

The Official Publication of the Power & Communication Contractors Association

PCCA

Journal

4th Quarter 2014

PCCA Year-End Product Showcase

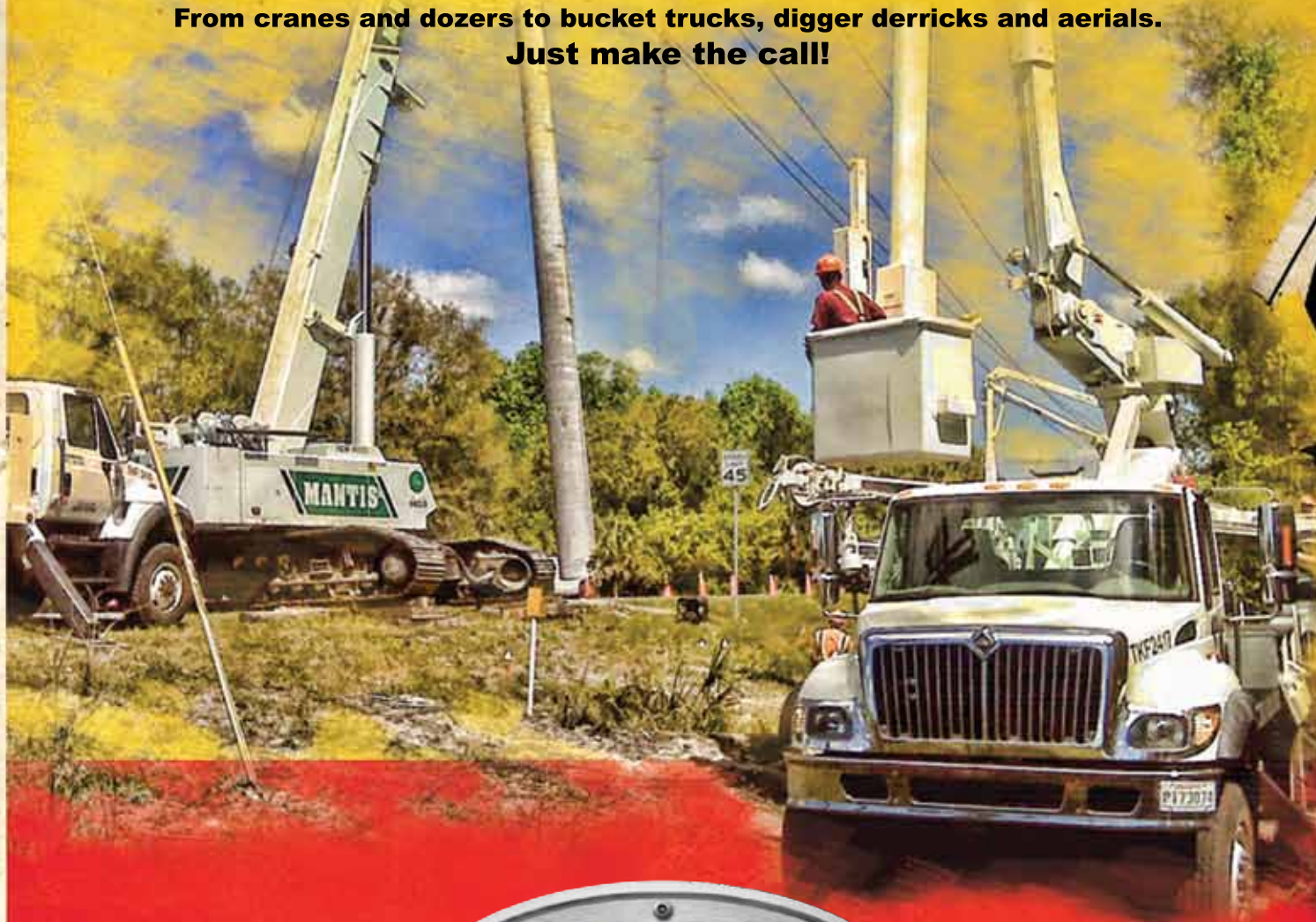
Inside

- Five Reasons Your Employees Will Leave You in 2015
- PCCA Unveils Program for 2015 Convention in Aruba
- PCCA Connections Lead to a Big Fish Story

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Five Reasons Your Employees Will Leave You in 2015

9

By Gene Marks

You read the news. You see the trends. Unemployment is coming down. Labor participation is creeping back up. And companies are hiring again, but many are challenged to find and maintain good people. Barring any unforeseen economic calamities and assuming continued growth in 2015, this will be the biggest issue facing your company this year. Your employees, after years of recession and slow recovery, will find themselves in demand on the job market. And important people may leave your company. Why? Turn to page 9 for at least five reasons.

PCCA Unveils Program for 2015 Convention in Aruba

31

PCCA recently released the full program for its 70th Annual Convention, March 6-11, 2015, at the Hyatt Regency Aruba Resort Spa & Casino in Palm Beach, Aruba. Go to page 31 for all the exciting details.

PCCA Year-End Product Showcase

39

To help our Associate members promote their companies, equipment lines, new models, expanded services, etc., PCCA runs the Year-End Product Showcase every year in the fourth quarter issue of the *PCCA Journal*. This year's edition begins on page 39—happy shopping!

Power News	13
Telecom News	19
PCCA Connections Lead to a Big Fish Story By Stephen Spears	23
Safety Watch By Grant Williams	25
Safety News	26
New PCCA Members	58
Industry Calendar	58
Advertiser Index	58

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Five Reasons Your Employees Will Leave You in 2015

By Gene Marks

You read the news. You see the trends. Unemployment is coming down. Labor participation is creeping back up. And like the owners and c-suite executives of mid-sized companies surveyed here, companies are hiring again... but are challenged to find and maintain good people. Barring any unforeseen economic calamities and assuming continued growth in 2015, this will be the biggest issue facing your company this year. Your employees, after years of recession and slow recovery, will find themselves in demand on the job market. And important people may leave your company. Why? Here are at least five reasons.

You are not outsourcing enough. Yes, outsourcing. Your company is asking people to do too much in too little time. You're giving responsibilities to people who do not have the experience or knowledge. You're asking them to do too much. And they will leave because of this. What should you be outsourcing? Where do you find experts and individuals to do contracted work? What are the legal and tax implications?

You are not paying attention to healthcare. If you've got more than 100 full-time equivalent people after January 1, 2015, you are required by law to provide affordable health insurance to the full timers. And that number goes down to 50 on January 1, 2016. Are you providing the best plans possible? Are you educating your employees so that they can make the right choices? Are your plans more expensive or less generous than a competitor down the road? If so, watch your people go to that competitor—or to work for someone else who provides better answers and choices to these problems.

You are not giving them enough flexibility. Today's employees don't just sit behind a desk. Particularly younger employees. They expect to be mobile. They want to move around. They want to work from home. They want to connect on the road. They want the ability to get their job done wherever they are, whenever they can. What are your policies? How can remote workers be supervised? How will this affect your business? And what technology is available to make it seem as if they're in your office, even when they're not?

Your policies are outdated. People in 1990s look and act differently than they did in the 1960s. And people now look and act differently than those in the 1990s. Have your poli-

Pay is important. Titles are important. Perks are important. But it's all about one thing: culture. How are you showing your gratitude? What special things is your company doing to keep your people happy, entertained, and looking forward to coming to the office?

cies kept up? Do you allow tattoos? Jewelry? Piercings? What do you consider to be inappropriate dress? Are you discriminating without realizing it? Are your hiring and firing practices up with the times? There are no clear answers to these questions. But there are laws. And there's common sense. And there's been a change in attitudes over the past ten years that today's employees expect. If you're not changing, you'll lose these people.

You're not investing in the right work environment. Pay is important. Titles are important. Perks are important. But it's all about one thing: culture. How are you showing your gratitude? What special things is your company doing to keep your people happy, entertained, and looking forward to coming to the office? Some companies spend big on perks; others have more innovative ways to keep their people satisfied. When was the last time you asked yourself how nice your place of business is? Your employees are asking that. They know what's out there. They have friends. And, if given a choice to do accounting in a dreary, negative, outdated place or in an open, friendlier, more appreciative environment, where would you choose?

You don't need a reminder how important your people are. But you do need some help to learn how other smart people are keeping their important



Gene Marks, Marks Group PC

Continued on page 10

Keeping Your Employees

Continued from page 9

people around. Everyone does. It starts with the above questions. I look forward to providing you with the answers.

Learn More in Aruba

Gene Marks will be leading a session at the 2015 PCCA Convention in Aruba: The Latest Trends, Techniques, and Tools for Finding and Motivating Your Very Best People. He is a

columnist, author, and small business owner. He writes daily for the New York Times and weekly for Forbes, the Huffington Post, Inc Magazine, FOX Business, Entrepreneur.com, and Philadelphia Magazine.

Marks' columns are read by hundreds of thousands of business owners and managers. He has written six books on business management, specifically geared toward small and medium-sized companies. His most recent is the Manufactur-

er's Book of Lists. He frequently appears on FOX News, MSNBC, Fox Business, Bloomberg, and CNBC discussing matters affecting the business community.

Through his sessions, Marks helps business owners, executives, and managers understand the political, economic, and technological trends that will affect their companies so they can make profitable decisions.

Gene owns and operates the Marks Group PC, a highly successful ten-person firm that provides technology and consulting services to small and medium-sized businesses. Before starting the Marks Group, Gene, a Certified Public Accountant, spent nine years in the entrepreneurial services arm of the international consulting firm KPMG in Philadelphia where he was a senior manager.



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**2015 PCCA Mid-Year
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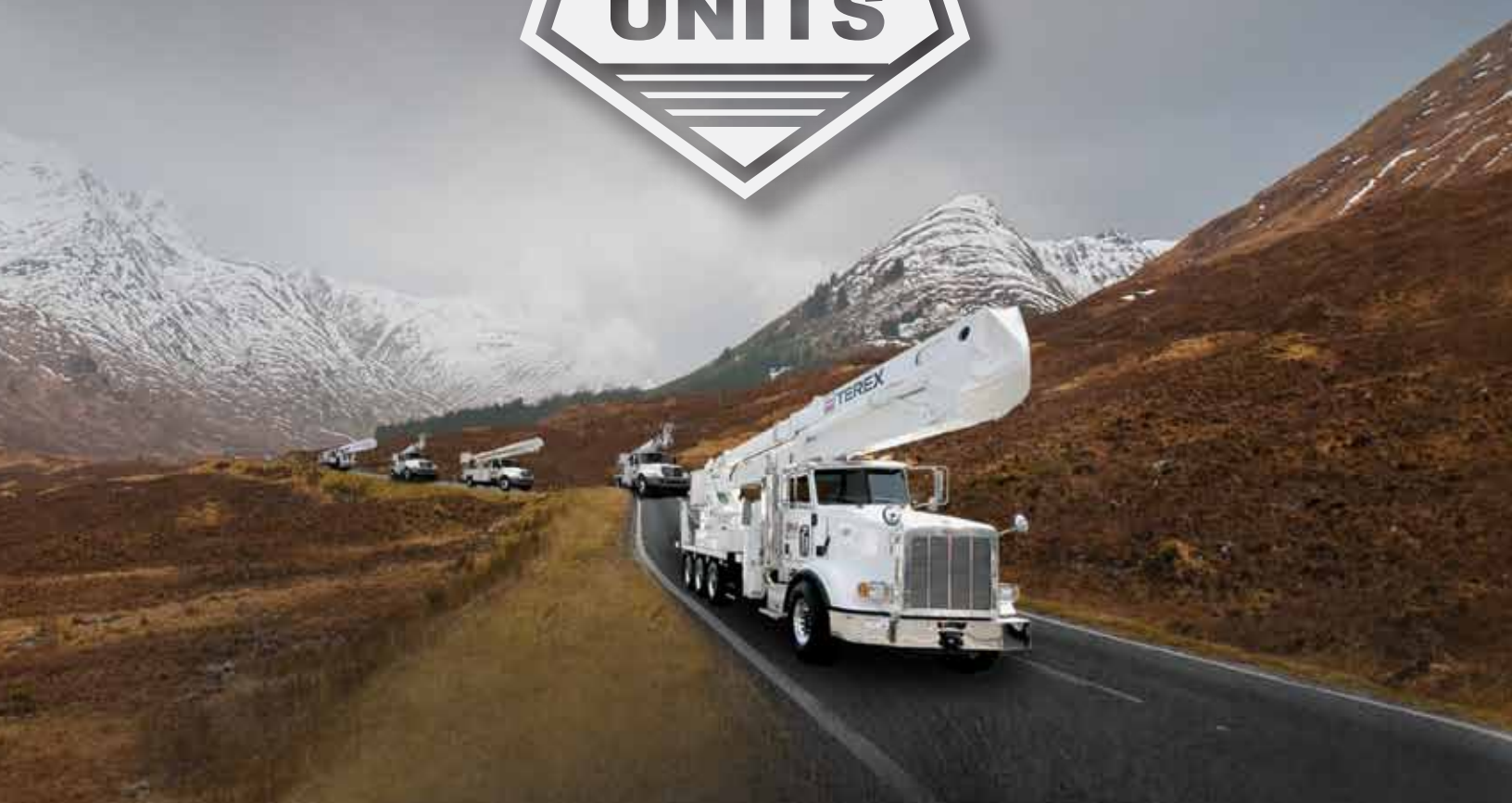
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USDA Announces Investments in Rural Electric Infrastructure

In September and October, Agriculture Secretary Tom Vilsack announced more than \$1.9 billion in USDA loan guarantees to improve the delivery of electric power to rural communities in 21 states. USDA has worked with rural electric cooperatives since 1935 to provide electricity for rural consumers. Through the years, these investments have delivered new economic and social opportunities and have enhanced the quality of life in the nation's rural communities.

USDA has invested nearly \$2.5 billion in electric infrastructure improvements in FY 2014 and almost \$31 billion since 2009. In FY 2014 alone, USDA loan guarantees have helped build or improve 19,000 miles of electric transmission and distribution lines.

Following are the recipients and projects receiving funding under the October 16 announcement.

(State, Borrower, Loan Amount, Total Miles)

Colorado

CoBank, \$250,000,000

Georgia

Coastal Electric Membership Corp., \$23,000,000 - 208 miles

GreyStone Power Corp., \$37,073,000 - 81 miles

Habersham Electric Membership Corp., \$15,724,000 - 82 miles

Sawnee Electric Membership Corp., \$161,456,000 - 809 miles

Georgia, Alabama, Florida

Georgia Systems Operation Corp., \$1,200,000 - 26 miles

Georgia Transmission Corp., \$104,414,000 - 6 miles

Iowa

Harrison County REC, \$4,000,000 - 8 miles

Western Iowa Power Co-op, \$7,500,000 - 75 miles

Illinois

Southern Illinois Power Co-op, \$10,305,000 - 29 miles

Indiana

Decatur County REMC, \$5,000,000 - 49 miles

Kansas

Caney Valley Electric Co-op Assn., Inc., \$5,500,000 - 83 miles

Twin Valley Electric Co-op, Inc., \$4,400,000

Kentucky

Inter-County ECC, \$20,000,000 - 311 miles

Minnesota

Blue Earth Nicollet Faribault Co-op Electric Assn., \$18,800,000 - 147 miles

Red River Valley Co-op Power Assn., \$8,000,000 - 84 miles

Todd-Wadena Electric Co-op, \$9,000,000 - 169 miles

Mississippi

South Mississippi Electric Power Assn., \$54,269,000 - 16 miles

Montana

Mid-Yellowstone Electric Co-op, Inc., \$5,254,000 - 69 miles

NorVal Electric Co-op, \$3,436,000 - 110 miles

North Carolina

Randolph EMC, \$24,000,000 - 335 miles

Rockwell Solar, LLC, \$3,000,000

Ohio

North Western Electric Co-op, Inc., \$3,696,000 - 11 miles

Oklahoma

Caddo Electric Co-op, \$32,400,000 - 330 miles

Northeast Oklahoma Electric Co-op, \$33,000,000 - 100 miles

Oklahoma & Texas

Southwest Rural Electric Assn., \$10,500,000 - 453 miles

South Carolina

Horry Electric Co-op, \$51,926,000 - 624 miles

South Dakota

Bon Homme Yankton Electric Assn., Inc., \$6,723,000 - 72 miles

Cam Wal Electric Co-op, Inc., \$6,074,000 - 124 miles

Kingsbury Electric Co-op, \$3,268,000 - 57 miles

South Dakota & Minnesota

East River Electric Power Co-op, Inc., \$131,659,000 - 445 miles

Virginia

Shenandoah Valley Electric Co-op, \$84,315,000 - 244 miles

National Rural Utilities Cooperative Finance Corp., \$250,000,000

Wisconsin

Clark Electric Co-op, \$4,800,000

Wyoming

Garland Light & Power Company, \$4,110,000 - 18 miles

Following are the loan recipients and projects receiving funding under the September 9 announcement.

