUILDING AND REPAIR SERVICES

R. E. UPTGRAFF MANUFACTURING
Tel: (724) 887-7700
www.uptegraff.com

T & R ELECTRIC SUPPLY COMPANY INC.
Tel: (605) 534-3555 • 1-800-843-7994
www.t-r.com

TRANSFORMERS - RENTAL SERVICES

T & R ELECTRIC SUPPLY COMPANY INC.
Tel: (605) 534-3555 • 1-800-843-7994
www.t-r.com

TRANSFORMERS - SMALL POWER

DELTA STAR, INC.
Tel: 1-800-368-3017
www.deltastar.com

R. E. UPTGRAFF MANUFACTURING
Tel: (724) 887-7700
www.uptegraff.com

T & R ELECTRIC SUPPLY COMPANY INC.
Tel: (605) 534-3555 • 1-800-843-7994
www.t-r.com

TRANSFORMERS - SMALL POWER, 10,000 KVA AND SMALLER

T & R ELECTRIC SUPPLY COMPANY INC.
Tel: (605) 534-3555 • 1-800-843-7994
www.t-r.com

TRANSFORMERS - SPECIALTY

DELTA STAR, INC.
Tel: 1-800-368-3017
www.deltastar.com

TRANSFORMERS - SPLITCORE

FLEX-CORE DIV.
Tel: (614) 889-6152
www.flex-core.com

SCHWEITZER ENGINEERING LABORATORIES INC.
Tel: (509) 332-1890
www.selinc.com

TRANSFORMERS - TEST EQUIPMENT

ADWEL INTERNATIONAL LTD.
Tel: (416) 321-1988 • 1-800-463-9371
www.adwel.com

NEOPTIX FIBER OPTIC SENSORS
Tel: (418) 687-2500
www.neoptix.com

REPTAME EQUIPMENT INC.
Tel: (905) 936-6979
www.reptame.com

TRANSFORMERS - USED, REBUILT

T & R ELECTRIC SUPPLY COMPANY INC.
Tel: (605) 534-3555 • 1-800-843-7994
www.t-r.com

TRANSFORMERS - VOLTAGE

DELTA STAR, INC.
Tel: 1-800-368-3017
www.deltastar.com

TRANSMISSION**ANCHORS - BOLTS**

HUGHES BROTHERS INC.
Tel: (402) 643-2991
www.hughesbros.com

THOMAS & BETTS - STEEL STRUCTURES DIVISION
Tel: (901) 252-8115
www.tnb.com

ANCHORS - FOUNDATION

HUBBELL POWER SYSTEMS INC.
Tel: (573) 682-5521
www.hubbellpowersystems.com

BRACES - CROSSARM

HUGHES BROTHERS INC.
Tel: (402) 643-2991
www.hughesbros.com

THOMAS & BETTS - STEEL STRUCTURES DIVISION
Tel: (901) 252-8115
www.tnb.com

BUSHING REPAIR

CK COMPOSITES INC.
Tel: (724) 547-4581
www.ckcomposites.com

PCORE ELECTRIC COMPANY, INC.
Tel: (585) 768-1200
www.pcoreelectric.com

BUSHINGS

AREVA T&D CANADA INC.
Tel: (450) 659-8921
www.areva-td.com

PCORE ELECTRIC COMPANY, INC.
Tel: (585) 768-1200
www.pcoreelectric.com

TRENCH LIMITED
Tel: (416) 298-8108
www.trenchgroup.com

BUSHINGS - COMPOSITE

POLYCAST INTERNATIONAL
Tel: (204) 632-5428 • (800) 665-7445
www.polycastinternational.com

BUSHINGS - CONDENSER-TYPE-CAST EPOXY

PCORE ELECTRIC COMPANY, INC.
Tel: (585) 768-1200
www.pcoreelectric.com

TRENCH LIMITED
Tel: (416) 298-8108
www.trenchgroup.com

BUSHINGS - HIGH VOLTAGE APPARATUS (OVER 34.5KV)

PCORE ELECTRIC COMPANY, INC.
Tel: (585) 768-1200
www.pcoreelectric.com

TRENCH LIMITED
Tel: (416) 298-8108
www.trenchgroup.com

CIRCUIT BREAKER COMPONENTS

CIRCUIT BREAKER SALES CO. INC.
Tel: (940) 665-4444
www.cbsales.com

HIGH VOLTAGE SUPPLY
Tel: (214) 637-4434 • (800) 338-5526
www.hightagesupply.com

CIRCUIT BREAKERS

AREVA T&D CANADA INC.
Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.
Tel: (484) 766-8100
www.areva-td.com

CIRCUIT BREAKER SALES CO. INC.
Tel: (940) 665-4444
www.cbsales.com

TRANSMISSION

ELECTRICAL WORLD INDUSTRIAL SALES CORP.

Tel: (800) 422-0089
www.elecworld.com

ROMAC

Tel: (800) 843-5473
www.romacsupply.com

TAVRIDA ELECTRIC NORTH AMERICA INC.

Tel: (604) 540-6600
www.tavrida-na.com

CIRCUIT BREAKERS - MEDIUM AND HIGH VOLTAGE

BELYEA COMPANY, INC.

Tel: (610) 515-8775
www.belyeapower.com

TAVRIDA ELECTRIC NORTH AMERICA INC.

Tel: (604) 540-6600
www.tavrida-na.com

CIRCUIT BREAKERS - MODIFICATION AND REPAIRS

BELYEA COMPANY, INC.

Tel: (610) 515-8775
www.belyeapower.com

CIRCUIT BREAKERS - OIL

BELYEA COMPANY, INC.

Tel: (610) 515-8775
www.belyeapower.com

CIRCUIT BREAKERS - OUTDOOR

TAVRIDA ELECTRIC NORTH AMERICA INC.

Tel: (604) 540-6600
www.tavrida-na.com

CIRCUIT BREAKERS - SF6

HVB AE POWER SYSTEMS INC.

Tel: (770) 495-1755
www.hvbi.com

CIRCUIT BREAKERS - VACUUM

CIRCUIT BREAKER SALES CO. INC.

Tel: (940) 665-4444
www.cbsales.com

TAVRIDA ELECTRIC NORTH AMERICA INC.

Tel: (604) 540-6600
www.tavrida-na.com

COATINGS - ANIMAL GUARD

INSULBOOT A DIV. OF PLASTIC DIP MOLDINGS

Tel: (215) 766-2020
www.insulboot.com

COATINGS - CORROSION PREVENTION

LOCWELD INC.

Tel: (450) 659-9661
www.locweld.com

CONNECTORS - COMPRESSION, TRANSMISSION

CICAME ENERGIE INC.