Colorado

Morgan County REA, \$10,346,000 - 97 miles

Georgia

Carroll Electric Membership Corporation, \$20,607,000 - 441 miles

Tri-County Electric Membership Corporation, \$22,955,000 - 302 miles

Illinois

Menard Electric Cooperative, \$17,000,000 - 173 miles

Kentucky

Continued on page 14

Power News

Continued from page 13

Jackson Energy Cooperative Corporation, \$26,940,000 - 135 miles
Salt River Electric Cooperative Corporation, \$18,000,000 - 147 miles
Shelby Energy Cooperative, Inc., \$20,000 - 192 miles

Minnesota

Crow Wing Cooperative Power and Light Company, \$21,000,000 - 168 miles
Lyon-Lincoln Electric Cooperative, Inc., \$6,198,000 - 70 miles

Missouri

Howard Electric Cooperative, \$4,766,000 - 31 miles
Ralls County Electric Cooperative, \$3,143,000 - 10 miles

Montana

Yellowstone Valley Electric Cooperative, Inc., \$16,166,000 - 144 miles

New Mexico

Springer Electric Cooperative, Inc., \$14,117,000 - 74 miles and a 1 MW photovoltaic facility

North Carolina

Rutherford Electric Membership Corporation, \$18,500,000 - 60 miles
Tideland Electric Membership Corporation, \$24,500,000 - 161 miles

Tri-County Electric Membership Corporation, \$19,000,000 - 97 miles
Union Electric Membership Corporation, \$50,000,000 - 384 miles

North Dakota

Cass County Electric Cooperative, Inc., \$36,300,000 - 771 miles
Roughrider Electric Cooperative, Inc., \$50,000,000 - 687 miles

Ohio

North Western Electric Cooperative, Inc., \$4,800,000 - 45 miles

Oklahoma

Verdigris Valley Electric Cooperative, Inc., \$21,000,000 - 231 miles

South Dakota

Central Electric Cooperative, Inc., \$14,343,000 - 222 miles
FEM Electric Association, Inc., \$5,752,000 - 197 miles
H-D Electric Cooperative, Inc., \$6,385,000 - 102 miles
West River Electric Association, \$22,870,000 - 160 miles
Whetstone Valley Electric Cooperative, Inc., \$7,500,000 - 86 miles

South Dakota & Nebraska

Cherry-Todd ECI, \$14,884,000 - 101 miles

Texas

North Plains Electric Cooperative, Inc., \$21,656,000 - 348 miles

Grid Modernization Efforts Stabilize Demand for T&D Services

The Environmental Protection Agency's impending regulation to lower power plants' carbon emissions is projected to shape demand for transmission and distribution (T&D) services. Working towards the goal of cutting emissions by 30 percent by 2030 from the 2005 levels, utilities have already achieved reductions of 14 percent. Ongoing work in terms of network renewal, new generating capacity, and reconfigurations will translate into revenue growth for the T&D services market.

New analysis from Frost & Sullivan, Analysis of the North American Transmission and Distribution Services Market, finds that the market earned revenues of \$20.43 billion in 2013 and estimates this to reach \$20.94 billion in 2018. Key market segments of T&D services are engineering and consul-

tancy, construction, and operations and maintenance.

The North American T&D services market has benefited from major investments in generation, transmission, and distribution infrastructure in both Canada and the United States. These investments are driven by the need to:

- Renew aging equipment
- Improve reliability and performance of electrical networks
- Ease grid congestion

Utilities are making considerable investments to protect T&D infrastructure from natural and man-made disasters. For instance, in the wake of devastation caused by Hurricane Sandy in October 2012, utility companies redoubled their efforts to storm proof the distribution network. This proved to significantly boost the T&D services market.

"Despite greater outsourcing of T&D tasks, the market has remained conservative in certain areas," said Frost & Sullivan Energy & Environmental Principal Consultant Farah Saeed. "Small electrical jobs and support for distribution voltage projects are still offered in-house; however, there is growing demand for external support for numerous transmission projects."

With utilities, especially investor owned-utilities, increasingly evaluating financial performance, there is a keen desire to slash non-critical investments and outsource non-core activities to save on all aspects of maintenance. While this bodes well for T&D players, they are also diversifying their operations in new verticals and acquiring companies to counter the sluggish investments over the last decade.

Nevertheless, the revenues from trans-

mission services are expected to fall until 2018, as major projects near completion. In contrast, services for distribution projects will become important as this sector benefits from higher investment as well

as outsourcing to contractors.

“Although transmission infrastructure will continue to attract the headline projects, developments in the distribution sector will provide more diverse

opportunities, especially in areas such as data management and environment conservation,” Saeed said.

Smart Cities Are Driving Change Across the Energy Sector

A new white paper from Navigant Research examines the critical issues facing cities and utilities as they develop energy policies suited for the 21st century.

Cities are a focal point for some of the most profound economic, environmental, social, and technological issues facing the world today. There is increasing demand to move to cleaner and more efficient energy resources to meet the demands of an urban population that will expand by 2.4 billion people during the next 35 years. According to the white

paper, the spread of smart city technologies and policies, developed in response to the rapid growth and change happening in cities around the world, is helping to drive sweeping and fundamental changes in the energy landscape.

“Cities around the world are recognizing the importance of—and the opportunities offered by—changes in energy infrastructure and energy markets,” said Eric Woods, research director with Navigant Research. “In addition to being the focus of extensive smart grid pilots, cities are becoming

Continued on page 16



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increasingly proactive in terms of the targets they are setting for their utilities to shift from fossil fuel to renewable energy and are encouraging local generation on both the residential and commercial level.”

Support for renewable generation by city authorities places increased pressure on utilities to deliver an infrastructure that can integrate these new resources in a manageable way, according to the white paper. Grid reinforcement is often required to support the integration of large amounts of renewable energy, but this can be offset by the wider use of smart technologies—smart grids—for both network management and demand management initiatives, such as automated

demand response.

The white paper, “Smart Cities and the Energy Cloud,” examines the critical issues facing cities and utilities as they develop the energy policies needed both today and in the future. The emerging vision is of smart cities that integrate large and small-scale energy initiatives ranging from improvements in national infrastructure through citywide energy efficiency programs to local energy generation.

The full white paper is available for free download at www.navigantresearch.com/research/smart-cities-and-the-energy-cloud.



Report: U.S. Solar Industry Nearing 16 GW of Installed Capacity

The United States’ solar market hit a major milestone in the second quarter of this year, with more than half a million homes and businesses now generating solar energy. According to GTM Research and the Solar Energy Industries Association’s (SEIA) Q2 2014 U.S. Solar Market Insight Report, the U.S. installed 1,133 megawatts (MW) of solar photovoltaics (PV) in the second quarter of this year.

The residential and commercial segments accounted for nearly half of all solar PV installations in the quarter. The residential market has seen the most consistent growth of any segment for years, and its momentum shows no signs of slowing down.

Across the United States, cumulative PV and concentrating solar power operating capacity has eclipsed 15.9 gigawatts (GW), enough to power more than 3.2 million homes.

“Solar continues to soar, providing more and more homes, businesses, schools, and government entities across the United States with clean, reliable, and affordable electricity,” said SEIA

President and CEO Rhone Resch. “Today, the solar industry employs 143,000 Americans and pumps nearly \$15 billion a year into our economy.”

Showing continued strength, the utility PV segment made up 55 percent of U.S. solar installations in the second quarter of the year. It has accounted for more than half of national PV installations for the fifth straight quarter. In just two years, the utility segment has quadrupled its cumulative size, growing from 1,784 MW in the first half of 2012 to 7,308 MW today.

“Solar continues to be a primary source of new electric generation capacity in the U.S.,” said GTM Research Senior Vice President Shayle Kann. “With new sources of capital being unlocked, design and engineering innovations reducing system prices, and sales channels rapidly diversifying, the solar market is quickly gaining steam to drive significant growth for the next few years.”

GTM Research and SEIA forecast 6.5 GW of PV will be installed in the United States by the end of this year, up 36 percent over 2013.

Key findings:

- The U.S. installed 1,133 MW of solar PV in Q2 2014, up 21 percent over Q2 2013, making it the fourth-largest quarter for solar installations in the history of the market.
- Cumulative operating PV capacity has now eclipsed the 15 GW mark thanks to three consecutive quarters of more than 1 GW installed.
- As of the first half of 2014, more than half a million homeowners and commercial customers have installed solar PV.
- For the first time ever, more than 100 MW of residential PV came online without any state incentive.
- 53 percent of new electric generating capacity in the U.S. in the first half of 2014 came from solar.
- Growth remains driven primarily by the utility solar PV market, which installed 625 MW in Q2 2014, up from 543 MW in Q2 2013.
- The report forecasts that PV installations will reach 6.5 GW in 2014, up 36 percent over 2013 and more than three times the market size just three years ago.

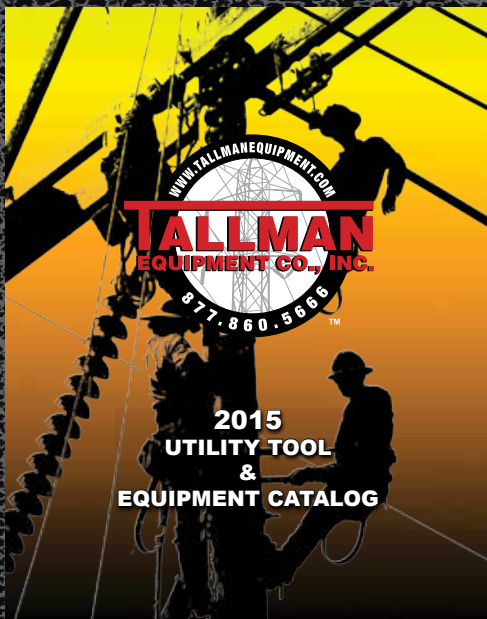




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USDA Announces Rural Broadband Investment

Agriculture Secretary Tom Vilsack on October 22 announced \$190.5 million in grants and loans to make broadband and other advanced communications infrastructure improvements in rural areas. USDA is providing assistance through the Community Connect Grant program (\$13,685,608), the Public Television Digital Transition Grant program (\$2,402,588), and the Telecommunications Infrastructure Loan program (\$174,419,000).

Community Connect grants establish broadband service in rural areas to boost economic growth and offer educational, health care, social, and public safety benefits. Public television grants help public television stations serving rural areas acquire the equipment they need to transition from analog to digital broadcasts. Telecommunications infrastructure loans help maintain, upgrade, or expand rural telecommunications networks.

Through this announcement, USDA is providing \$190.5 million for 25 projects in 19 states, Puerto Rico, and the U.S. Virgin Islands. Funding is contingent upon the recipients meeting the terms of their grant or loan agreements.

Following are the Telecommunications Infrastructure Loans that were announced. (The Community Connects Grant and Public Television Digital Transition Grant recipients can be found at www.rurdev.usda.gov.)

Arkansas

Arkwest Communications, Inc., \$24,015,000, to establish a fiber-to-the-home network and make other system improvements.

Georgia

Pineland Telephone Cooperative, Inc., \$16,498,000 to establish a fiber-to-the-premises network and make other system improvements.

Iowa

South Slope Cooperative Telephone Company, \$14,690,000 to establish a fiber-to-the-premises network and make other system improvements.

Kentucky

Thacker-Grigsby Telephone Company, Inc., \$9,595,000 to establish a fiber-to-the-premises network and retire its copper-based fixtures.

Missouri

Miller Telephone Company, \$8,425,000 to establish a fiber-to-the-premises network and make other system improvements.

Oklahoma

Atlas Telephone Company, Inc., \$5,064,000 to establish a fiber-to-the-home network and make other system improvements.

South Carolina

Palmetto Rural Telephone Cooperative, Inc., \$23,898,000 to establish a fiber-to-the-premises network and make other system improvements.

Tennessee

Twin Lakes Telephone Cooperative Corporation, \$29,753,000 to establish a fiber-to-the-premises network and make other system improvements.

Texas & Oklahoma

Santa Rosa Telephone Cooperative, \$10,303,000 to complete the co-op's fiber-to-the-premises network in Texas and make other system improvements.

Utah & Idaho

Direct Communications Cedar Valley, LLC, \$7,695,000 to establish a fiber-to-the-home network and make other system improvements.

Washington

Mashell Telecom, Inc. (dba Rainier Connect), \$24,483,000 to establish a fiber-to-the-premises network and make other system updates to improve broadband delivery.

Rural Broadband Experiments Draw Wide Interest

In November, the Federal Communications Commission announced that its experiment exploring how to expand robust broadband in rural America in the most cost-effective way has attracted almost 600 project bids from 181 applicants, representing nearly \$885 million worth of projects.

In total, the 181 applicants proposed to serve more than 76,000 census blocks in all 50 states and Puerto Rico. In the coming weeks, FCC staff will identify the provisionally winning bidders, who then will be required to submit information demonstrating their financial and technical ability to participate in the \$100 mil-

lion experiment. Finalists that are able to meet financial, technical, and other regulatory requirements could launch their experiments as early as spring 2015.

The FCC's rural broadband experiments will inform the agency's broader effort to expand rural broadband through its Connect America Fund. They will

Continued on page 20

also inform the FCC's efforts to ensure that consumers everywhere can benefit from the sweeping technological advances occurring now in the communications industry, while preserving consumer protection, competition, universal service, and access to emergency services during these transitions.


The FCC said that bidders included a diverse group of entities, including

competitive providers, electric utilities, wireless internet service providers, and others.

The \$100 million available for the experiments is divided into three groups:

- \$75 million to test competitive interest in building networks that are capable of delivering 100 Mbps downloads and 25 Mbps uploads—far in excess of the current Connect America Fund

standard of 4/1—for the same or lower amounts of support than will be offered to incumbent carriers in Phase II of Connect America


- \$15 million to test interest in delivering service at 10/1 speeds in high-cost areas
- \$10 million for 10/1 service in areas that are extremely costly to serve. 

FCC Boosts Wireless Broadband by Easing Infrastructure Burdens

The Federal Communications Commission on October 17 adopted a Report and Order that takes critical steps to promote deployment of the wireless infrastructure necessary to provide the public with ubiquitous, advanced wireless broadband services.

This FCC action updates and tailors the manner in which the FCC evaluates the impact of proposed deployments on environment and historic properties. It also adopts rules to clarify and implement statutory limitations on state and local government authority to review infrastructure siting applications, including a “deemed granted” remedy if a state or local government fails to act on an eligible facilities modification

request under Section 6409(a) of the Spectrum Act. Finally, it adopts an exemption from the environmental public notification process for “temporary towers” that are in place only for short periods of time.

Taken together, these steps lay the groundwork necessary for delivering more wireless capacity in more locations to consumers throughout the United States. At the same time, the FCC said, it adheres to statutory obligations to protect the environment and historic properties, and it safeguards tribal, state, and local land-use priorities as well as safety and aesthetic interests. 

Study Shows One Public Hotspot for Every 20 People on Earth by 2018

iPass Inc., the world's largest commercial Wi-Fi network, has revealed the results of in-depth research into global public Wi-Fi hotspot deployments through its Wi-Fi growth map. The data, from analysts Maravedis Rethink, shows there will be 47.7 million public Wi-Fi hotspots deployed worldwide by the end of 2014. The map shows that over the next four years, global hotspot numbers will grow to more than 340 million, nearly one Wi-Fi hotspot for every twenty people on earth by 2018. This compares to one Wi-

Fi hotspot for every 150 people today. Further Wi-Fi growth map highlights include:

- France is the “country of Wi-Fi” in 2014 with the most hotspots in total, followed by the U.S. and the UK. By 2018 this will change to the U.S., followed by China and France.
- Europe is the “continent of Wi-Fi” with 50 percent of the world's Wi-Fi estate in 2014. By 2018, Asia will strip Europe of this title.
- Today, China has five times more commercial Wi-Fi hotspots than any other

country.

- Community Wi-Fi has been driven by Europe and then North America, but Asia will catch up in 2018.
- 22.7 million Wi-Fi hotspots are enabled for roaming between different provider networks today; this number rises to 289.3 million in 2018.

“Over the last few years we’ve seen the emergence of the ‘Wi-Fi first’ generation. Wi-Fi has become cool again; in fact it’s seen by most as an essential utility, just like water or electricity,” iPass

President and CEO Evan Kaplan said. “Most of the devices we use are Wi-Fi only and even on the most advanced 4G handsets, 78 percent of data goes over Wi-Fi. Simply put, it’s the network of choice for consumers and soon they’ll be able to roam this alternative network of millions of hotspots.”

Wi-Fi is also on the move; becoming available on 60 percent of planes and 11 percent of trains by 2018. This compares to only 16 percent of planes and 3 percent of trains equipped with Wi-Fi in 2014. Community “homespot” public Wi-Fi hotspots will see the most explosive growth, rising from just under 40 million in 2014 to more than 325 million in 2018.

“The growth in community hotspots is taking public Wi-Fi from the cities to the suburbs,” said Peter White, co-founder, Maravedis Rethink. “The fixed

line operators with superfast broadband in the ground are converting residential customers to community hotspot providers at the rate of 1 per second. For many years, all the talk around mobility has been on 3G/4G and a handful of mobile operators. Our data shows that in the coming years it’s Wi-Fi that will steal the limelight as consumers’ thirst for data goes beyond anything that cellular can deliver, and as business owners see the value Wi-Fi brings to helping them differentiate and innovate.”

The research showed that Wi-Fi is changing the power structures of the telecommunications industry. Fifty percent of all commercial hotspots are controlled by brands whose core business isn’t telecommunications. Just a few years ago there were only a handful of Wi-Fi suppliers; now there are millions. As opposed to the highly regulated

cellular world, Wi-Fi is organic, emergent, and empowering; it’s not regulated and it’s easy for anyone to deploy. As a result, we are witnessing a power shift from traditional telcos to business owners, such as cafes, hoteliers, and retailers who are all getting in on the Wi-Fi game.

“A messy and fragmented global Wi-Fi network is emerging; the challenge is that it needs to be easy for consumers to access and simple for providers to monetize. This is where we’ll see the platform players like Facebook and Google come to the party. They have the ability to help this new breed of Wi-Fi provider get paid in meaningful currencies—namely cash, advertising, or user data,” Kaplan said. “Just look back ten years or so, many business were under-utilizing their online assets before the emergence of Google AdSense; now many are making significant revenues from it.”



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PCCA Connections Lead to a Big Fish Story

By Stephen Spears, PCCA Past President
Bonneville Contracting & Technology Group, Inc.

I spent a year in Minnesota one winter. But as an avid fisherman, the opportunity to take the prize catch of the Northlands off my Bucket List was one I could not pass up. So when Marty Ferguson of FS3 put a premium Walleye trip to northern Minnesota up for bid at the PCCA Auction in St. Thomas, I was on it like a Muskie on a hooked Walleye.

This pilgrimage to the north is an annual event for Marty and a select group of customers and suppliers. But having heard the stories (or tall tails) spun by Past PCCA Presidents like J.R. Spalj and Greg Johnson of the monster Walleyes, Northerns, and Muskies lurking in the frigid lakes of the north, I had to see for myself. I was not disappointed.

The adventure started upon my arrival in the Twin Cities and finding Indian summer in its full splendor. Lucky me. Marty picked up me and the other non-Minnesotans at the airport and escorted us to his office/warehouse facility and home in Annandale, west of the cities. After a spin around Clearwater Lake on his pontoon boat, we were wine and dined at the lake's best steak house.

The next morning, we headed north. A caravan of SUVs took 14 of us up through Brainerd, Bemidji, and on to Baudette and Lake of the Woods. There we were met by Sportsman's Lodge staff and captains who loaded us onto 30-foot Sportcraft Cruisers for the next segment of our journey—two hours across the lake to Oak Island, the home for the great Walleye adventure. The Sportsman's Lodge knows Marty well, and the red carpet comes out when his group hits dock.

The lodge's accommodations were more than comfortable. The evenings were spent feasting on truly memorable meals followed by ceremonial Duck Farts and tales of the one that



Andy Lewis, Lewis Manufacturing, and Marty Ferguson, FS3, cruise across picturesque Clearwater Lake. FS3 donated the fishing trip to this year's PCCA Auction.

got away. The days were spent two to a boat with highly skilled local guides whizzing us through the lake's Canadian islands to one spot and the next to catch Walleye, Crappie, Perch, Small Mouth Bass, Northern Pike, and the occasional prize monster Muskie.

While strict limits on all varieties of keepers were observed, the daily group shore lunches were something to write home (as well as the *PCCA Journal*) about: fresh catch prepped on shore among the pines and the bald eagles. Each evening we were back to the lodge enjoying happy hour on the balcony while the guides cleaned and packaged our catch for us to carry home.

The PCCA was well represented on the expedition, with participants from suppliers Condux, Lewis Manufacturing, and Dura-Line, from contractors Bonneville, Telecom Construction, and MP Nexlevel, and of course our most gracious hosts from FS3, Marty and Laurie Ferguson. They really put on a great event, and it more than met my expectations. If catching a hundred fish a day per boat is something that grabs your attention, this is the place you want to go. But first you will have to out-bid me at the auction in Aruba!



Steve Spears' purchase at last year's PCCA Auction not only greatly benefited the association, but it also landed him the big catches that he had dreamed of—a Northern Pike (left) and a Walleye.

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Operating Bucket Trucks in Cold Weather

By Grant Williams, J. J. Kane Auctioneers

Winter is coming, and storm response crews are preparing. When ice and snow hang on the power lines and knock out electrical service, utility linemen have to be ready to go at a moment's notice. One of the most critical tools they bring along to restore your power is a bucket truck. Operating in freezing temperatures means the equipment has to stand up to harsh elements. Sub-zero temperatures, moisture, and slippery roads are only a few of the challenges bucket truck crews may face. Many of the problems bucket trucks can experience in the winter are associated with the chassis: the battery, engine oil, spark plugs, thermostats, and door locks. Additional precaution should be taken when operating a bucket truck in cold weather.

We are always glad to see those heroes who wear hard hats when they arrive to restore power, phone, and cable TV. Let's look at a few of the things operators need to consider checking on their equipment in advance, before loading up trucks and heading out to restore the electricity.

When preparing to leave for a lengthy trip, check these items, to avoid equipment trouble:

Hydraulic Equipment - Hydraulic unit and used bucket truck accessories that should be monitored during winter temperatures include the hydraulic system, control panels, bearings, lines, and fittings. Many units have electronic "over-stow" switches that can remain engaged when ice is present and prevent the boom from functioning properly. Hot water and a rubber mallet can help free up the switch and get the boom back in action. Insure proper maintenance and lubrication of your bucket truck to keep it in top condition for years to come.

Winch Lines and Cables - Inspect the cables and ropes that are regularly used to hoist materials into place, looking for damaged areas. It is better to find and replace any damaged lines in the shop rather than out in the cold weather.

Engine Fluid Levels - Inspect each fluid to ensure it is at the proper level, and consider carrying along extra, if permissible. Remember, there are hydraulic system fluids that power the unit, as well as the typical truck chassis fluids, including windshield washer fluid, coolant, transmission fluid, differen-

tial fluid, etc.

Truck Batteries - Most batteries are rated to a specific sub-zero temperature. Know the temperature for which the battery is rated and be prepared to take additional precautions if traveling in temperatures below that limit. Make sure the battery is in proper working condition with clean, non-corroded terminals to protect against any starting problems.

Tire Pressure - Before taking a trip, tires need to be checked for proper inflation. Changes in temperature cause the tire pressure to increase and decrease. Check with your tire manufacturer to get the recommended operating pressure levels for the conditions in which you will be driving. Both under-inflated and over-inflated tires will affect handling ability and fuel efficiency.

Windshield Wipers - Clear visibility is very important during colder weather. Check wiper blades for damage and replace them with new blades if needed. Remember that the windshield washer fluid needs to have de-icing capability. This will help increase your visibility when precipitation is falling as well as prevent the wipers from freezing during sub-zero weather.

Vehicle Body - Ice, rocks, and road salt can damage the exterior paint of the bucket truck, which can lead to corrosion. A coat of "winter wax" can help preserve the paint. Wash the bucket truck frequently during the winter to remove any corrosive materials that can get stuck on the truck from roadways.

Door Lock Lubrication - Locks can freeze during frigid temperatures. Lubricating the hood latch, door, and any other locks is necessary to help prevent sticking. Apply lubricants to prevent ice forming and to keep the locks working freely.

Always follow the operators and maintenance procedures as directed by the equipment manufacturer.



Safety News

Labor Department and FCC Announce Cell Tower Safety Effort

Kathy Pierce expected her son, Chad Weller, to come home on March 19, at the end of his shift as a cell tower climber. But Weller, always ready with a smile for his mother, never came back. He was sent up alone to fix a communication signal on top of a water tower in the rain while wearing a harness two sizes too big, and he lost his life in a fatal fall. Chad Weller is one of 11 workers who have lost their lives in 2014 while constructing or repairing cell towers. Thirteen died in the previous year, including Bridgette Hester's husband, who was killed as he worked on a tower that was struck by a vehicle and collapsed.

Kathy Pierce and Bridgette Hester joined the U.S. Department of Labor, the Federal Communications Commission, and leaders in the telecommunications industry at an event in October focused on new and continuing efforts to prevent worker fatalities on cell towers. Labor Secretary Thomas Perez and FCC Chairman Thomas Wheeler spoke at the event to announce a new working group that will collaborate in the development and implementation of recommended safety practices for the growing telecommunications industry.

"The cellphones in our pockets can't come at the cost of a worker's life," Perez said. "The cell tower industry might be small, with 10,000 to 15,000 workers, but it's quickly proving to be one of the most dangerous. If we don't do something now, the number of fatalities is going to grow as fast as the industry does. We know we can't solve this problem alone though, and that's why I am so glad to be joined in partnership on this issue with the FCC and major carriers like AT&T. It's a perfect example of federal agencies and industry break-

ing down barriers and identifying common goals to save workers' lives."

The event featured a morning workshop led by OSHA, comprised of two panel discussions featuring representatives from OSHA, the FCC, AT&T, and the National Association of Tower Erectors. The first panel discussed the root causes of the high fatality and injury rates, while the second explored solutions. During the discussions, OSHA shared steps taken to curb these injuries and fatalities, including public outreach and enforcement, as well as the agency's emphasis on worker training.

"The fatality rate in this industry is extraordinarily high—tower workers are more than 10 times as likely to be killed on the job as construction workers," said OSHA head Dr. David Michaels. "But these deaths are preventable. OSHA has developed a comprehensive initiative to ensure that safer working conditions and best practices are not just recommendations, but the law of the land. We look forward to the help FCC and industry can provide in making this a reality."

Following OSHA's workshop, the group participated in a signing ceremony for the new apprenticeship program. It was spearheaded by the telecommunications industry, with the advice and assistance from the Department of Labor, and it aims to provide high-quality skills and safety training for telecommunication tower technicians.

For more information on worker safety on the communication towers, visit OSHA's web page at www.osha.gov/doc/topics/communicationtower. This article was provided by the Occupational Safety and Health Administration.

Survey Links Compulsion and Phone Use

If the ring, beep, or buzz of your cellphone triggers an intense urge to respond and you find yourself reaching for the phone—even when you're driving—you're not alone.

A new survey commissioned by AT&T and Dr. David Greenfield, founder of The

Center for Internet and Technology Addiction and Assistant Clinical Professor of Psychiatry at the University of Connecticut School of Medicine, found that twice as many people as self-reported cellphone addiction are showing compulsive phone behaviors, with three-in-four

people admitting to at least glancing at their phones while behind the wheel.

"We compulsively check our phones because every time we get an update through text, email, or social media, we experience an elevation of dopamine, which is a neurochemical in the brain

that makes us feel happy,” Greenfield said. “If that desire for a dopamine fix leads us to check our phones while we’re driving, a simple text can turn deadly.”

The study, fielded as part of the Texting & Driving...It Can Wait campaign, was released as AT&T focuses on helping people find ways to resist the urge to text and drive at a potentially deadly moment of temptation.

- The AT&T DriveMode app for iPhone is now available on the App Store, making it the first free no-texting-while-driving application offered by a major U.S. wireless carrier that works on the iPhone. The app is easy to use. It silences incoming text message alerts, turns on automatically when one drives 15 MPH or more, and turns off shortly after one stops. When activated, it automatically responds to incoming SMS and MMS text messages so the sender knows the text recipient is driving. It also allows parents with young drivers to receive a text message if the app is turned off.
- The It Can Wait campaign is working with celebrities to help drive adoption of a new social shorthand, “#X.” You can use it in social media, text, or email to signal to others that you’re pausing the conversation before you drive and that you’ll get back to them when you arrive safely at your destination.

The survey included some startling revelations about how our attachment to our mobile phones can lead us to use them when we’re driving—even when we know we shouldn’t.

While over 90 percent say they know texting and driving is dangerous, many rationalize their texting-and-driving behavior—a classic sign of addiction,

according to Greenfield. Nearly three-in-ten said they can easily do several things at once, even while driving. “However, many objective studies show that’s not possible,” Greenfield said.

According to the research, those who

are most likely to text and drive are also the most likely to take steps to stop. And 82 percent of people who take action to stop texting and driving feel good about themselves.

Continued on page 28



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It Can Wait is making a difference. The campaign has inspired more than 5 million pledges to never text and drive and more than 1.8 million downloads

of the Android and Blackberry versions of the DriveMode app. But more work needs to be done to help end texting while driving.

To learn more about It Can Wait, visit www.itcanwait.com.