Tel: (450) 679-7778
www.cicame.ca

DMC

Tel: (310) 323-6200
www.dmcusa.com

IMPL0 TECHNOLOGIES

Tel: (905) 513-9084
www.implotech.ca

CONNECTORS - DEADEND, TRANSMISSION

CICAME ENERGIE INC.

Tel: (450) 679-7778
www.cicame.ca

IMPL0 TECHNOLOGIES

Tel: (905) 513-9084
www.implotech.ca

CONNECTORS - GROUNDING

IMPL0 TECHNOLOGIES

Tel: (905) 513-9084
www.implotech.ca

THOMAS & BETTS - STEEL STRUCTURES DIVISION

Tel: (901) 252-8115
www.tnb.com

THOMAS & BETTS - UTILITY GROUP

Tel: (901) 252-8251
www.tnb.com

CONNECTORS - SOLDER

RICHARDS MANUFACTURING CO. SALES INC.

Tel: (973) 371-1771
www.richards-mfg.com

CONSOLES - T&D CONTROL CENTERS

PRIMATE TECHNOLOGIES

Tel: 321-821-2227
www.prima-tech.com

CROSSARMS

DIS-TRAN

Tel: (318) 448-0274
www.distran.com

HUGHES BROTHERS INC.

Tel: (402) 643-2991
www.hughesbros.com

THOMAS & BETTS - STEEL STRUCTURES DIVISION

Tel: (901) 252-8115
www.tnb.com

CROSSARMS - FIBERGLASS - REINFORCED

GEOTEK INC.

Tel: (800) 533-1680
www.geotekinc.com

HUGHES BROTHERS INC.

Tel: (402) 643-2991
www.hughesbros.com

LAKEPORT POWER LTD

Tel: (905) 355-3281 • (800) 293-1909
www.lakeportpower.com

CROSSARMS, WOOD - LAMINATED

HUGHES BROTHERS INC.

Tel: (402) 643-2991
www.hughesbros.com

CROSSARMS, WOOD - SOLID

DIS-TRAN

Tel: (318) 448-0274
www.distran.com

HUGHES BROTHERS INC.

Tel: (402) 643-2991
www.hughesbros.com

DAMPERS - VIBRATION

HUBBELL POWER SYSTEMS INC.

Tel: (573) 682-5521
www.hubbellpowersystems.com

DEADENDS WOOD, LAMINATED

HUGHES BROTHERS INC.

Tel: (402) 643-2991
www.hughesbros.com

ENGINEERING - SERVICES - T & D

AREVA T&D CANADA INC.

Tel: (450) 659-8921
www.areva-td.com

AREVA T&D INC.

Tel: (484) 766-8100
www.areva-td.com

POWER ENGINEERS, INC.

Tel: (208) 788-3456
www.powereng.com

S&C ELECTRIC COMPANY

Tel: (773) 338-1000
www.sandc.com

SARGENT & LUNDY LLC

Tel: (312) 269-2000
www.sargentlundy.com

SNC-LAVALIN TRANSMISSION & DISTRIBUTION

Tel: (514) 334-6780
www.snc-lavalin.com/td

GROUND RODS - COPPERWELD**COMMSCOPE BIMETALS**

Tel: (704) 883-8015 • (800) 982-1708
www.commscope.com

GROUNDING - EQUIPMENT**CICAME ENERGIE INC.**

Tel: (450) 679-7778
www.cicame.ca

HASTINGS FIBERGLASS PRODUCTS INC.

Tel: (269) 945-9541
www.hfgp.com

HUBBELL POWER SYSTEMS INC.

Tel: (573) 682-5521
www.hubbellpowersystems.com

HARDWARE - POLELINE**HUGHES BROTHERS INC.**

Tel: (402) 643-2991
www.hughesbros.com

POWER LINE HARDWARE LLC

Tel: (904) 695-9880
www.powerlinehardware.com

RICHARDS MANUFACTURING CO. SALES INC.

Tel: (973) 371-1771
www.richards-mfg.com

HARDWARE - TRANSMISSION LINE**HELIX UNIFORMED LTD**

Tel: (514) 828-0057
www.helix-uni.ca

HUGHES BROTHERS INC.

Tel: (402) 643-2991
www.hughesbros.com

WINOLA INDUSTRIAL INC.

Tel: (570) 378-3808
www.winolaindustrial.com

INSULATORS - COATING SERVICES**GLOBAL INSULATOR GROUP**

Tel: 7 343 2163577
www.gig-group.com

INSULATORS - COMPOSITE**K-LINE INSULATORS LIMITED**

Tel: (416) 292-2008
www.k-line.net

K-LINE INSULATORS USA INC

Tel: (585) 235-2870
www.k-line.net

INSULATORS - GUY STRAIN - FIBERGLASS - REINFORCED**HUBBELL POWER SYSTEMS INC.**

Tel: (573) 682-5521
www.hubbellpowersystems.com

HUGHES BROTHERS INC.

Tel: (402) 643-2991
www.hughesbros.com

K-LINE INSULATORS LIMITED

Tel: (416) 292-2008
www.k-line.net

K-LINE INSULATORS USA INC

Tel: (585) 235-2870
www.k-line.net

INSULATORS - POLYMER**DOW CORNING CORPORATION**

Tel: (989) 496-4400
www.dowcorning.com/power

GLP HI-TECH POWER PRODUCTS

Tel: (450) 347-0177 • 1-877-348-4918
www.glpower.com

HUBBELL POWER SYSTEMS INC.

Tel: (573) 682-5521
www.hubbellpowersystems.com

K-LINE INSULATORS LIMITED

Tel: (416) 292-2008
www.k-line.net

K-LINE INSULATORS USA INC

Tel: (585) 235-2870
www.k-line.net

LAKEPORT POWER LTD

Tel: (905) 355-3281 • (800) 293-1909
www.lakeportpower.com

POLYCAST INTERNATIONAL

Tel: (204) 632-5428 • (800) 665-7445
www.polycastinternational.com

INSULATORS - PORCELAIN**AMERICA ASIA GROUP CO.**

Tel: (626) 309-0198
www.aagcusa.com

ORBIS TRADE INC

Tel: (305) 358-9032
www.orbistradeinc.com

INSULATORS - POST-HORIZONTAL**K-LINE INSULATORS LIMITED**

Tel: (416) 292-2008
www.k-line.net

K-LINE INSULATORS USA INC

Tel: (585) 235-2870
www.k-line.net

INSULATORS - SUSPENSION**K-LINE INSULATORS LIMITED**

Tel: (416) 292-2008
www.k-line.net

K-LINE INSULATORS USA INC

Tel: (585) 235-2870
www.k-line.net

SEDIWER CANADA INC.