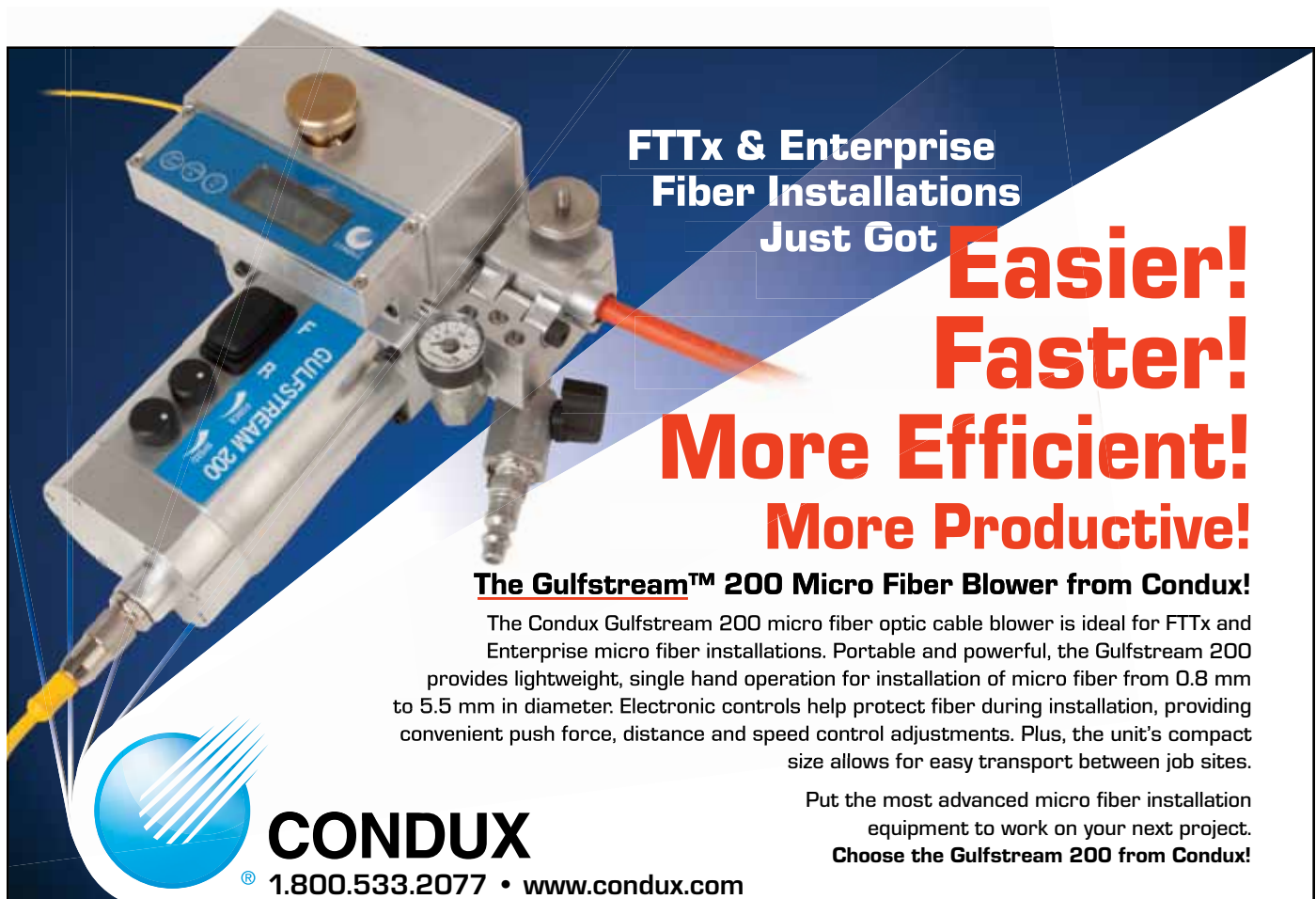
OSHA Extends Compliance Date for Crane Certification

On September 25, OSHA issued a final rule extending the deadline for crane operator certification requirements in the Cranes and Derricks in Construction final rule published in 2010 by three years to November 10, 2017. The rule also extends by three years the employer's responsibility to ensure that crane operators are competent to operate a crane safely. The final rule becomes effective November 9, 2014.

During the three-year period, OSHA will address operator qualification requirements for the cranes standards including the role of operator certification. The final cranes and derricks rule required crane operators on construction sites to meet one of four qualification/certification options by November 10, 2014. After publishing the final rule, a number of parties raised concerns about the standard's requirement

to certify operators by type and capacity of crane and questioned whether crane operator certification was sufficient for determining whether operators could operate their equipment safely on a construction site.

The agency published a Notice of Proposed Rulemaking on February 12, 2014, proposing to extend both the deadline for operator certification and the employer duty to ensure competent crane operation for three years. After publishing the proposed rule, a hearing was requested and held in Washington, D.C. OSHA analyzed the comments to the NPRM and the hearing testimony and decided to extend both the crane operator certification deadline and the existing employer duty for three years. OSHA has already begun the process of developing a standard to ensure crane operator qualifications.



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Bon Bini! Welcome to Aruba!

Located 15 miles north of Venezuela in the warm waters of the southern Caribbean, Aruba is home to beautiful white-sand beaches, 82-degree days, and some of the warmest people in the world. The island is 19.6 miles long and 6 miles across, with a total area of 70 square miles. It is located far below the hurricane belt, and unlike many islands in the Caribbean, the climate is dry and rainy days are very rare.

The PCCA convention is in Palm Beach on the northwestern side of the island, which is known for sugar-white beaches, calm waters ideal for swimming and snorkeling, and a kid-friendly atmosphere. Water lovers will find no shortage of activities to dive into: sunset cruises, windsurfing, water safaris, jet skiing, snorkeling, fishing, and more are all in play. Red Sail Sports, a full-service adventure outfitter, is conveniently located in the hotel lobby and will meet all your water-adventure needs.

Many vacationers enjoy exploring the island on ATVs or motorcycles (more information at www.harleydavidson-aruba.com). Sightseeing opportunities abound in Aruba, including the Arikok Park, a wilderness reserve with more than 21 miles of marked hiking trails; the Bubali Bird Sanctuary, a nesting area for more than 80 species of migratory birds; a tropical Butterfly Farm; ruins of gold mines more than 500 years old; and numerous fascinating natural caves around the island.

Golf is a top priority for many PCCA members, and the Hyatt Regency is just minutes from the scenic Tierra del Sol Country Club, which features a desert course with an ocean view that was designed by Robert Trent Jones II. Tierra del Sol includes a full-length practice range, putting greens, chipping areas, and a magnificent clubhouse with golf shop and restaurant.



Aruba is a shopper's paradise, with jewelry, watches, cameras, designer fashions, perfume, crystal, and china among the luxury items available at excellent prices. Many stores also feature local handicrafts. The Paseo Herencia Mall, just steps from Hyatt Regency, is an old village-style plaza surrounded by great Aruba shopping, dining, and a state-of-the-art cinema featuring nightly liquid fireworks shows and musical performances against a backdrop of a unique blend of Aruban architectural designs and an expose of Aruban heritage. One of the most popular shopping destinations is the Tourists Go Flea Market, a weekend market featuring more than 100,000 items, including Aruban crafts, souvenirs, and artwork. (We hear that Big Daddy's BBQ is not to be missed!)

Hyatt Regency Aruba Resort Spa & Casino

An unparalleled luxury hotel experience in Aruba awaits PCCA members at the exquisite, beachfront Hyatt Regency Aruba Resort Spa & Casino. Renovated with a stylish and welcoming lobby, delightful lobby bar, and sumptuous guest rooms, the resort offers pampering service and amenities for an amazing Caribbean vacation. Treat yourself to rejuvenating spa treatments, learn to scuba dive, shop for amazing jewels, dine on tantalizing cuisine, or take a chance in the casino. Whether you prefer peaceful relaxation on the beach, days filled with outdoor adventure, or evening entertainment, you'll find everything you need for an unforgettable getaway at this premier luxury resort.

View Rooms. Let the hypnotic sounds of the ocean gently lull you to sleep each evening in the luxurious comfort of the resort's newly remodeled Aruba accommodations. Situated on the upper floors of the resort, these spacious 380-square-foot rooms offer a private step-out balcony, perfect for enjoying views of the ocean, three-level pool, lagoon, and tropical gardens.

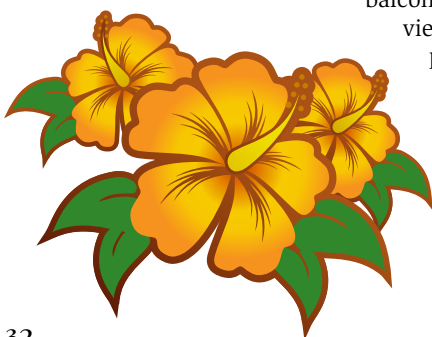
Standard Rooms. These spacious 380-square-foot rooms located on the 3rd floor, offer rooftop views of the resort's open-air Spanish

architecture, lush gardens, and cascading waterfalls. The rooms have windows that open, but no balconies.

Resort Activities

With an idyllic setting on the white sandy beach and mesmerizing Caribbean Sea, newly renovated facilities, impeccable service, and fun onsite activities, you'll find endless things to do at the resort. Explore the magical undersea world on a diving expedition in the sea. Hop on a banana boat or catamaran for an exhilarating ride, or play a round of golf. Whether you crave adventure or relaxation, this spectacular resort offers a myriad of fun things to do.

Looking for some island serenity? Pamper yourself in the luxurious spa, recline on a comfortable chaise poolside, or relax on the pristine beach while the mesmerizing sounds of the sea





take you far away. Entertain the kids and show off your ping-pong expertise in the video arcade. When the sun goes down, hit the Hyatt Regency Casino for lively entertainment, music, and gaming excitement.

Aruba Hotel Pool. The resort's magnificent, 8,000-square-foot pool complex offers fun in the sun for everyone. Relax and soak up the sunshine as you lounge on the expansive pool decks with comfortable lounge chairs and umbrellas. Cool down with a swim in the sparkling multi-level pool, complete with refreshing cascading waterfalls.

If you're looking for family excitement in Aruba, the hotel pools offer aquatic adventures. Fly down the two-story water slide with an invigorating splash into the warm waters. Laze in the freshwater lagoon brimming with tropical fish and wildlife, or play a game of water volleyball with family and friends.

Hungry? Float over to Balashi Bar and Grill for a light lunch, snack, and a refreshing cocktail or tropical drink. Submerge in one of the two outdoor Jacuzzis, nestled under the swaying palms.

ZoiA Spa. Immerse yourself in healing tranquility at Hyatt Regency Aruba's newly renovated ZoiA Spa. One of the top spas in Aruba, ZoiA Spa is a peaceful escape that rejuvenates your body and soul. ZoiA—the Papiamentu word for balance and poise—is reflected in the spa's all-natural treatments. Feel your cares melt away with relaxing massages, refreshing facials, and rejuvenating treatments at this peaceful Aruba spa retreat. The spa specialists exude Aruba's "one happy island" spirit.

The extensive selection of state-of-the-art equipment allows you to work all the major muscle groups in an inviting setting complete with French doors with views of the beautiful

grounds. Take advantage of the full range of equipment, including cardio theater entertainment: treadmills, stairmasters, bikes, and resistance training equipment

Tennis. Whether you play every chance you can or prefer a carefree game just for fun, you'll enjoy the professional tennis facilities. Two hard surface tennis courts are lighted for nighttime play as well as weekly tennis clinics and tournaments.

Hyatt Regency Casino. The adrenaline rush of a winning poker hand, the clanging of a slot machine payout, and the fun of dancing the night away are all part of the Aruba casino experience. The Hyatt Regency Casino features 21 gaming tables (Blackjack, Let It Ride, Craps, Three-card Poker, Caribbean Stud, Roulette, and Baccarat), 255 slot machines, and a casino bar serving hand-rolled cigars and exotic drinks.

Join the fun every night for the "Carnival in Rio" celebration, where you can enjoy live music Tuesday through Sunday, dancing, and a never-ending party.

Dance, play, groove to the music, sip a refreshing cocktail, and mix with the fascinating crowd. The electrifying casino will keep you delightfully entertained night after night.



Preliminary Schedule

Friday, March 6

Registration Open

8 - 6 pm

PCCA Leadership Development Program

8 am - 4 pm

PCCA continues its efforts to advance the leadership skills of its members with another full-day session of the PCCA Leadership Development Program (LDP). FMI and a group of PCCA-member contractors and associates have developed course material that is not only construction-industry specific, but is also customized using PCCA's subject matter experts and examples specific to power and communication construction.



Session two in Aruba is on Executive Communication with these sections: Elements of Communications, Communication Styles, Tools for Effective Communication, Structured Communications: Conducting Successful Meetings, Effective Delegation, and Making the Commitment: Your Action Plan.

LDP is an ongoing learning experience with action planning and follow-up for each session to reinforce the concepts presented and to encourage the practical implementation of the techniques and skills when participants get back on the job. Each session will include Personal Action Plans with accountability, a Performance Tool sent three months after the session, a touchpoint at the Mid-Year Meeting, and a conference call nine months after the session.

Every LDP session will feature interaction with an experienced industry executive, usually a PCCA Past President. Each session will also include an industry trends overview, which will include a section from FMI on the general economy, the overall construction industry, and PCCA-specific trends as seen from the perspective of contractor and associate members.

The primary audience for the Leadership Development Program is the younger professional, but the program will benefit anyone interested in growing his or her leadership capabilities, regardless of age.

\$500 per person, includes all educational materials, professional instructor, breakfast and lunch on Friday, an invitation to Friday night's VIP reception, and breakfast on Saturday.

Board of Directors Meeting

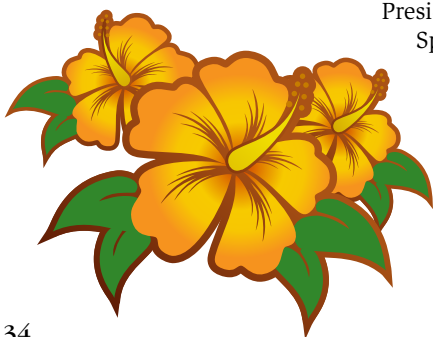
4:15 - 5:45 pm

Open to PCCA Board of Directors only.

Board/Past President/Sponsor Reception & Dinner

6:15 - 8:30 pm

Open to PCCA Board members, Past Presidents, 2015 Convention Sponsors, LDP attendees, and their spouse/guest.



Saturday, March 7

Leadership Development Program Breakfast

7:30 - 9 am

Open to LDP registrants only.

Past Presidents Breakfast

9 - 10:30 am

Steve Sellenriek hosts the PCCA Past Presidents for breakfast and a lively discussion of the power and telecommunications industry.

Aruba Sightseeing Tour

1 - 4 pm

Enjoy this half-day tour that still leaves time for other activities and beach time. You will enjoy the unique tales of Aruba as told by professional guides. You will enjoy and learn all about some of Aruba's hidden treasures with visits to the famous California Lighthouse, Casibari Rock Formations, Alto Vista Chapel, Natural Bridge, and colorful Butterfly Farm. Once the trip is over, enjoy the convenience of being dropped at the Hyatt or downtown for shopping and dining.



\$45 per person, includes professional guide, transportation, and gratuities.

Recommended attire: casual clothing and comfortable walking shoes.

Andicuri UTV Off-Road Safari

2 - 5 pm

Jump behind the wheel of these unique UTVs in a professionally guided off-road safari along the Andicuri Trail. Prepare to get down and dirty blazing this trail as only these UTVs can. Each UTV carries a maximum of two passengers. The tour will take you through the wild beauty of Aruba's outback, skirting along the rugged coast with visits to Andicuri, the Alto Vista Chapel, the Gold Mill ruins, and the historic California Lighthouse.



\$230 per vehicle (seats 2 people), includes water, cool drink, dry snack, experienced first-response certified tour guide, transportation, and gratuities.

Attendee should bring valid driver's license, towel, sun protection, sunglasses, extra t-shirt, camera, and sneakers.

Note: Tour is not suitable for guests with back or kidney problems, that are pregnant, or are younger than 12 years old. Driver must provide valid drivers license; no one under 25-years old may drive the vehicle. This tour requires energetic participation, including walking long/short distances over uneven and steep terrain or on steps.

Opening Session with Ken Schmidt and PCCA Hall-of-Fame Award Presentation

5:30 - 7 pm

One of the most in-demand speakers and communications consultants in America, PCCA Convention keynoter Ken Schmidt has lived a life that most can only dream about. He has toured the world on two wheels, met with presidents and royalty, partied with movie and music legends, and appeared many times on network news. As the former director of communications for Harley-Davidson Motor Company, he played an active role in one of the most celebrated turnarounds in corporate history—and got paid to ride motorcycles.



The longtime motorcycle enthusiast's formal association with Harley-Davidson began in 1985. As a specialist in corporate positioning and media relations, he was asked to work with the then-struggling Harley-Davidson to help restore the company's image and create demand for its motorcycles. Within a few short years, Harley-Davidson became one of the most visible and frequently reported-on companies in the world, while sales of its motorcycles rocketed upward.

In 1990, Schmidt became director of Harley-Davidson's corporate and financial communications and served as its primary spokesperson to the media and financial communities. He appeared numerous times on network news programs and was frequently called on by business media to share his insights on non-traditional communications and customer relations.

In 1997, Schmidt left Harley-Davidson to take an ownership position with a highly successful Chicago-based marketing firm, VSA Partners. In addition to Harley-Davidson, VSA serves many other of the world's best-known brands. In July 1999, he sold his portion of VSA to start his own business, Ken Schmidt Company, and slow down the pace of his life.

Now, Schmidt is a frequent speaker to business groups and academic communities throughout the world. Few speakers generate more positive word-of-mouth and referrals. "I love to startle people by exposing them to proven ideas and concepts they've never imagined," he said. "Whether I'm talking about how perfectly average people can do extraordinary things—which is now an everyday occurrence at Harley-Davidson—or how to build an entirely new corporate culture, rekindle relationships with customers, or reach out to new ones in completely untraditional ways, I'm teaching people to throw conventional approaches out the window. I see opening hearts and minds as my life's work."

Today, Schmidt shares his expertise with many of America's leading brands, but happily states that he is "semi-retired," which allows him to pursue his other passions. After all he has accomplished, his philosophy hasn't changed: "Never do what's expected, make yourself as noticeably different as possible, and have a lot more fun than you're supposed to."

President's Welcome Reception & Dinner

7:30 - 9:30 pm

PCCA President Steve Sellenriek welcomes all convention attendees to the fantastic Hyatt Regency Aruba and the 70th Annual PCCA Convention. PCCA will take over the hotel pool deck with lively entertainment, a scrumptious Island Flavors dinner, and fun times with your fellow PCCA members, all overlooking a beautiful Caribbean sunset.

Sunday, March 8

Annual Prayer Breakfast

8 - 9:30 am

The Prayer Breakfast is a longtime PCCA tradition that unites members and their families in scripture, music, and fellowship.

Utility Construction Industry Overview

9:45 - 11:45 am

Chris Daum, a principal in FMI's investment-banking practice who focuses largely on the utility construction sector, reports on activity in PCCA members' primary markets and discusses what he sees coming down the pipeline.



Jolly Pirates Sail, Snorkle, Swim Aruba & Swing

2 - 5 pm

Ahoy Mateys! You're never too old or too young for a Jolly Pirate adventure. Arrrrggg! The PCCA crew will sail, swim, snorkel, and swing in the tranquil, turquoise-imbued world along the Aruban coastline. We'll drop anchor at a few amazing spots, including the World War II shipwreck, Antilla. Sunk by its own captain and crew at the start of WWII—thus preventing it from falling into enemy hands—this 400-foot German freighter sits on the ocean floor in 60 feet of water with a portion of its hull and masts protruding impressively up and out of the sea. And there will be lots of food and beverages for all ye Scallywags!



\$85 per person includes private PCCA charter, snorkeling instruction, snorkel gear, refreshments, rum drinks, snacks, captain and crew, and gratuities and service charges.

Silent Auction & Reception

6 - 7 pm

Not as raucous as the Live Auction to follow, the Silent Auction and Reception are filled with cocktails, hors d'oeuvres, good times with friends, and some low-key bidding for about 50 minutes. Then, as the deadline nears, things tend to get a little crazy and it's everyone for themselves!

Auction & Dinner

7 - 10 pm

Always filled with clamor, craziness, and plenty of surprises, the PCCA Auction is the liveliest night on the PCCA calendar. PCCA revelers bid on a variety of fabulous trips, ballgames, tools, equipment, jewelry, and much, much more. All proceeds go directly to building programs and services for PCCA members, so everyone is encouraged to bid early and often and to have a great time.



Preliminary Schedule

Monday, March 9

Annual Associates Exhibit & Breakfast

8:30 - 11:00 am

PCCA's manufacturer and supplier members host the 15th Annual Associates Exhibit & Breakfast. Contractor members have been particularly pleased with our exhibit format, which allows them to peruse the displays, meet with vendors, discuss jobsite issues, and learn about the industry's latest products and services in a very relaxed atmosphere.

Exhibit Wrap-up & Associates Meeting

11:15 - 12:00 am

PCCA's associate members hold a roundtable discussion on topics that affect manufacturers and suppliers in our industry and elect a new Associate Director to the PCCA Board. We will also review the just-completed Associates Exhibit and other convention activities and discuss ways they can be improved to further benefit everyone involved.

Exhibit Teardown

11 am - 8 pm

De Palm Island Adventure

12:30 - 5 pm

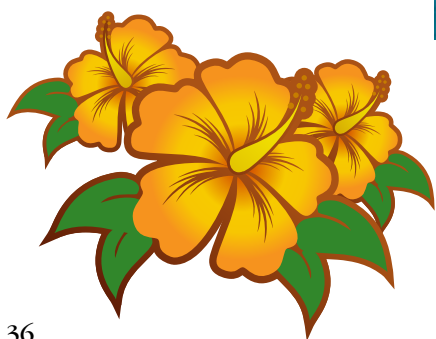
The PCCA crew will escape to beautiful De Palm Island for an afternoon of tropical fun on our own private Caribbean island! The island offers something for everyone, including

the Blue Parrot Water Park, snorkeling in a coral reef teeming with tropical fish, limitless banana boat rides, unlimited food and beverage (featuring local and Caribbean fare), open bar, use of beaches and palapas, and activities such as salsa classes, beach volleyball, table tennis, or just simply lounging on the white sandy beaches and swimming in the glistening turquoise waters.

\$150 per person, includes transportation, snorkeling equipment, instructions, lounge chairs/cabanas, general facilities, changing rooms, lockers, showers, transportation, and gratuities.



Note: Guests should wear a swimsuit and bring towel, sun protection, camera, and extra money.



De Palm Island Optional Upgrades

The Sea Trek Underwater Helmet.

Wear a specially designed diving helmet and tread the sea floor on a custom 375-foot walkway 20-feet below the surface. Even those who don't swim or snorkel can feed a bevy of colorful tropical fish, view a sunken Cessna 414 airplane, and pose for a photograph while sitting at the underwater Sea Trek Cafe. The Sea Trek takes approximately one hour. Children must be eight years or older. All equipment and professional guide are provided.

\$53 per person

Note: Sea Trek requires energetic participation, walking short/long distances over uneven and steep terrain or on steps. Liability waiver must be filled out properly and signed to participate. Must meet medical requirements.



SNUBA. If you want to go beyond snorkeling and experience Aruba's underwater beauty in the safest and easiest way possible, try SNUBA. You can breathe easily underwater without wearing heavy, restrictive dive gear. It is safe, fun, and easy to learn. No prior diving or snorkeling experience is required, and your professionally trained SNUBA guide will personally take you on an underwater tour of the beautiful marine environment. The duration of Snuba is approximately one hour, including briefing, set up, and underwater tour. All equipment is provided.

\$45 per person

Note: SNUBA requires energetic participation, walking short/long distances over uneven and steep terrain or on steps. Liability waiver must be filled out properly and signed to participate. Must meet medical requirements.



Tuesday, March 10

Continental Breakfast

7:30 - 8 am

General Session with Gene Marks

The Latest Trends, Techniques, and Tools for Finding and Motivating Your Very Best People

8 - 9:30 am

The recession is over. Unemployment is down. You know this. Your employees know this. And over the next two years, as your company grows, the issue won't be about just keeping your costs under control. It will be about watching what's going on in Washington, taking advantage of new opportunities, and being smart about your investments. It will be about capitalizing on the latest trends in technology, cash flow, and how to find and motivate the very best people.

And your employees will be the difference. But being an employer has changed. There are new issues and unique challenges for managing people this year. And as the economy grows over the next two years you, as business owner or manager, must embrace these changes so that you can succeed. And that's what this presentation is all about.

During this entertaining and fast-moving session, Gene will touch on some of the most important employee-related issues in your company, including:

- Where to go to find the best people,
- The right interview questions to ask,
- The best processes for selecting the best person for the job,
- The latest trends in compensation from bonus to profit sharing,
- The benefits, costs, risks, and rewards of outsourcing, including the latest technology tools to manage your outsourced contractors,
- The latest ideas for motivating your employees and retaining your best people,
- The latest technologies for managing your remote employees,
- A review of the most recent legislation regarding retirement plans, and
- A review of the most recent options for providing health insurance under the Affordable Care Act.

About Gene Marks



Gene Marks is a columnist, author, and small business owner. He writes daily for the *New York Times* and weekly for *Forbes*, the *Huffington Post*, *Inc Magazine*, *FOX Business*, *Entrepreneur.com*, and *Philadelphia Magazine*.

Gene's columns are read by hundreds of thousands of business owners and managers. He has written six books on business management, specifically geared toward small and medium-sized companies. His most recent is *The Manufacturer's Book of Lists*. Nationally, Gene frequently appears on FOX News, MSNBC, FOX Business, Bloomberg, and CNBC discussing matters affecting the business community.

Through his sessions, Gene helps business owners, executives, and managers understand the political, economic, and technological trends that will affect their companies so they can make profitable decisions.

Gene owns and operates the Marks Group PC, a highly successful ten-person firm that provides technology and consulting services to small and medium-sized businesses. Before starting the Marks Group, Gene, a Certified Public Accountant, spent nine years in the entrepreneurial services arm of the international consulting firm KPMG in Philadelphia where he was a senior manager.

Construction Industry Roundtable

9:45 am - 12 pm

Many PCCA members make their decision to attend the PCCA Convention each year based primarily on the valuable information gleaned from the Construction Industry Roundtable. This fast-paced and frank discussion moves through the various sectors of power and communications construction and elicits thoughtful insights and candid opinions from contractors and suppliers working throughout North America as well as from experts representing the government, engineering, insurance, and legal sectors.



Natural Pool Land Rover Adventure

2 - 6 pm

If you are looking to get away from the beaches for a bit and explore the rugged Aruban outback, step into one of these open-air Land Rovers for a heart-racing adventure. Said to be Aruba's roller coaster, this is the most thrilling and yet safest way to get to the island's secluded treasure, the Natural Pool, which offers beautiful snorkeling. Your adrenaline will pump as tour guides take you on a wild ride through the rolling hills with twists and turns at every corner, not to mention great photo ops. Highlights include the California Lighthouse, Alto Vista Chapel, Gold Mill Ruins, and the Baby Natural Bridge and Ruins. The trip includes historical, cultural, and intriguing facts about Aruba. An assortment of goodies and refreshments are provided along the way.



\$115 per person, includes water, cool drink, dry snack, snorkeling equipment, instructions, water shoes, experienced first-response certified tour guide/driver, transportation, and gratuities.

Attendees should bring towel, camera, sun protection, extra t-shirt, headwear, bathing suit, and comfortable walking shoes.

Note: *This tour requires energetic participation, walking long/short distances over uneven and steep terrain or on steps. This tour is not allowed for guests with back or kidney problems or that are pregnant.*

70th Anniversary Beach Bash

7:00 - 9:30 pm

PCCA closes its 70th Anniversary Convention and bids farewell to Aruba with a beautiful and boisterous Caribbean Beach Bash, featuring tropical entertainment, a full island dinner with tasty treats from the grill, and your old PCCA friends as well as all the new friends that you have made during your stay.

Wednesday, March 11

Board of Directors Wrap-up Breakfast Meeting

9 - 10 am

Open to PCCA Board of Directors only.

Departures All Day



Additional Details

Getting There

The Queen Beatrix International Airport (AUA) has more than 100 non-stop flights every week from several U.S. gateways and one-stop connections from almost every city in the U.S. and Canada. U.S.-bound passengers benefit from their own terminal building that houses a U.S. INS/Customs facility, allowing flights from Aruba to enter the U.S. as domestic flights.

Driving Directions from the Airport

From the Queen Beatrix International Airport: Take airport exit, take a left at the light. Continue on this road until you reach a roundabout. Take the 3rd exit, continuing straight along the seashore. After approximately 2.5 miles, you will reach a 2nd roundabout. Take the 2nd exit, continuing straight through. Turn left at the 2nd set of traffic lights. Turn right at the next intersection. Hyatt Regency Aruba Resort Spa & Casino is the 2nd hotel on the left.

Passports

A current passport is required.

Weather

Aruba has the most sunny days of any island in the Caribbean so visitors can expect unwaveringly sunny skies, warm

temperatures, and cooling breezes. The average high temperature in March is 85° F, and the average low is 76° F. Because Aruba is more of a desert than a rainforest, the humidity is low and it seldom rains, and when it does, it's usually only a short shower. And because Aruba is far south of the tropical-storm belt, hurricanes don't often visit.

Shipping

Shipping to Aruba is very expensive. PCCA is looking long and hard at everything we plan to bring to the convention to determine what is absolutely necessary. We recommend that you do the same. Shipping items back home from Aruba is just as expensive, so it is wise to minimize what needs to be shipped home, as well.

For items that must be shipped, you should ship early, 4 to 6 weeks before the start of the convention. One strategy PCCA will use to get items to the convention is having staff members carry them in their luggage. The \$35-50 cost to check an extra bag with the airline is most likely much cheaper than shipping to the hotel.

Golf

While there is no golf tournament during this year's convention, attendees looking to play a round or two can make tee times with the resort's concierge for Tierra del Sol, Aruba's only 18-hole course, or the 9-hole Links at Divi Aruba.

Hyatt Regency Aruba Resort, Spa and Casino

J.E. Irausquin Boulevard #85
Palm Beach, Aruba, Dutch Caribbean
+011 297 586 1234
www.aruba.hyatt.com



For more information or to register,
call (800) 542-PCCA or go to www.pccaweb.org

Limited room block in the Hyatt.
Register now for the best rates and room selection.



Product Showcase

Vermeer

Vermeer has introduced a new horizontal directional drill with improved power and reliability for the increasingly demanding projects contractors face. The new D20x22 S3 Navigator HDD



was designed from the voice of contractors who desire a small footprint machine that can increase productivity when working in urban or tight jobsites.

"Compared to its predecessor, the D16x20 Series II, Vermeer added power and improved precision control for those customers who work mainly in fiber/telecom and gas service installation," said Jon Kuyers, Vermeer global product manager for underground business.

The D20x22 S3 features 19,550 pounds of thrust/pullback with 2,250 foot-pounds of torque. The 74-horsepower Deutz engine is capable of 12 percent greater power compared to its predecessor, the D16x20 Series II. All new models that feature the S3 label are Tier 4 Final emission compliant in North America and Europe. Units sold in lesser-regulated countries will have Tier 4 Interim engines.

The D20x22 S3 features a new hydraulic system design with enhanced rotation, thrust, and tracking performance over its predecessor. The hydraulics increases the system efficiency, allowing better use of engine horsepower and helping to increase the drill's productivity.

The D20x22 S3 has a faster carriage speed, which can lead to an increase in the amount

of product installed per minute. Tracking power and speed has increased as well, improving the drill's ability to make sharper turns, climb slopes, and track up to 3.3 mph to travel to various jobsites in less time than previous models.

www.vermeer.com

HammerHead

HammerHead has introduced four new tools to its pneumatic piercing line. The new models come in two sizes, 4- and 5.125-inch. Both sizes are available in a Catamount reciprocating head model or a fixed, non-reciprocating head model. The new tools are ideal for any underground installation that requires minimal disruption to landscapes, buildings, or traffic flow.