Tel: (514) 739-3385
www.sediver.fr

METAL - MANUFACTURER**NATIONAL BRONZE & METALS, INC.**

Tel: (713) 869-9600
www.nbmmetals.com

PLATFORMS - LINEMAN'S**HASTINGS FIBERGLASS PRODUCTS INC.**

Tel: (269) 945-9541
www.hfgp.com

POLE - WOOD / PRESERVATIVES**ARCH WOOD PROTECTION, INC.**

Tel: (770) 801-6600
www.wolmanizedwood.com

POLE LINE HARDWARE**HUBBELL POWER SYSTEMS INC.**

Tel: (573) 682-5521
www.hubbellpowersystems.com

HUGHES BROTHERS INC.

Tel: (402) 643-2991
www.hughesbros.com

WINOLA INDUSTRIAL INC.

Tel: (570) 378-3808
www.winolaindustrial.com

POLES - TRANSMISSION**FWT INC.**

Tel: (817) 255-2998
www.fwtinc.com

ROHN PRODUCTS

Tel: (309) 697-4400
www.radiancorp.com

THOMAS & BETTS - STEEL STRUCTURES DIVISION

Tel: (901) 252-8115
www.tnb.com

UNION METAL CORPORATION

Tel: (330) 456-7653
www.unionmetal.com

VALMONT NEWMARK

Tel: (205) 968-7200
www.valmont-newmark.com

POLES - TRANSMISSION - CONCRETE**VALMONT NEWMARK**

Tel: (205) 968-7200
www.valmont-newmark.com

POLES - TRANSMISSION - STEEL**DIS-TRAN**

Tel: (318) 448-0274
www.distran.com

FALCON STEEL COMPANY

Tel: (817) 581-9500
www.falconsteel.com

TRANSMISSION

FWT INC.

Tel: (817) 255-2998
www.fwtinc.com

LOCWELD INC.

Tel: (450) 659-9661
www.locweld.com

ROHN PRODUCTS

Tel: (309) 697-4400
www.radiancorp.com

SABRE TUBULAR STRUCTURES

Tel: (817) 852-1700
www.sabretubularstructures.com

THOMAS & BETTS - STEEL STRUCTURES DIVISION

Tel: (901) 252-8115
www.tnb.com

UNION METAL CORPORATION

Tel: (330) 456-7653
www.unionmetal.com

VALMONT NEWMARK

Tel: (205) 968-7200
www.valmont-newmark.com

POLES - UTILITY

DIS-TRAN

Tel: (318) 448-0274
www.distran.com

POWERTRUSION PRODUCTS

Tel: (814) 839-4186
www.powertrusion.com

ROHN PRODUCTS

Tel: (309) 697-4400
www.radiancorp.com

SABRE TUBULAR STRUCTURES

Tel: (817) 852-1700
www.sabretubularstructures.com

THOMAS & BETTS - STEEL STRUCTURES DIVISION

Tel: (901) 252-8115
www.tnb.com

VALMONT NEWMARK

Tel: (205) 968-7200
www.valmont-newmark.com

POWER DISTRIBUTION AND/OR TRANSMISSION POLES

DELTA STAR, INC.

Tel: 1-800-368-3017
www.deltastar.com

DIS-TRAN

Tel: (318) 448-0274
www.distran.com

RELIPOLE SOLUTIONS, INC.

Tel: (281) 290-8283
www.reliapole.com

THE OESER COMPANY

Tel: (360) 734-1480
oeserco.com

THOMAS & BETTS - STEEL STRUCTURES DIVISION

Tel: (901) 252-8115
www.tnb.com

VALMONT NEWMARK

Tel: (205) 968-7200
www.valmont-newmark.com

SOFTWARE - T&D LINE DESIGN

INTERGRAPH CORPORATION

Tel: (303) 785-9835
www.intergraph.com

SPLICES & ACCESSORIES - COMPRESSION JOINT

IMPLO TECHNOLOGIES

Tel: (905) 513-9084
www.implotech.ca

RICHARDS MANUFACTURING CO. SALES INC.

Tel: (973) 371-1771
www.richards-mfg.com

SPLICES & ACCESSORIES - MOLDED

3M CANADA COMPANY

Tel: (800) 937-0042
www.3m.com

RICHARDS MANUFACTURING CO. SALES INC.

Tel: (973) 371-1771
www.richards-mfg.com

SPLICES & ACCESSORIES - TENSION

HUBBELL POWER SYSTEMS INC.

Tel: (573) 682-5521
www.hubbellpowersystems.com

IMPLO TECHNOLOGIES

Tel: (905) 513-9084
www.implotech.ca

STEEL - MANUFACTURERS

LOCWELD INC.

Tel: (450) 659-9661
www.locweld.com

SABRE TUBULAR STRUCTURES

Tel: (817) 852-1700
www.sabretubularstructures.com

SBB TOWERS

Tel: (450) 473-4247
www.sbb.ca

STEEL - STRUCTURAL

DIS-TRAN

Tel: (318) 448-0274
www.distran.com

J & Y ENGINEERING SERVICES INC.

Tel: (440) 891-1130
www.jyengineering.com

SABRE TUBULAR STRUCTURES

Tel: (817) 852-1700
www.sabretubularstructures.com

THOMAS & BETTS - STEEL STRUCTURES DIVISION

Tel: (901) 252-8115
www.tnb.com

STEEL PRODUCTS - CUSTOM FABRICATION

DIS-TRAN

Tel: (318) 448-0274
www.distran.com

METALPOL

Tel: 52-871-750-0300
www.metalpol.com.mx

WINOLA INDUSTRIAL INC.

Tel: (570) 378-3808
www.winolaindustrial.com

STRUCTURE - PREFABRICATED

THOMAS & BETTS - STEEL STRUCTURES DIVISION

Tel: (901) 252-8115
www.tnb.com

SUSPENSION ARMS, POLE - STEEL

HUGHES BROTHERS INC.

Tel: (402) 643-2991
www.hughesbros.com

THOMAS & BETTS - STEEL STRUCTURES DIVISION

Tel: (901) 252-8115
www.tnb.com

VALMONT NEWMARK

Tel: (205) 968-7200
www.valmont-newmark.com

TOWER - TRELLIS AND TUBULAR

THOMAS & BETTS - STEEL STRUCTURES DIVISION

Tel: (901) 252-8115
www.tnb.com

TOWERS - EMERGENCY T & D

SBB TOWERS

Tel: (450) 473-4247
www.sbb.ca

THOMAS & BETTS - STEEL STRUCTURES DIVISION

Tel: (901) 252-8115
www.tnb.com

TOWER SOLUTIONS INC.