Each new pneumatic piercing tool comes with the Power Port Reverse feature. The patented quarter-turn reverse design pneumatically locks into forward or reverse, preventing accidental direction change during the bore. The patented Debris Free Tailcone was also incorporated to eliminate the introduction of debris into the tool body, increasing overall production and tool life.

"With the release of these four models, HammerHead has a complete line of quarter-turn reverse piercing tools with sizes ranging from 2 inches to 5.125 inches," said Will LaBlanc, HammerHead national sales and product manager.

The new Catamount piercing tools, along with the entire Catamount line, are designed for tough working conditions in a wide



range of soil conditions. Because the tools are engineered without mechanical springs, contractors enjoy more productivity with lower cost of replacement parts. They are also easy to service in the field due to HammerHead's original tailbolt design.

Additional Catamount features include exclusive Smart Head Technology to reduce tool swim and increase performance, a redesigned body housing providing better durability and tool life, and HammerHead's original Clamped Rear Anvil that provides 200 percent more clamp load for secure assembly. Composite wear rings also eliminate metal-to-metal contact, decreasing wear and sustaining performance levels. Made of a specially designed composite, these rings offer a low coefficient of friction and have a higher abrasion resistance. The Catamount piercing tools provide contractors with a single tool for a variety of ground conditions.

www.hammerheadtrenchless.com

Global HR Research

Hiring is the most important thing you



do. Trust it to Global HR Research.

Since 2009 GHRR has been a proud partner and supporter of the PCCA and its members. GHRR provides PCCA members with discounted pricing along with a quick and easy set up to help them hire the best employees fast. GHRR also gives back 10 percent to the PCCA from each account affiliated with the association.

GHRR offers background screening, drug testing, DOT programs, MVR management, plus much more.

Whether you conduct routine pre-hire screenings for mostly similar job categories or you're handling complex enterprise hiring and assessment in a compliance-driven in-

Continued on page 40

Product Showcase

Continued from page 39

dusty, Global HR Research offers unmatched adaptability, experience, and customer service.

Global HR Research knows you need more than screening and assessment. You need pre-hire intelligence. That's why GHRR offers a robust set of screening and assessment products. It's a comprehensive set of tools that will help you make better hiring decisions and make them faster. When you're tired of your current approach to hiring, talk to us about how pre-hire intelligence can help you make smarter hires...today.

www.globalhrresearch.com

Sherman + Reilly

Sherman + Reilly has designed its Revolution Series equipment around operator safety, ergonomics, and environmental comfort. The new Sherman + Reilly Revolution Series P-1400X Single Drum Puller is a perfect example of this. With a 14,000-pound pulling capacity, the P-1400X also has additional re-conductoring capabilities. This transmission class puller utilizes an automatic horizontal floating levelwind that permits overhead rope retrieval with precision control.

One of the most important features of the P-1400X is its Safe-Zone. The Safe-Zone Cab employs a floor-to-ceiling polycarbonate front window for maximum visibility while providing superior protection against impact. The cab includes climate control, a fully adjustable ergonomic seat, and all required electronic controls and gauges. The Safe-Zone Cab is designed to reduce operator fatigue and provide an "off-ground" envelope for greatly reducing the risk of "touch potential" in energized environments.

The P-1400X is also equipped with an



ACG (advanced control group), allowing for a single operator at a protected central console to control payout speed, pulling speed, levelwind controls, and jack position. This puller comes with a 173-horsepower industrial diesel engine capable of delivering a full 14,000 pounds of line pull, rated at the top of the drum. This machine also employs a first-of-a-kind drum engagement system, utilizing lateral sliding sides and drum support rollers. These unique hydraulically actuated articulating sides of the machine allow for easy changing of the drum to a metal re-conductoring reel. The fully hydraulic direct drive system provides the operator with precise and intuitive automatic drive/drum braking. The P-1400's tandem air brake axle trailer is equipped with three hydraulic jacks, an adjustable pintle eye, safety chains/hooks, and U.S. DOT-approved LED lighting.

www.sherman-reilly.com

American Augers

There is a reason American Augers' DD-440T is a hot-selling maxi-rig! This track-mounted horizontal directional drill offers 440,000 pounds of thrust/pullback and continues to perform successful crossings for the pipeline industry.

The carriage system is engineered with a two-pinion drive with an adjustable force limiter and a maximum carriage speed of 95 feet per minute.

The advanced rotary drive includes a three pinion and gear drive that permits 60,000 foot-pounds of maximum rotary torque and a rear-mounted mud swivel that provides up to 650 gallons per minute of mud flow.

Other standard features include 10- to 18-degree drill angle, triple jaw wrenches with a 12-inch separation, wrenches that travel the full length of the thrust frame, 154,000 foot-pounds of maximum breakout torque, 101,700 foot-pounds of maximum



makeup torque, removable wrenches for lighter transport weight, and the ability to utilize Range II drill pipe.

American Augers is a leading manufacturer of underground and utility construction equipment, including large directional drills, auger boring machines, mud pump & cleaning systems, trenchers, and tooling & accessories. American Augers takes pride in the support provided to its customers around the world, 24-hours a day, 365-days a year. Whether you are in need of additional parts or encounter a technical support issue, the dedicated service team is responsive, knowledgeable, and customer-focused.

www.americaugers.com

Preformed Line Products

Preformed Line Products Company (PLP) was founded in 1947 with the invention of the helically preformed rod for the power industry. Over the past 30 years, PLP has offered copper and fiber optic closures, demarcation, bonding, strand, and cable products for communications markets, including fiber optic hardware accessories for OPGW and ADSS cables. Well-known brands include COYOTE Closures, COYOTE Access Solutions, ARMADILLO Stainless Closures, FIBERLIGN Hardware, and GUY-GRIP Dead-ends.

PLP's global reach and local focus strategy for growth is supported by U.S. and international locations. These facilities can produce high-volume components as well as specialized products with responsiveness to local



customer needs.

PLP provides a lean manufacturing initiative and strong principles of continuous improvement. In 2014, PLP expanded its state-of-the-art Ohio research and engineering facility by 50 percent. This expansion included two new vibration spans and dedicated rooms for environmental and heat cycle testing. Additionally in 2014, PLP completed a 40,000-square-foot expansion of its Rogers, Ark., plant. PLP moved key production machines for rubber compression molding and plastic injection molding into the new space and relocated hundreds of tons of sophisticated and fragile equipment. Additional equipment will be up and running in August 2014.

PLP also expanded its global renewable energy power generation by adding a PV solar array at its manufacturing facility in Albemarle, N.C. The 50 kW grid-tied photovoltaic system is divided into multiple arrays positioned on the roof, parking area, and front lawn of the facility. The mounting hardware systems feature the POWER-FAB CRS, Top-of-Pole, and MPM-G2 ground mount systems designed and manufactured by PLP's wholly owned subsidiary, DPW Solar, in Albuquerque, N. Mex. PLP expects the system to generate more than 66 MW-hrs per year of clean energy supplying a portion of the electricity consumed by the manufacturing facility.

PLP is committed to providing exceptional products, customer service, technical support, training, and emergency storm response. PLP is "The Connection You Can Count On."

www.preformed.com

Ditch Witch

Ditch Witch introduces two new horizontal directional drills: the JT60 and the JT60 All Terrain. Each drill is equipped with 60,000 pounds of thrust and pullback plus 9,000 foot-pounds of rotational torque—a powerful combination that results in exceptionally efficient and productive installation of utilities.

Powering each drill is the contractor's choice of a 190-gross-hp Tier 3 or 200-gross-hp Tier 4i diesel engine. Both engines provide sufficient power for each drill's mechanical and hydraulic components, including an onboard, 150-gpm fluid pump that helps ensure productive

drilling at greater distances. The pump is enclosed to reduce noise and protect components from harsh conditions.

A climate-controlled cab, a heavy-duty double rack-and-pinion thrust drive, intuitive carve mode, easy serviceability, and many of the other features shared by these drills are results of direct input from customers. One feature unique to the JT60 All Terrain directional drill is the patented, two-pipe All Terrain drilling system that provides



Continued on page 42



The Crane Authority

New 2014 National Crane Boom Trucks in Stock



2014 National NBT55128: 55 ton capacity, 32' – 128' 5 section full power boom, 26' – 46' jib, 360 degree continuous rotation, two 3000 lb. removable counterweights, hydraulic front and rear outriggers.



2014 National NBT60128: 60 ton capacity, 31' – 128' four plat full power boom, 360 degree continuous rotation, hydraulically removable counterweight, hydraulic front and rear outriggers.

Other great National Crane Boom Trucks for sale:



2013 National NBT1460:
14 ton capacity,
24' – 60' 3 section full power boom



2013 National 8100D:
23 ton capacity,
29.6' – 100' 4 section full power boom,
44' pull out boom extension



2013 National 571E:
18 ton capacity,
27' – 71' 3 section full power boom



2013 National 9103A:
26 ton capacity,
31' – 103' 4 section full power boom,
25' – 44' boom extension



2013 National 690E:
20 ton capacity,
27' – 90' 4 section power boom,
25' – 45' jib



2013 National 14127A:
33 ton capacity,
31.6' – 127' 4 section full power boom,
30' boom extension



2012 National NBT40103:
40 ton capacity, 31' – 103' 4 section full power boom, 360 degree continuous rotation



2013 National NBT45127:
45 ton Capacity, 31' – 127' 4 section full power boom, 5,400 lbs. non-removable rotating counterweight, 360 degree continuous rotation

All sales are subject to availability at time of order, prices do not include taxes or other applicable fees. Kirby-Smith Machinery Inc. doesn't engage in exports to embargoed countries. Sold As Is Where Is.

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for details and pricing.**

www.kirby-smith.com

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Not all makes available at all locations

Product Showcase

Continued from page 41

exceptional power to the bit, enabling the JT60 All Terrain to be more productive in a wide range of ground formations.

Last but not least, both the JT60 and the JT60 All Terrain will come factory-equipped with the proven Ditch Witch GPS offering at no additional charge. The Ditch Witch organization and U.S. Fleet Tracking are providing the hardware, installation, and one year of premium service as a special promotion for JT60 customers. Users of the system can remotely view engine hours, operational hours, service reminders, machine location, and various other performance criteria.

"Knowledge is power," said Ditch Witch GPS Product Manager Steve Seabolt. "Users will gain valuable awareness into operator practices, idle time, and service needs. Owners also typically receive a significant discount off their insurance premiums. We're very excited about the JT60 and JT60 owners' utilization of the GPS system."

www.ditchwitch.com

Caterpillar

Beginning in 2015, Caterpillar's new 850,000-square-foot facility in Athens, Ga., will produce all Cat E2 Series Mini Hydraulic Excavators. Additionally, the five compact radius E2 Series machines—including the 303.5E2, 304E2, 305E2, 305.5E2, and 308E2—will feature the new High Definition Hydraulic (HDH) system, which provides a load-sensing and flow-sharing capability for operational precision, efficient performance, and greater controllability.

Redesigned with a new operator station, the 303.5E2, 304E2, 305E2, and 305.5E2 include a wider entry, suspension seat with

adjustable arm rests, 100 percent pilot controls, and an ergonomic layout for increased comfort. Additionally, a new interlocking front window system allows the operator to lock the bottom pane into the top pane and raise the full window unit for secure storage within the cab.

A number of standard features, such as automatic two-speed, 200-degree bucket rotation, and blade float, are built into every Cat mini hydraulic excavator. The two-speed feature adjusts automatically to balance speed and torque requirements for improved control, the 200-degree bucket rotation simplifies vertical wall digging eliminating the need for repositioning, and the blade float function drags the blade backwards along the contour of the ground with only the weight of the blade for increased productivity. A unique bucket shape maximizes the volume of material retention without sacrificing digging performance, and the boom and stick cylinders have built-in dampening to cushion the impact of the rod and piston against the stops.

All E2 Series models are equipped with the Complete Operation, Maintenance, Performance, and Security System (COMPASS) digital control panel. COMPASS includes a password-protected, anti-theft system; an automatic engine-idle selection activated after 4 seconds of inactivity; and an adjustable auxiliary-flow control for work tool attachments.

www.catresourcecenter.com

RWF BRON

BRON is a worldwide supplier of static and vibratory plows, vibratory rippers, forestry mulchers, self-propelled drainage machines, and wheel trenchers.

BRON recently introduced its new 2014 250 BRON Utility Power Unit with V250 Off-

setting Vibratory Plow. BRON's new enclosed cab comes with heat and air conditioning, tinted tempered glass, sliding rear window, and full ROPS protection. Inside the cab has a swivel seat and seat-mounted controls that provide clear visibility up front and back. Installation chutes and hoppers for multi products are available.

The BRON 250 also comes with an open ROPS canopy, dual reel carrier, hinged ROPS fairleads, and slider chute. This power unit has a 300-horsepower Caterpillar engine, total weight is 61,000 pounds, and maximum plowing depth is 66 inches. The unit comes with hydrostatic drive for maximum production in all ground conditions.

www.bronrwf.com

Hi-Line Utility Supply Co.

Hi-Line Utility Supply Co. (a Division of WESCO Distribution, Inc.) is a proud supplier of rubber goods testing services in Chicago, Ill., and Boston, Mass. These state-of-the-art, NAIL for PET accredited test labs boast 80 years of combined testing experience, testing over 330,000 products annually including rubber gloves, sleeves, blankets, line hose, and more.

With one of the fastest rubber goods testing turnaround times in the industry, compliance with OSHA regulations and ASTM standards has never been easier. When it's time to re-certify your rubber goods, Hi-Line will clean, inspect, and dielectrically test them in compliance with ASTM standards and OSHA regulations within an average of 5-7 business days.

As the largest stocking distributor of Salisbury Rubber Goods in the United States, Hi-Line can also eliminate long factory lead times on new or replacement rubber goods.



In-stock rubber is tested and shipped within 48 hours or less.

Hi-Line also provides Rubber Goods Inventory and Change Out programs. Like clockwork, rubber goods are cleaned, tested, date-stamped, and shipped—arriving before old goods expire. Customized exchange programs allow maximized usage of rubber products and spare inventory, maintain testing standards compliance, free up warehouse space, and the reduce time associated with managing exchanges. Hi-Line has developed customized rubber goods testing programs for clients across the country, supporting as many as 4,000 linemen out of hundreds of locations.

With a rubber goods inventory and change out program, emergency rubber orders are one-day away from deliveries. Before, during, after storms and other emergencies, in addition to rubber goods support, Hi-Line is available 24/7/365 for tool

and equipment support.

In addition to rubber goods support, Hi-Line carries more than 10,000 products in inventory and works directly with more than 175 manufacturers, while providing the services contractors need most, including custom grounds & jumpers, fiberglass tool restoration, tool repair/recertification, custom rope lines, rope inspection services, and truck inventory/replenishing programs.

www.hilineco.com

Toro

Toro's all-new RT1200 riding trencher is designed with versatility, productivity, and operator comfort in mind to meet the needs of a variety of contractors. Built on a tool carrier chassis, its design is extremely versatile to allow contractors to select from tracks or tires and a variety of attachments—including a backhoe, 6-way backfill blade, rocksaw, vibratory plow, reel carrier, and the Toro-



exclusive Heavy-Duty (HD) trencher drive.

The Toro HD trencher drive consists of three major components: flywheel, torsion shaft, and planetary gearset. The flywheel stores inertial energy, ensures efficient hydraulic system operation, and keeps the chain consistently running in tough digging conditions. The torsion shaft absorbs shock loads, and the planetary gearset multiplies the hydrostatic motor torque for added digging power. Added up, the HD trencher drive technology ensures consistent, powerful trenching performance in the most demand-

Continued on page 44

Essential Tools for Underground Tasks

GMP CONTINUOUS DUCT RODDERS

- ▶ Rods available in a full range of sizes and lengths
- ▶ Carriers made of tubular steel alloy
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 Society of Cable Telecommunications Engineers



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- ▶ Complies with D.O.T. Standards
- ▶ Robust steel chassis

 Society of Cable Telecommunication Engineers



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Product Showcase

Continued from page 43

ing digging conditions.