Tel: (905) 946-8789
www.implotech.ca

TOWERS - POLES

DIS-TRAN

Tel: (318) 448-0274
www.distran.com

FWT INC.

Tel: (817) 255-2998
www.fwtinc.com

ROHN PRODUCTS

Tel: (309) 697-4400
www.radiancorp.com

SABRE TUBULAR STRUCTURES

Tel: (817) 852-1700
www.sabretubularstructures.com

THOMAS & BETTS - STEEL STRUCTURES DIVISION

Tel: (901) 252-8115
www.tnb.com

VALMONT NEWMARK

Tel: (205) 968-7200
www.valmont-newmark.com

TOWERS, TRANSMISSION - RETROFIT**HUGHES BROTHERS INC.**

Tel: (402) 643-2991
www.hughesbros.com

THOMAS & BETTS - STEEL STRUCTURES DIVISION

Tel: (901) 252-8115
www.tnb.com

TOWERS, TRANSMISSION - STEEL**DIS-TRAN**

Tel: (318) 448-0274
www.distran.com

FWT INC.

Tel: (817) 255-2998
www.fwtinc.com

LOCWELD INC.

Tel: (450) 659-9661
www.locweld.com

ROHN PRODUCTS

Tel: (309) 697-4400
www.radiancorp.com

SBB TOWERS

Tel: (450) 473-4247
www.sbb.ca

THOMAS & BETTS - STEEL STRUCTURES DIVISION

Tel: (901) 252-8115
www.tnb.com

VALMONT NEWMARK

Tel: (205) 968-7200
www.valmont-newmark.com

TOWERS, TRANSMISSION - WOOD, LAMINATED**HUGHES BROTHERS INC.**

Tel: (402) 643-2991
www.hughesbros.com

TOWERS, TRANSMISSION - WOOD, SOLID**HUGHES BROTHERS INC.**

Tel: (402) 643-2991
www.hughesbros.com

TRANSMISSION AND DISTRIBUTION LINE**HAMBY YOUNG**

Tel: (330) 562-8444 • (800) 726-8444
www.hambyyoung.com

TRENCH - CONCRETE**CONCAST INC.**

Tel: (507) 732-4095
www.concastinc.com

TRENWA, INC

Tel: (859) 781-0831
www.trenwa.com

UTILITY VEHICLES & ACCESSORIES**AERIAL DEVICES****ALTEC INDUSTRIES, INC.**

Tel: (205) 991-7733
www.altec.com

NESCO INC.

Tel: (260) 824-6340 • 1-800-252-0043
www.nescosales.com

POSI-PLUS TECHNOLOGIES INC.

Tel: (800) 758-5717
www.posi-plus.com

AERIAL LIFTS**ALLIANCE EQUIPMENT CO., INC**

Tel: (800) 383-2290
www.alliance-equipment.com

ALTEC INDUSTRIES, INC.

Tel: (205) 991-7733
www.altec.com

NESCO INC.

Tel: (260) 824-6340 • 1-800-252-0043
www.nescosales.com

AERIAL LIFTS - TRUCK MOUNTED, INSULATED**ALTEC INDUSTRIES, INC.**

Tel: (205) 991-7733
www.altec.com

LIFT-ALL, DIVISION OF HYDRA-TECH, INC.

Tel: (260) 747-0526
www.lift-all.net

AERIAL LIFTS - RENTAL**NESCO INC.**

Tel: (260) 824-6340 • 1-800-252-0043
www.nescosales.com

UTILITY EQUIPMENT LEASING CORP.

Tel: (262) 547-1600
www.uelc.com

AERIAL LIFTS - SALES & SERVICES**ALTEC INDUSTRIES, INC.**

Tel: (205) 991-7733
www.altec.com

DUECO, INC.

Tel: (262) 547-8500
www.dueco.com

NESCO INC.

Tel: (260) 824-6340 • 1-800-252-0043
www.nescosales.com

AERIAL LIFTS - TESTING & INSPECTION**THE VON CORPORATION**

Tel: (205) 788-2437
www.voncorp.com

AERIAL PHOTOGRAPHY**W.I.R.E SERVICES, A DIVISION OF MANITOBA HYDRO**

Tel: (204) 480-5800
www.wireservices.ca

AERIAL SURVEY**ARBORMETRICS SOLUTIONS LTD**

Tel: (407) 339-1733 • (866) 685-1880
www.arbormetricssolutions.com

W.I.R.E SERVICES, A DIVISION OF MANITOBA HYDRO

Tel: (204) 480-5800
www.wireservices.ca

AUGERS - DRILLING - EARTH AND ROCK**NESCO INC.**

Tel: (260) 824-6340 • 1-800-252-0043
www.nescosales.com

BODIES - TRUCK, UTILITY SERVICES**READING TRUCK BODY, LLC**

Tel: (610) 775-3301
www.readingbody.com

BUCKET LINERS - AERIAL LIFT ACCESSORIES

HASTINGS FIBERGLASS PRODUCTS INC.

Tel: (269) 945-9541
www.hfgp.com

PLASTIC TECHNIQUES, INC.

Tel: (603) 645-6800
www.plastictechniques.com

CRANES

ALTEC INDUSTRIES, INC.

Tel: (205) 991-7733
www.altec.com

ELLIOTT EQUIPMENT COMPANY

Tel: (402) 592-4500
www.elliottequip.com

CRANES - HYDRAULIC

ALTEC INDUSTRIES, INC.

Tel: (205) 991-7733
www.altec.com

CRANES - MANUFACTURERS/ DISTRIBUTORS

ALTEC INDUSTRIES, INC.

Tel: (205) 991-7733
www.altec.com



NESCO Sales & Rentals has the broadest range of utility vehicles and products you'll find at any one place in the industry.

Visit Our Web Site To Browse Our Equipment
1-800-252-0043 • www.nescosales.com

NESCO INC.

Tel: (260) 824-6340 • 1-800-252-0043
www.nescosales.com

FIBER OPTIC C & A - CABLE PULLERS

NESCO INC.

Tel: (260) 824-6340 • 1-800-252-0043
www.nescosales.com

INSULATOR - WASHERS, HOT LINE, TRUCK & TRAILER MOUNTED

ALTEC INDUSTRIES, INC.

Tel: (205) 991-7733
www.altec.com

LIFTS - AERIAL BUCKET

ALTEC INDUSTRIES, INC.

Tel: (205) 991-7733
www.altec.com

NESCO INC.

Tel: (260) 824-6340 • 1-800-252-0043
www.nescosales.com

PULLERS - CABLE

LUG-ALL CORPORATION

Tel: (877) 658-4255
www.lug-all.com

PULLERS - CABLE, AERIAL

ALTEC INDUSTRIES, INC.

Tel: (205) 991-7733
www.altec.com

NESCO INC.

Tel: (260) 824-6340 • 1-800-252-0043
www.nescosales.com

PULLERS - CABLE, UNDERGROUND

NESCO INC.

Tel: (260) 824-6340 • 1-800-252-0043
www.nescosales.com

REELS - CABLE TEST VAN

THE VON CORPORATION

Tel: (205) 788-2437
www.voncorp.com

REELS - CABLE, GROUNDING

COMMScope BIMETALS

Tel: (704) 883-8015 • (800) 982-1708
www.commscope.com

REELS - CABLE, HIGH VOLTAGE

COMMScope BIMETALS

Tel: (704) 883-8015 • (800) 982-1708
www.commscope.com

THE VON CORPORATION

Tel: (205) 788-2437
www.voncorp.com

TEST EQUIPMENT - AERIAL LIFT

PHENIX TECHNOLOGIES INC.

Tel: (301) 746-8118
www.phenixtech.com

TRACKED VEHICLES

ASPLUNDH TREE EXPERT CO.

Tel: (800) 248-8733
www.asplundh.com

TRAILERS - CABLE REEL

NESCO INC.

Tel: (260) 824-6340 • 1-800-252-0043
www.nescosales.com

TRAILERS - POLE

NESCO INC.

Tel: (260) 824-6340 • 1-800-252-0043
www.nescosales.com

TRAILERS - RENTAL AND LEASING

WELLS CARGO, INC.

Tel: (800) 348-7553
www.wellscargo.com

TREE TRIMMING EQUIPMENT

ASPLUNDH TREE EXPERT CO.

Tel: (800) 248-8733
www.asplundh.com

KERSHAW

Tel: (866) 537-7429
www.kershawusa.com

TRUCKS

LAKEPORT EQUIPMENT LTD

Tel: (866) 525-7678
www.lakeportequip.com

SUPREME CORPORATION

Tel: (574) 642-4888
www.supremecorp.com

TRUCKS AND ACCESSORIES - MANUFACTURERS

PELSUE COMPANY

Tel: (800) 525-8460
www.pelsue.com

WIRE, CABLE & FIBER OPTICS EQUIPMENT

BLOCKS - HOIST

HUGHES BROTHERS INC.

Tel: (402) 643-2991
www.hughesbros.com

BRACKETS - CABLE

HUGHES BROTHERS INC.

Tel: (402) 643-2991
www.hughesbros.com

WINOLA INDUSTRIAL INC.

Tel: (570) 378-3808
www.winolaindustrial.com

CABLE - AERIAL, SELF-SUPPORTED

AMERICAN WIRE GROUP, INC.

Tel: (954) 455-3050 • (800) 342-7215
www.buyawg.com

CABLE - ALUMINUM

ALCAN CABLE

Tel: (770) 394-9886
www.cable.alcan.com

AMERICAN WIRE GROUP, INC.

Tel: (954) 455-3050 • (800) 342-7215
www.buyawg.com

HENAN KOSEN CABLE CO.,LTD

Tel: 0086 371 65318810
www.hnkosen.com

MIDAL CABLES

Tel: (905) 896-6953
www.midalcable.com

CABLE - COAXIAL

COMMSCOPE BIMETALS

Tel: (704) 883-8015 • (800) 982-1708
www.commscope.com

CABLE - CONTROL

AMERICAN WIRE GROUP, INC.

Tel: (954) 455-3050 • (800) 342-7215
www.buyawg.com

COMMSCOPE BIMETALS

Tel: (704) 883-8015 • (800) 982-1708
www.commscope.com

CABLE - COPPER

AMERICAN WIRE GROUP, INC.

Tel: (954) 455-3050 • (800) 342-7215
www.buyawg.com

COMMSCOPE BIMETALS

Tel: (704) 883-8015 • (800) 982-1708
www.commscope.com

CABLE - FIBER OPTIC

AFL TELECOMMUNICATIONS

Tel: (864) 433-0333
www.afltele.com

AMERICAN WIRE GROUP, INC.

Tel: (954) 455-3050 • (800) 342-7215
www.buyawg.com

CABLELAN PRODUCTS

Tel: (800) 840-6655
www.cablelan.com

CABLE - GROUNDING

COMMSCOPE BIMETALS

Tel: (704) 883-8015 • (800) 982-1708
www.commscope.com

Power Cables
Bare Aluminum Conductors
Substation Control Cables
Service Drop Cables
Guy Wire-static Wire
Bare Copper Ground Wire
Copperweld®/Alumoweld® Cables
OPGW & Fiber ADSS Cable

Join others from across the industry.
Join AWG BANA Consortium & Reduce Total Costs.



www.buyawg.com



Your Access to the Wire & Cable Global Supply Chain

sales@buyawg.com

Toll Free: 1.800.342.7215 • Fax: 954.455.9886



WIRE, CABLE & FIBER OPTICS EQUIPMENT

HASTINGS FIBERGLASS PRODUCTS INC.

Tel: (269) 945-9541
www.hfgp.com

CABLE - JUMPER

HASTINGS FIBERGLASS PRODUCTS INC.

Tel: (269) 945-9541
www.hfgp.com

CABLE - MULTIPLEX, SERVICE DROP

AMERICAN WIRE GROUP, INC.

Tel: (954) 455-3050 • (800) 342-7215
www.buyawg.com

CABLE - POWER, JOINT - TERMINATION FILLING COMPOUNDS

AMERICAN WIRE GROUP, INC.

Tel: (954) 455-3050 • (800) 342-7215
www.buyawg.com

CABLE - PULLING

NESCO INC.

Tel: (260) 824-6340 • 1-800-252-0043
www.nescosales.com

CABLE - RESTORATION

NOVINIUM

Tel: (206) 529-4828
www.novinium.com

CABLE - SUBMARINE

NOVINIUM

Tel: (206) 529-4828
www.novinium.com

CABLE - TEMPORARY GROUND

HASTINGS FIBERGLASS PRODUCTS INC.

Tel: (269) 945-9541
www.hfgp.com

CABLE - UNDERGROUND DISTRIBUTION

NOVINIUM

Tel: (206) 529-4828
www.novinium.com

CABLE - UNDERGROUND, RESIDENTIAL

AMERICAN WIRE GROUP, INC.

Tel: (954) 455-3050 • (800) 342-7215
www.buyawg.com

CABLE - UNDERGROUND, STRAND BLOCK

AMERICAN WIRE GROUP, INC.