When it comes to plowing, the RT1200's P105 Vibratory Plow features plow-blade attitude adjustment, as well as plow steer and swing of up to 30-degreess to maintain plowing accuracy and provide enhanced maneuverability.

Additionally, its Cummins 4.5-liter, 121-horsepower engine, and 48-gallon fuel tank provide high output with minimal downtime. A standard tilt frame allows the operator to tilt the machine at variable degrees in order to maintain trench angle, while optional load control allows the operator to set the percentage of engine output dedicated to the ground drive to ensure that the performance of the digging implement is maintained. In addition to power, it is an operator-focused machine with features that provide greater visibility and comfort to ensure maximum productivity.

www.toro.com/underground

Baroid

QUIK-BORE high-yield boring fluid system is specially formulated for use in horizontal directional drilling (HDD), primarily tunneling and micro-tunneling applications. QUIK-BORE high-yield boring fluid system is a proprietary blended product using Wyoming sodium bentonite.

The use of QUIK-BORE high-yield boring fluid system provides functional gel strength for cuttings suspension, improves borehole stability, reduces filtration by forming a thin filter cake with low permeability, and lubricates pipe in micro-tunneling operations.

Advantages include that the system is high-yielding and easy to mix, helps provide lubrication for pulling product line, can be used in unconsolidated formations, can provide gel strength to compensate for low annular velocity, can minimize the number

of boring fluid products required, disperses readily in water, efficiently improves filtration control, and is NSF/ANSI Standard 60 certified.

QUIK-BORE high-yield boring fluid system can be purchased through any Baroid Industrial Drilling Products Retailer.

www.baroididp.com

American Wire Group

American Wire Group (AWG) is a global company responsible for the design, production, and direct distribution of wire and cable for the renewable energy industry (wind and solar) and to electric utilities responsible for power generation, transmission, and distribution.

AWG has material in stock and ready for immediate shipment from either its West Coast or East Coast warehouses. AWG offers a complete line of collection system underground cables in 15KV-35KV TR-XLPE/ EPR, overhead bare aluminum T&D conductors (ACSR/AAAC/AAC), industrial power cables, bare copper conductor, copper clad steel, static wire, guy wire, aluminum clad steel, substation control cables, fiber optic cables & hardware, and OPGW. Exclusive for its medium voltage line, AWG also stocks TE/ Raychem products. To support the growth of the solar power industry, AWG stocks aluminum PV cable in 600V and 2kV for use on DC collection systems. Copper PV cable is also available.

AWG's accumulated experience spans more than 100 combined years in the wire and cable industry. With inventory over \$6 million in warehouses across the U.S., AWG can respond to the most urgent requests—in hours not days. Combined with an extensive manufacturing capability, AWG handles projects both large and small. As a result, AWG makes it easier and less expensive as a complete solution for all cable needs.

Let AWG be your "powerful solution."

www.buyawg.com



Zigma Ground Solutions

Zigma Ground Solutions is a leader in composite matting for a variety of industries and markets, creating temporary fast and economic access roads and ground protection for projects in power line transmission and distribution, utility services, and general construction.

As designers, manufacturers, and suppliers of temporary access and ground protection solutions, Zigma aims to provide its customers with innovative, quality products delivering the highest levels of performance, value, and safety at all times.

The Tuff Trak and Liberty Series Mats are high-quality and cost-effective solutions for all of your most difficult applications. Zigma carries stock within the USA through its distributor network, with which it can provide full turn key installation services if required.

Zigma's solutions are designed to meet health and safety regulations, avoid environmental damage, and save time and project costs. Sustainability and environmental protection are both Zigma policies of effectively managing environmental performance to minimize the impact of its business on the natural environment and the community at large. Extending this policy to all its workplaces, employees, and others affected by its activities, many of its products are manufactured from 100 percent recycled plastics and waste materials at end of life and diverting useful materials away from landfill.

To better serve North American customers, Zigma Ground Solutions has recently



established an office in the Seattle, Wash., area. Furthermore, Zigma has manufacturing facilities all around the globe and is proud to announce the locations in North Carolina and Alabama.

www.zigmagroundsolutions.com

J.J. Kane Auctioneers

J.J. Kane Auctioneers provides an exciting marketplace for both the seller and buyer. This provides an environment that builds anticipation and enthusiasm for each item and offers a very attractive way for a seller to dispose of an item quickly and at a substantial value. It also creates an environment where the buyer can get a great deal. When an auction is done well, it is a win-win for all parties. J.J. Kane hopes you'll give them the opportunity to work with you in the near future.



J.J. Kane's mission is to operate a company where honesty and integrity are the cornerstone of everything it does. The company's success is determined by its ability to work with the customers to get equipment into the hands of people that have work to get done. J.J. Kane's people roll up their sleeves and apply technology to do everything they can to help their customers achieve their goals.

Turn to page 25 for a J.J. Kane-supplied article on safely operating bucket trucks in harsh winter weather.

www.jjkane.com

Graybar

Packaging materials together saves time! Kitting is the packaging of components to provide a complete "kit" of materials that are required



for assembly or installation. Graybar develops special packaging for a few items and can kit, crate, and ship large components.

Kits can be built to stock or to order. Graybar has the experience in developing kitting operations for large customers who require assembly, storage, and shipment of thousands of kits in a single month, to requirements as small as several components for a specific installation. Graybar offers a wide range of innovative kitting services that help customers get the job done while saving time and money.

Customer benefits include reduced administrative costs of ordering a large number of components from multiple sources and reduced internal labor costs associated with the procurement, logistics, and installation of material. Companies can improve customer service levels internally and externally, reduce returns and shrinkage, and place orders for a group of products

Continued on page 46

ADD-ON UTILITY PLOWS

STATIC VIBRATORY

UP
TO 72" DEPTH

BRON Add-On Utility Plows are the most cost-effective method for installation of fiber optic, copper cable, conduit and pipe. Available as static or vibratory, there is a BRON Add-On Utility Plow that's right for you.

1.800.263.1060 www.rwfbbron.com

BRON is a registered trade mark of RWF Industries a division of Roberts Welding & Fabricating Ltd.

Product Showcase

Continued from page 45

made by multiple manufacturers with one catalog number, which will help avoid delays as all items ship together. Companies can save money through reduced administrative costs, leveraged buying, reduced receiving costs, and reduced cost of labor spent on non-installation activities.

This process can be performed for electrical contractors, communication contractors, commercial businesses, industrial businesses, and the government. Kitting can reduce the number of miles driven via deliveries or trips to your local Graybar location.

Contact your local Graybar sales representative today!

www.graybar.com

Pengo

Pengo turns your challenges into solutions! The "Revolution" continues; the NEW Revolution RS-6X hand-held anchor drive is the ultimate solution for applications with

limited access. With a short overall length and diameter, the PENG0 RX-6X provides more than 8,000 foot/pounds of torque in a compact 87-pound package.

Adding to the versatility of this unit, with the optional bail assembly this drive may be used on either a mini excavator or mini skid steer, giving you two drive options in one.

The RS-6X is packed with a high-efficient gearbox, cross-over pressure relief system, and is TruLink compatible. Include one of Pengo's many mounting options to complete the entire drive package.

For more information on the RS-6X and RS-6 Anchor Drives, contact a Pengo sales professional. At Pengo, "your challenge is our challenge; let us be your solution provider."

www.pengoattachments.com



Power & Telephone Supply Co.

Power & Telephone Supply Co. (Power & Tel) has received certification as a Women Business Enterprise from the Supplier Clearinghouse, formed by the California Public Utilities Commission.

"We are honored to represent the Supplier Clearinghouse as one of their certified woman business enterprises," said Power & Tel CFO Jackie Thomas. "By obtaining this certification, we can effectively meet 100 percent of our customer base's diversity requirements."

"We are pleased to receive this important certification by the Supplier Clearinghouse and proud to be part of a program that is committed to fostering diversity and the development of woman-owned businesses," said Power & Tel CEO Jennifer Pentecost Sims.

Founded in 1963, Power & Tel's extensive distribution system provides service providers and contractors a reliable source for the wide-range of products needed to build and maintain communication networks. As a value-added partner, the company also offers solutions focused on the efficient management of a supply chain: helping customers maximize their resources and reach their profit objectives. Company headquarters are located in Memphis, Tenn., with branch offices and distribution centers throughout the United States, Canada, Mexico, and Brazil.

www.ptsupply.com



Kennametal

In the networked world of the future, mini- and even micro-trenching is playing a large part. Formerly extensive, open-cut trenches are being replaced with narrow (from two inches down to as little as 0.5 inches wide) cuts for laying fiber-optic cable and conduit.

As with all trenching or horizontal

directional drilling jobs, reliable tools are paramount. Kennametal's new CM-Mini Series offers a range of small-diameter block and bit in NB, plug, and cap-style tips to match a

wide range of trenching requirements. For example, the CM61 features a small-diameter tip designed for increased penetration, while its rear-mount style makes it accessible to worn bore blocks. The CM65 by comparison features a wide collar for maximum block protection along with a cap carbide tip profile for excellent performance in medium to hard abrasive cutting conditions. There are also four new tools in Kennametal's new CM-Mini series: CM69, CM70, CM71, and CM72 with proven NB tip carbide.

A range of carbide tip styles are available for the CM Mini Series. Plug-style tips feature a physical lock between steel and carbide for maximum toughness. Cap-style tips are the premier choice for abrasive applications with the carbide on the business end, not sunk into the shank. The NB tip withstands abrasive cutting like a cap with the physical support of a plug. Unlike a cap point that blunts at the end of wear life, the NB tip sharpens as it wears, making it an excellent choice in rock cutting as well as asphalts/abrasives.

Micro-trenching is gaining attention because of increased efficiencies (narrower, shallower cuts accomplished in less time with less disturbance in busy environments). New CM Mini Series tools from Kennametal will make this global trend even more effective.

www.kennametal.com

Condux Tesmec

Condux Tesmec pullers, tensioners, puller-tensioners, and stringing blocks allow utilities and utility contractors to improve productiv-





ity and efficiency while limiting downtime and improving jobsite safety.

Condux Tesmec pullers, tensioners and puller-tensioners have the ability to interface and work together through passive and active electronic controls. Multiple pullers and puller-tensioners can be linked together and controlled from a centralized location. One person can operate the puller, tensioner, or puller-tensioner, plus reel winder or stand from the control panel. Depending on the specific unit, up to four reel winders can be controlled independently.

Using independent pullers, tensioners, and puller-tensioners allows for the installation of multiple phases simultaneously, up to 3-phases, and a ground is possible at the same time. Hydraulically controlled systems allow Condux Tesmec equipment to eliminate conductor galloping, providing utility contractors maximum pulling control.

Condux Tesmec also offers a comprehensive line of equipment accessories that add safety and productivity to every job. Condux Tesmec 2-3 bundled conductor helicopter blocks are available in 24- and 32-inch diameters. The one-piece cast aluminum frame is over 25 percent lighter, yet stronger and less likely to break compared to aluminum blocks with welded extruded frames.

The unit's specially designed counterweight fly-in gate allows for quicker and more secure rope installs, featuring a unique hinge for safer and more efficient cable removal during clipping operation. With a workload rating of 12,000 pounds, the Condux Tesmec 2-3 bundled conductor helicopter blocks are load tested to 60,000 pounds, providing a 5:1 safety factor.

Condux Tesmec reel stands and reel winders are designed to work exclusively with the hydraulic circuits on the Condux Tesmec pullers, tensioners, and puller-tensioners

or can be operated independently when powered by a hydraulic power pack.

www.conduxtesmec.com

Scott Powerline & Utility Equipment

Scott Powerline & Utility Equipment is the heavyweight in sales and rentals, plus 24/7 service,



Continued on page 48

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Product Showcase

Continued from page 47

and then some.

Scott Powerline & Utility Equipment, rents, sells, leases, and services equipment primarily to electrical line construction and maintenance companies, investor-owned utilities, and electric co-ops as well as companies in bridgework, signing, lighting, and general construction. With facilities in Monroe, La., and McDonough, Ga., the company serves customers in the U.S. and Canada.

Scott Powerline offers products from Elliott, National Crane, PowerTraxx, Tadano Mantis, Terex, Skylift, LoDril, TSE International, and other industry-recognized brands. The company's state-of-the-art and well-maintained equipment includes bucket trucks, cranes, crawlers, digger derricks, drills, track-mounted equipment, vacuum excavators, and wire-stringing equipment. Complete product training on all equipment is available.

The company provides 24/7 service and then some. Its customer-support specialists and factory-trained technicians can diagnose a problem and get it fixed quickly to get you back to work. Besides repair and routine maintenance, the company also offers services to meet required safety regulations like crane inspections and dielectric testing.

Since its beginning, Scott Powerline has remained family-owned and believes in working with customers one-on-one to get a job done. The company appreciates the value of maintaining a strong customer relationship built around respect and trust.

www.scottpowerline.com

FS3

FS3, Inc. now offers innovative and efficient

restoration equipment! The Hydra-Bucket is a new invention that makes your skid loader more versatile. You are able to grind stumps, roots, brush, hard ground, driveways, and grass and also pulverize dirt. The drum is bidirectional, so it is a powered box blade in

reverse and a leveling bar, bucket, dirt pulverizer, stump grinder, and brush mower, and it can be used to help the skid loader move in low-traction situations.

The Skid Loader Hydra-Rake and 3pt PTO Hydra-Rake are truly industrial pieces of equipment. There are no shafts, chains or gear boxes to cause breakdowns. The carbide teeth guarantee cutting contact on every inch of the ground to pulverize any soil type in its path. With this unit's weight and power, contractors will eat up the competition and get their leveling or restoration project done faster and smoother.

These units are available in various widths and are manufactured 100 percent in the USA using high-quality materials and components. Available to all PCCA members exclusively through FS3, Inc.

Check out the FS3 website at to watch videos of these units in action!

www.fs3inc.biz

Kirby-Smith Machinery

The National Series 1400A offers top-class boom length. A new hydraulic system uses pressure-compensated control valves with a load-sensing variable displacement piston pump for smoother operation and reduced maintenance. The Vision Cab provides enhanced visibility and includes ergonomic single joystick controls, ventilation fans, and a diesel heater for cold weather comfort.

All National Crane boom trucks are equipped with overload protection with a load monitor display console with a work area definition system that is weatherproof. The LCD display is visible in full or low light

and displays all crane load lifting values simultaneously. The stronger standard torsion box improves rigidity, reduces truck frame flex, and reduces the need for counterweight.

The Series 1400A five-section boom is the longest in its size range. The long boom allows the operator to perform more lifts without the use of a jib, reducing set-up time and improving efficiency. This series is supplied with continuous rotation standard, along with the "glide swing" feature that allows free swing during rotation and a manually applied foot brake.

This model has two sets of "H" style outriggers with a 24-foot 6-inch span, with removable ball-and-socket aluminum foot pads. Independent controls located on each side of the crane can be positioned at mid-span setting of 17 feet.

The model pictured is the National 14127A, which has a 33-ton maximum capacity, 171-foot with optional jib maximum vertical reach, and 135-foot main boom maximum vertical reach. Other features include wireless radio remote control, two-man basket, high-performance planetary winch, 2014 Peterbilt 367 425-horsepower Cummins engine, 10 speeds, and a FBL Tri-drive axle configuration.

www.kirby-smith.com

TT Technologies

The Grundowinch line of hydrostatic constant-tension winches from TT Technologies are specially designed for the variable conditions in below-grade work. All models feature protective cable storage and are available with an air-cooled diesel or gas engine, as well as an adjustable boom system.



Portable and powerful, Grundowinch is well-suited for underground utility construction applications including underground cable pulling, pipe bursting, sliplining, pipe pulling, and swage lining.