Tel: (954) 455-3050 • (800) 342-7215
www.buyawg.com

CABLE ACCESSORIES - URD

HUBBELL POWER SYSTEMS INC.

Tel: (573) 682-5521
www.hubbellpowersystems.com

CABLE FAULT LOCATING - EQUIPMENT

HIPOTRONICS INC.

Tel: (845) 279-3644
www.hipotronics.com

INNOVATIVE UTILITY PRODUCTS CORP.

Tel: (479) 410-2098
www.iupcorp.com

PHENIX TECHNOLOGIES INC.

Tel: (301) 746-8118
www.phenixtech.com

RCC ELECTRONICS

Tel: (905) 238-6848 • 1-800-668-6053
www.rcce.com

T.I. CHEN ASSOCIATES LLC.

Tel: (253) 678-2661
www.tichenassociates.com/fl/

THE VON CORPORATION

Tel: (205) 788-2437
www.voncorp.com

CABLES

AMERICAN WIRE GROUP, INC.

Tel: (954) 455-3050 • (800) 342-7215
www.buyawg.com

CABLES - BARE COPPER

AMERICAN WIRE GROUP, INC.

Tel: (954) 455-3050 • (800) 342-7215
www.buyawg.com

CABLES - HIGH TEMPERATURE

AMERICAN WIRE GROUP, INC.

Tel: (954) 455-3050 • (800) 342-7215
www.buyawg.com

CABLES - HIGH TEMPERATURE SUPERCONDUCTING

AMERICAN SUPERCONDUCTOR (DEVENS)

Tel: (978) 842-3000
www.amsc.com

CABLES - HIGH VOLTAGE

AMERICAN WIRE GROUP, INC.

Tel: (954) 455-3050 • (800) 342-7215
www.buyawg.com

BRIM ELECTRONICS, INC.

Tel: (201) 796-2886
www.brimelectronics.com

CABLES - HIGH VOLTAGE - XLPE

AMERICAN WIRE GROUP, INC.

Tel: (954) 455-3050 • (800) 342-7215
www.buyawg.com

CABLES - MEDIUM VOLTAGE

AMERICAN WIRE GROUP, INC.

Tel: (954) 455-3050 • (800) 342-7215
www.buyawg.com

COMMSCOPE BIMETALS

Tel: (704) 883-8015 • (800) 982-1708
www.commscope.com

CABLES - SPECIALTY

AMERICAN WIRE GROUP, INC.

Tel: (954) 455-3050 • (800) 342-7215
www.buyawg.com

COMMSCOPE BIMETALS

Tel: (704) 883-8015 • (800) 982-1708
www.commscope.com

CONDUCTOR, STEEL - COPPER-CLAD

COMMSCOPE BIMETALS

Tel: (704) 883-8015 • (800) 982-1708
www.commscope.com

CONDUIT - POLYETHYLENE, CONTINUOUS

ARNCO CORPORATION

Tel: (800) 321-7914
www.arncocorp.com

CONNECTORS - FIBER OPTIC

RUGGED COM INC.

Tel: (905) 856-5288 • (888) 264-0006
www.ruggedcom.com

CONNECTORS - SOLDER

RICHARDS MANUFACTURING CO. SALES INC.

Tel: (973) 371-1771
www.richards-mfg.com

CONNECTORS - SUBSTATION

ACA CONDUCTOR ACCESSORIES

Tel: (864) 433-0333
www.acasolutions.com

HUBBELL POWER SYSTEMS INC.

Tel: (573) 682-5521
www.hubbellpowersystems.com

IMPL0 TECHNOLOGIES

Tel: (905) 513-9084
www.implotech.ca

THOMAS & BETTS - STEEL STRUCTURES DIVISION

Tel: (901) 252-8115
www.tnb.com

THOMAS & BETTS - UTILITY GROUP

Tel: (901) 252-8251
www.tnb.com

CONNECTORS, UNDERGROUND - TERMINATING**RICHARDS MANUFACTURING CO. SALES INC.**

Tel: (973) 371-1771
www.richards-mfg.com

THOMAS & BETTS - STEEL STRUCTURES DIVISION

Tel: (901) 252-8115
www.tnb.com

THOMAS & BETTS - UTILITY GROUP

Tel: (901) 252-8251
www.tnb.com

FIBER OPTIC - COMPONENTS AND ACCESSORIES**SCHWEITZER ENGINEERING LABORATORIES INC.**

Tel: (509) 332-1890
www.selinc.com

FIBER OPTIC - SENSORS**FISO TECHNOLOGIES**

Tel: (418) 688-8065 X 241
www.fiso.com

NEOPTIX FIBER OPTIC SENSORS

Tel: (418) 687-2500
www.neoptix.com

OPSENS FIBER OPTIC SENSORS

Tel: (418) 682-9996
www.opsens.com

PHOTON CONTROL INC.

Tel: (604) 422-8861
www.photon-control.com

FIBER OPTIC C & A - CABLE PULLERS**NESCO INC.**

Tel: (260) 824-6340 • 1-800-252-0043
www.nescosales.com

FIBER OPTIC COMMUNICATIONS**RUGGED COM INC.**

Tel: (905) 856-5288 • (888) 264-0006
www.ruggedcom.com

FIBER OPTICS**NEOPTIX FIBER OPTIC SENSORS**

Tel: (418) 687-2500
www.neoptix.com

RUGGED COM INC.

Tel: (905) 856-5288 • (888) 264-0006
www.ruggedcom.com

GRIPS - CABLE-PULLING**HASTINGS FIBERGLASS PRODUCTS INC.**

Tel: (269) 945-9541
www.hfgp.com

HOISTS**HUBBELL POWER SYSTEMS INC.**

Tel: (573) 682-5521
www.hubbellpowersystems.com

KITS - CABLE - SPLICING**LPS LABORATORIES/PT TECHNOLOGIES**

Tel: (800) 241-8334
www.lpslabs.com

LASHING WIRE**WIRE WORLD INC.**

Tel: (970) 356-5505
www.wireworldinc.com

MULTIPLEXERS - FIBER OPTICS**INIVEN**

Tel: (908) 722-3770
www.iniven.com

PULLERS - CABLE, UNDERGROUND**NESCO INC.**

Tel: (260) 824-6340 • 1-800-252-0043
www.nescosales.com

REELS - CABLE**K & H INDUSTRIES INC.**

Tel: (716) 549-0135
www.khindustries.com

THE VON CORPORATION

Tel: (205) 788-2437
www.voncorp.com

REELS - CABLE TEST VAN**THE VON CORPORATION**

Tel: (205) 788-2437
www.voncorp.com

REELS - CABLE, GROUNDING**COMMSCOPE BIMETALS**

Tel: (704) 883-8015 • (800) 982-1708
www.commscope.com

REELS - CABLE, HIGH VOLTAGE**COMMSCOPE BIMETALS**

Tel: (704) 883-8015 • (800) 982-1708
www.commscope.com

THE VON CORPORATION

Tel: (205) 788-2437
www.voncorp.com

REELS - WIRE, GROUNDING**COMMSCOPE BIMETALS**

Tel: (704) 883-8015 • (800) 982-1708
www.commscope.com

HASTINGS FIBERGLASS PRODUCTS INC.

Tel: (269) 945-9541
www.hfgp.com

ROPE - INSULATING**THIES ELECTRICAL DISTRIBUTING CO.**

Tel: (519) 621-2524
www.djinfo.com/TEDC

SPACER - DAMPERS - BUNDLED CONDUCTOR**CICAME ENERGIE INC.**

Tel: (450) 679-7778
www.cicame.ca

SPACERS - BUNDLED CONDUCTOR**UNDERGROUND DEVICES INC.**

Tel: (847) 205-9000
www.udevices.com

SPACERS - DUCT**UNDERGROUND DEVICES INC.**

Tel: (847) 205-9000
www.udevices.com

SPACERS - UNDERGROUND CABLE AND CONDUIT**UNDERGROUND DEVICES INC.**

Tel: (847) 205-9000
www.udevices.com

SPLICES & ACCESSORIES - COMPRESSION JOINT**IMPLO TECHNOLOGIES**

Tel: (905) 513-9084
www.implotech.ca

RICHARDS MANUFACTURING CO. SALES INC.

Tel: (973) 371-1771
www.richards-mfg.com

SPLICES & ACCESSORIES - MOLDED**3M CANADA COMPANY**

Tel: (800) 937-0042
www.3m.com

RICHARDS MANUFACTURING CO. SALES INC.

Tel: (973) 371-1771
www.richards-mfg.com

SPLICES & ACCESSORIES - TENSION**HUBBELL POWER SYSTEMS INC.**

Tel: (573) 682-5521
www.hubbellpowersystems.com

IMPLO TECHNOLOGIES

Tel: (905) 513-9084
www.implotech.ca

TOOLS - WIRE & CABLE

RIPLEY

Tel: (860) 635-2200
www.ripley-tools.com

TOOLS CABLE - UNDERGROUND CABLE INSTALLATION

VITALDRIVE LTD.

Tel: +357-24-821788
www.vitaldrive.net

TRAILERS - CABLE REEL

NESCO INC.

Tel: (260) 824-6340 • 1-800-252-0043
www.nescosales.com

WIRE - SEALS

BROOKS UTILITY PRODUCTS GROUP

(Brooks Ekstrom, Brooks Meter Devices,
Brooks Security Products)

Tel: (248) 477-0250 • 888-687-3008
www.brooksutility.com

INNER-TITE CORP.

Tel: (508) 829-6361
www.inner-tite.com

WIRE AND CABLE ACCESSORIES

ROLL-A-REEL (DE-SPOOLERS)

Tel: (513) 761-8500
www.rollareel.com

WIRE, STEEL - COPPER - CLAD

COMMSCOPE BIMETALS

Tel: (704) 883-8015 • (800) 982-1708
www.commscope.com

WIRE, STEEL STRAND - GALVANIZED

AMERICAN WIRE GROUP, INC.

Tel: (954) 455-3050 • (800) 342-7215
www.buyawg.com

WIRES AND CABLES - ELECTRICAL

AMERICAN WIRE GROUP, INC.

Tel: (954) 455-3050 • (800) 342-7215
www.buyawg.com

GENERAL CABLE

Tel: (800) 237-2726 • 1-800-237-2726
www.generalcable.com

NEXANS

Tel: (905) 944-4300 • 1-800-268-9473
www.nexansenergy.com

SUPERPOWER, INC.

Tel: (518) 346-1414
www.superpower-inc.com

WIRING DEVICES AND SYSTEMS

K & H INDUSTRIES INC.

Tel: (716) 549-0135
www.khindustries.com

GIS All-Rounder

Neil Stone – Passionate cricket player, British pop fan, curry chef,
prince of trivia, devoted GIS master

On the cricket field, Neil Stone is one of the sport's rare and coveted all-rounders. A player who bowls and bats equally well, he gives his team the invaluable benefit of having two players in one. In the GIS arena, Neil brings the same combination of multi-faceted skills, experience-honed confidence, hard-driving passion and smoothly executed plays to every client that depends on Enspira to meet their geospatial challenges head-on. With more than a decade of specialized GIS expertise, Neil is not only one of the industry's leading Smallworld experts, but also a well-rounded specialist in all aspects of geospatial software engineering and integration. When it comes to GIS, if Neil is on your team, there are no sticky wickets.



Real People with Inspired Solutions to Real Problems

www.enspiria.com • 303.741.8400



PRODUCT SHOWCASES

C.I.Agent advanced technology safely solidifies petroleum into an easy-to-dispose-of rubber like substance



Resulting in SPCC compliance, simple secondary containment solutions that have minimal impact on a facility and save 50 to 80% over conventional methods.



11760 Commonwealth Drive
Louisville, Kentucky 40299
502.267.0101
502.267.0181 fax
www.ciagent.com

Circle 57 on Reader Service Card



REMOTE CONTROLLED SEARCHLIGHT

*Durable, Versatile, Powerful...
Guaranteed!*

- Exclusive Cr5 Pentabeam™ II Technology
- Wireless Remote Controlled Operation
- 370° Rotation x 135° Tilt
- 500,000 Candle Power, 5.5 Amps
- UV Ray and Saltwater Resistant
- Integrated 12V DC High-Torque Motors
- Weatherproof for Land and Sea Applications
- Waterproof Remote Transmitters
- R.F. Programmable Super Heterodyne Receiver
- 5-Year Limited Warranty

GOLIGHT™

Golight, Inc. | RT 3 Box 37B | Culbertson, NE 69024
tel: 800.557.0098 | 308.278.3131 | fax: 308.278.2525
email: info@golight.com | website: www.golight.com

Circle 58 on Reader Service Card



- Will NOT Rust
- Cost Effective
- Made in the USA
- Customized to fit your needs
 - + Key to your existing key
 - + Your key our lock
 - + Custom engraving
- One-time padlock seal

Circle 59 on Reader Service Card

NEW from INCON



Model 1250-LTC

Condition Monitor/Position Indicator

- Number of tap changes "up/down to" each tap
- Number of consecutive tap changes in one direction
- Number of days since first or last change to highest and lowest tap (draghands)
- Number of days since passing through neutral
- Momentary relay acknowledgement at each tap change

INCON
INTELLIGENT CONTROLS

P.O. Box 638 Saco, ME 04072
Tel: 800.872.3455 / 207-283-0156
FAX: 207-283-0158 www.incon.com

Circle 60 on Reader Service Card

SOMETIMES
TWO HEADS ARE
BETTER THAN ONE



The K&H StarBeam remote controlled spotlight. All the dependability and control of our famous NightRay plus dual stainless-steel lampheads and wireless remote. Easy to mount on just about any type of vehicle, StarBeams are made right here in the USA. For more information, call 716-549-0135 or visit www.khindustries.com.

KH K&H INDUSTRIES, INC.
The Permanent Name in Temporary Lighting & Power

Circle 61 on Reader Service Card

Alarm Annunciators & Event Recorders



Products ideal for all process and power alarm applications

High Integrity Design (high availability)

Serial and Ethernet Communications



Low-cost 1ms Time Stamping/Annunciation

Surpasses EMC and surge tests



LED, ultra-bright, illumination

No single source of failure for the best reliability

5-year Warranty

Full range of Alarm Products for Safe and Hazardous Areas

You'll be in good company... suppliers of Alarm Systems and Event Recorders to: ABB, Areva, BNFL, ConEd, Duke Power, Florida Light and Power, PG&E, PowerGen, Schneider, Siemens and many more.

Please call 908 688 6709 for full details or visit us at www.rtkinstruments.com

A member of the RTK Instruments Group plc



Circle 62 on Reader Service Card

ADVERTISERS INDEX

RSC #	COMPANY	WEB SITE	PAGE #
1	Aegis Technologies	www.aegistech.us	1
2	Altec Industries, Inc.	www.altec.com	17
3	American Wire Group, Inc.	www.buyawg.com	139
4	ArborMetrics Solutions Ltd.....	www.arbormetricssolutions.com	29
5	Association of Energy Engineers	www.energycongress.com	107
6	Belyea Company, Inc.	www.belyeapower.com	32
7	Cannon Technologies/Cooper Power Systems.....	www.cannontech.com	Inside Front Cover
8	Cigré Canada	www.cigre-canada.org	37
9	CommScope, Inc.	www.commscope.com	44
10	Comverge, Inc.	www.comverge.com	9
11	Current Group LLC	www.currentgroup.com.....	23
12	Delta Star, Inc.	www.deltastar.com.....	131
13	Dis-Tran	www.distran.com	87
14	Elster	www.elster-eis.com	5
15	Flir Systems.	www.goinfrared.com	13
16	GarrettCom Inc.	www.GarrettCom.com.....	8
17	Hamby Young	www.hambyyoung.com	35
18	Hastings Fiberglass Products Inc.	www.hfgp.com	39, 41, 43
19	High Voltage Inc.	www.hvinc.com	117
20	Hipotronics Inc.	www.hipotronics.com	118
21	Hughes Brothers Inc.....	www.hughesbros.com.....	121
22	Inner-Tite Corp.....	www.inner-tite.com	28
23	Manitoba HVDC Research Centre Inc.	www.pscad.com	40
24	Neoptix Fiber Optic Sensors.....	www.neoptix.com	Front Cover
25	Nesco Inc.....	www.nescosales.com	138
26	Novinium	www.novinium.com.....	21
27	Opal-RT Technologies Inc.	www.opal-rt.com.....	93
28	Open Systems International Inc.	www.osii.com	25
29	Pauwels Canada Inc.	www.pauwels.com	130
30	Phenix Technologies Inc.	www.phenixtech.com	33
31	Power Engineers Inc.....	www.powereng.com	19
32	Primate Technologies	www.primate-tech.com.....	36
33	RTDS Technologies.....	www.rtds.com	42
34	Rugged Com Inc.	www.ruggedcom.com	7
35	Sabre Communications Corp.	www.sabrecom.com	77
36	Schweitzer Engineering Laboratories Inc.	www.selinc.com	14
37	Sensus Metering Systems	www.sensus.com	Inside Back Cover
38	T & R Electric Supply Company Inc.	www.t-r.com.....	132
39	Tavrida Electric North America Inc.....	www.tavrida.com	Outside Back Cover
40	The Von Corporation	www.voncorp.com.....	6
41	Thomas & Betts (Steel Structures Division).....	www.tnb.com	27
42	Trench Limited	www.trenchgroup.com.....	10
43	Utilimetrics	www.utilimetrics.org	101
44	Utility Tech Congress.....	www.utilitytechcongress.com	123
45	Valmont Newmark	www.valmont-newmark.com.....	15
46	W.I.R.E. Services, a division of Manitoba Hydro	www.wireservices.ca	24
47	Westex Inc.	www.westexinc.com	11
48	Winola Industrial Inc.	www.winolaindustrial.com	124
49	Workrite Uniform Company	www.workrite.com	3

Sensus **Flex** **Reliable Net** **Transmissions**

No interference. Period. The FCC license awarded only to the FlexNet system clears the airwaves for your transmissions. Your data collection is protected on this dedicated frequency. What's more, the system offers the highest RF power in the industry – a full two watts increases the range and reliability of endpoint-to-tower communications. And, data redundancy with every transmission assures data delivery.

Discuss FlexNet benefits with your local Sensus distributor.
Contact us for literature: 1-800-METER-IT
www.sensus.com/FlexNet

The only truly flexible AMI system.
SENSUS
METERING SYSTEMS

Systems available for electricity, gas, water and combination utilities.

YOU'VE SEEN IT YOU'VE HEARD ABOUT IT NOW IT'S HERE

Do you like the idea of circuit breaker's that are a third of the size of conventional products?

TEL manufactures in the range of 4 kV to 27 kV state-of-the-art circuit breakers with magnetic actuator technology that are suitable to both new switchgear and retrofit applications.

TEL circuit breakers have unsurpassed performance, with up to 150,000 close / open cycles.

TEL has the lightest, most compact circuit breakers with the highest reliability in the industry today.

VACUUM CIRCUIT BREAKERS



RECLOSERS



Our 15.5 kV and 27 kV reclosers are compact, lightweight (max. 70 Kg) and highly reliable with up to 30,000 full load operations.

Our reclosers have been designed with non-saturable Rogowski coils and with six voltage sensors while keeping the tank itself free of any encumbering electronics.

**All Tavrida products come with a
5 year warranty.**

TEL TAVRIDA ELECTRIC

1105 Cliveden Ave, Delta, BC V3M 6G9 Canada

Tel: 604.540.6600 — Fax: 604.540.6604

Email: info@tavrida-na.com

Website: www.tavrida-na.com