The constant-tension design feature means any cable slack is immediately sensed and quickly taken up automatically. This makes for an ideal winch for sensitive operations. Control is easy with a number of convenience and operational features such as single-lever tension control (no gears to engage), power assisted winch line feed, and winch controls located at the rear of the unit to provide a safe view of the job while operating.

TT Technologies offers nine models of Grundowinch constant tensions winches ranging pulling capacities from 1.5 tons to 20 tons. A 3-ton hydrostatic Grundowinch is ideal for pulling CCTV and cable through innerduct. The Grundowinch can pull up to

3,280 feet of 3/8-inch cable at pulling speeds of up to 160 feet per minute. In addition to a 3-ton pulling capacity, the winch offers infinite speed control throughout the pulling range. The 3-ton winch is compact and highly portable for pulling in easements and backyards.

The compact Grundodrill 4X is ideal for the installation of conduit for power and last-mile applications. The Grundodrill 4x offers 9,800 pounds of thrust and pullback. Using the compact drill is less intrusive and ideal for areas where larger units are not an option. The drill features a dual hydrostatic pump system and a four-auger stake down system that provides greater stability.

www.tttechnologies.com

Wagner-Smith Equipment Company

Wagner-Smith Equipment Company recently held a groundbreaking ceremony for its new facility in Burleson, Tex., that will house of-



fices, inventory, and a shop for the company that manufactures, repairs, rents, and sells transmission and distribution equipment, tools, and supplies across the country.

Construction on the 58,000-square-foot facility is set to begin this fall on a 19-acre lot in Burleson's new HighPoint Business Park. The building will be nearly double the size of the company's current location.

"Wagner-Smith Equipment's success in Burleson has resulted in us outgrowing our space," President James Pace said. "We look

Continued on page 50

Make us prove it! Make us prove it!



HLB-1250

Bethea's Handline Blocks are:

1. Equal or superior to all major brands
2. In stock for immediate delivery
3. Priced at substantial savings!

The three (3) inch diameter free running sheave is profile machined to exacting tolerances for greater lifting efficiency. The shielded ball bearings are permanently lubricated and have a rating of 1250 pounds at a sheave speed of 100 rpm for an average life of 2500 hours at the rated loads and speeds. Frame, head and sheave are cast from high strength A356-T6 Aluminum Alloy.

HLB-1250-SH

HLB-1250-KH

HLB-1250-MH



FOR PROOF write or call:
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 Birmingham, Alabama 35238
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Bethea's Heavy Duty Line Swivels are:

1. Equal or superior to all major brands
2. In stock for immediate delivery
3. Priced at substantial savings!



BSE-B8

Bethea swivels are computer designed to allow safe smooth passage of a conductor through stringing blocks without overloading insulators and structures.

Computer controlled machinery is used to manufacture precision dimensioned components that will perform satisfactorily under severe loading conditions encountered in stringing conductors. These corrosion protected alloy steel swivels are designed for long lasting cost efficient service.



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Product Showcase

Continued from page 49

forward to the opportunities the investment in a larger facility will create for our business and our customers.”

The building will be complete by summer 2015. Wagner-Smith Equipment has locations in Lawrenceville, Ill.; Burseson, Tex.; Dayton, Ohio; Tualatin, Ore.; and McDonough, Ga.

www.wagnersmithequipment.com

John Deere

John Deere’s K-Series 4WD Wheel Loaders now feature three models that meet Final Tier 4 emissions standards. The engine update also allowed John Deere to offer several machine enhancements to the 624K, 644K, and 724K for added durability, productivity, increased uptime, and lower daily operating costs.

“Our goal when updating the K-Series engines to Final Tier 4 was to integrate the engine with minimal machine impact and to maintain the performance features our customers have come to know and expect from John Deere wheel loaders,” said Chris Cline, Deere product marketing manager for utility wheel loaders. “The engine update also allowed our engineers to implement several customer-inspired solutions, including axle improvements and several feature upgrades to better meet the needs of today’s wheel loader operator.”

The implementation of a John Deere PowerTech EPA Final Tier 4/EU Stage IV engine delivers impressive torque to help maintain good boom and bucket speed in and out of the pile for heaped loads, even in wet or hard-packed material. The new wheel loader models weigh the same as their Interim Tier



4 predecessors with no increase in machine dimensions.

The K-Series boasts several axle improvements for increased durability in demanding conditions, including standard axle cooling and filtration, along with brake retractors and adjusters on the Teammate V axles. Standard axle cooling and filtration keeps axle oil and its components cooler in hard breaking and significant load-and carry applications.

For added protection, axle oil is filtered by continuously cleaning wear particle and debris out of the oil. Together, this system provides increased engine reliability, durability, and longevity. Finally, brake reactors and automatic self-adjusters were added to eliminate brake drag and to maintain a constant brake running clearance with better compliance and less heat.

www.deere.com

General Machine Products

General Machine Products Co., Inc. (GMP) is pleased to introduce the AirStream Cable Blowing Machine to its line of fiber optic cable placing equipment. Specifically designed to safely install micro fiber cable into pre-installed 5- to 18-mm OD micro duct, the AirStream will place 2.5- to 11-mm OD cable at speeds up to 80 meters per minute. This, along with its low maintenance and high reliability, makes the AirStream an excellent value.

The AirStream incorporates a tabletop design with easy-to-use ergonomic controls for one-person operation. The unit uses a double belt drive concept, backed by the latest in servo control technology, to provide a secure cable grip with precise torque and speed control. The pushing force, up to 20 kg maximum, can be adjusted to suit the cable stiffness.

The AirStream uses compressed air to install micro fiber cable into micro duct in both indoor and outdoor environments. Its electrically powered, double belt drive system controls the cable as it is propelled through the micro duct. An electronic monitoring system



provides read-outs of speed and distance and includes an emergency stop capability.

Compressors are available to accommodate GMP’s complete line of Cable Blowing Machines. On-site training is available with purchase, and rental and rent-to-own programs are available.

Other features include one-person operation, tabletop design with ergonomic controls, cable speed and distance monitoring on a digital display, variable torque and speed control, forward and reverse operation, easy cable threading, polycarbonate safety guard over the double belt drive, and reduced noise levels.

With the purchase of any GMP fiber cable blowing machine, onsite training is provided at no additional cost. Compressors are also available to accommodate GMP’s complete line of fiber cable blowing machines. Note: the AirStream requires 110/120 Volt AC service.

www.gmptools.com

Sumitomo Electric Lightwave

As a major leader in optical fiber and connectivity, Sumitomo Electric Lightwave provides advanced and integrated solutions for your network applications.

As a recognized leader in ribbon technolo-



gy, Sumitomo's 576F DriTube Ribbon Cable is a gel-free ribbon cable that exceeds standard 432 fibers. Rather than switch to gel-filled after 432 fibers, installers can now streamline the project with all dry cable and the Quantum Mass fusion splicer. The cable features patented Easy Split & Peel technology that allows fast and easy fiber access by hand. If you prefer 864F gel-filled, or whatever your cable preference may be, Sumitomo has you covered with a broad choice of optical fiber types and cables.

The 36 Fiber Flat Drop Cable is PE-90 rated and 600 pounds. It is designed for use as a multi-purpose distribution or drop cable that can be placed aerially, in conduit, directly buried, or blown for providing last-mile optical service. With a greater amount of fibers within a small diameter, it's easy and fast to install.

The new Quantum Type-Q101-CA-PLUS is Sumitomo's next generation Quantum core alignment fusion splicer. It features new standard levels in speed with heater shrink time of only 14 seconds. The unit increases splicing efficiency by more than 80 percent and has Wi-Fi capabilities for splice data transfer and other interactive features via mobile apps. This core alignment splicer boasts patented dual independent heat shrink ovens, SD port for virtually unlimited storage, and internet interface for 24-7 remote maintenance, plus much more!

Contact Sumitomo for more information on reliable OSP and a host of other network solutions backed by outstanding engineering and training support.

www.sumitomoelectric.com

Digital Control Incorporated

Digital Control Incorporated is a pioneer in the underground construction industry. Since 1991, DCI has been delivering new products that have revolutionized the installation of underground utilities around the world. Innovations such as roll/pitch data and "look ahead locating" with ball-in-the-box interaction have made underground



construction more profitable and safe.

The DigiTrak Aurora display represents another industry first, a platform for task-specific applications that add value to the jobsite. Aurora represents the latest in color touch screen technology and allows for rapid navigation between applications. Aurora is a connected device that enables the collection, integration, and sharing of jobsite data.

Aurora is the future HDD locating.

The company's flagship locating system, the F5, incorporates DCI's patented 3D antenna technology along with a graphical icon driven menu system that increases productivity in the field. Interacting with the F5 is easy given a four-way toggle switch. The F5 system includes five unique transmitter frequency options to address the various types of interference encountered on HDD jobsites. DigiTrak Dual Frequencies Transmitters can switch frequencies on the fly while underground in mere seconds, allow-

ing users to rapidly respond to changing drill site interferences.

This system also allows contractors to log their pilot bores and easily upload the data log into DCI's LWD software to create a detailed as-built. The F5 captures pitch, depth, annular fluid pressure, transmitter temperature, and real-time tension being applied to your product pipe during pull-back. The F5 with LWD software meets the growing jobsite documentation requirement in the underground construction industry while simultaneously compiling a historical reference bank for future projects where safe, efficient navigation is key.

All DCI products are back by a top customer relations group. DCI invites you to contact the company and find out for yourself.

www.digital-control.com

Continued on page 52



Pelsue Tents & Shelters Keep You Warm and Protected.

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Product Showcase

Continued from page 51

McLaughlin

The Vermeer by McLaughlin MEGA Vacuum excavator line is designed to keep you on the job longer with larger capacity spoil tanks and fresh water options. The MEGA Vacs can be equipped with three different powerpacks to suit your application. All are powered by a 99-horsepower Kubota diesel engine and run a 1,200-cfm blower. Powerpacks can be upgraded to add a DEEP mercury (23-inch mercury) blower for fluid management and HDD support or an Air/Water combination powerpack with the standard 1,200-cfm blower with 15-inches of mercury.

These skid-mounted units have the ability to arrive on a jobsite, pothole for existing utilities, and then remove drilling fluids from larger and longer bore projects. The MEGA 2000 skid-mounted vacuum excavator has a 99-horsepower Kubota diesel engine with a 1,200-cfm blower and features a 2,000-gallon spoil tank and 925 gallons of fresh water to ensure you have the power and capacity required.

The MEGA 2600 skid-mounted vacuum excavator is designed for fluid management and HDD support for up to D100x120 class rigs and maxi-rig jobs. The Mega 2600 is typically paired with PP100XT DEEP power pack providing additional suction power with the 23 inches of mercury DEEP blower for increased fluid management capabilities. The MEGA 2600 also features 300 gallons of fresh water, making it a versatile potholing unit when needed.

www.mclaughlinunderground.com



Underground Tools, Inc.

Underground Tools, Inc., headquartered in Lino Lakes, Minn., is a world leader in the manufacturing and distribution of ground-engaging wear parts for the construction industry, specializing in the development of underground infrastructure through the installation and remediation of utilities and related activities.

The company was founded in 2003 by partners that spent their entire careers in the industry. UTI's mission was developed based on 100 percent customer satisfaction: Produce the highest quality products technology will allow, offer at market-leading prices, and provide customer service and support that is second to none.

UTI manufactures a complete line of drill pipe and complementary downhole tools for horizontal directional drilling equipment. Product line offerings include drill pipe, sonde housings, pilot bits, backreamers, drive chucks, starter rods, transition subs, wear collars, jaw dies, adapters, and much more. Drill pipe and tooling are available for all major manufacturers' drills, including Ditch Witch/American Augers, Vermeer, Case/Astec, Barbcro, and Universal HDD.

UTI also manufactures fully integrated digging systems and complementary components for virtually every make and model of trencher on the market, from the smallest pedestrian units to the largest track trenchers. Trencher chain of all sizes and strengths is available, from 1.5- to 6.5-inch pitch chains, which range in tensile strength from 10,000 to more than 450,000 pounds. Chain assemblies, complete with cutting teeth, adapters, stabilizers, and hardware, are

built using special sequential pattern configurations designed to optimize productivity based on application and ground conditions. Sprockets, idlers, and rollers are engineered specifically to match the trencher chains, which allows for precise articulation and extended wear life. Digging systems and much more are available for Ditch Witch, Trenchor, Vermeer, Case/Astec, Tesmec, Trench-Tech, and many other trencher manufacturers' equipment.

www.undergroundtools.com

Hunting Trenchless

After almost a year on the market, the Hunting Trenchless M-Series Mud Motor line continues to be a game-changer for the directional drilling industry. The M-Series design incorporates the sonde housing into the bearing housing just 3-feet behind the bit, giving the operator highly accurate tracking information.

"Unlike conventional mud motors that position the sonde housing 20 or 30 feet behind the drill bit, Hunting's design provides tracking information that is within 3 feet of real time," said Klane Kirby, general manager of Hunting Trenchless. "These motors are also engineered with a 1 1/2- or 2-degree bend in the housing to provide effective steering in even the toughest rock conditions."

The M-Series Mud Motor is for use with horizontal directional drilling equipment with pullback ratings of 40,000 pounds and higher. It has a diameter of 5 3/4 inches, requires a bit of at least 6 3/4 inches, is 18 feet long with power section, and operates on 150-gpm minimum mud flow.

Hunting mud motors have been on the market for more than 10 years, with current models incorporating features of the com-



pany's proven oil field motors, for increased production, performance, and reliability.

"Hunting is a leader in progressive-cavity, positive displacement mud motors. Mud motors convert hydraulic energy from the drilling fluid into mechanical energy to turn the drill bit, independent of the drill string," Kirby said. "This allows slower drill string rotational speeds, which in turn equals more efficient drilling and less wear on the drill string and its components."

Motors are available in sizes from 1 11/16 through 9 5/8 inches.

www.huntingtrenchless.com

Ditch Witch Minnesota

Ditch Witch Minnesota proudly offers the RT80 Quad Ride-On Trencher and the JT9 Directional Drill.

For short drops, long hauls, and everything in between, the Ditch Witch RT80 Quad is one plow that does it all. This exceptionally powerful, durable, and rugged machine is completely designed and manufactured by the Ditch Witch organiza-

tion to provide outstanding traction and performance on rough and uneven terrain. The RT80 Quad's three-speed, shift-on-the-fly ground drive—three speeds in forward, three in reverse—provides the power you need, when you need it, to tackle any jobsite. And the innovative Quad Track System pivots about the centerline of the axle, a design that provides exceptional machine stability in all conditions.

Tremendous axle capacity provides a static load rating of 39,000 pounds and 35,215 pounds of breakout for plowing applications.



Three-speed, shift-on-the-fly ground drive gives you more options as jobsite conditions and requirements change.

Backfill blade arm has the same heavy-duty design as the Ditch Witch RT115 Quad, for added strength and durability. Turbocharged Deutz Tier-4 diesel engine with 74 gross horsepower and a compact footprint enable the RT80 Quad to do big jobs in small places.

The 66-horsepower, Tier 4 Ditch Witch JT9 offers 9,000 pounds of pullback force in its sturdy yet compact frame. The JT9 combines the simplicity and easy operation of smaller horizontal directional drills with the advanced features of bigger drilling machines, like a heavy-duty anchor system, open-top vise wrenches, and an integrated remote display.

The high-performance, Tier 4, 66-horsepower Deutz diesel engine is air-cooled and quiet for easy maintenance and longer operation. The drill is equipped with a heavy-duty anchor system, integrated remote tracking display, and other features usually seen

Continued on page 54

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Product Showcase

Continued from page 53

only on larger directional drills.

www.ditchwitchmn.com

Dura-Line

Dura-Line is a global manufacturer of HDPE conduit and pipe systems with 18 plants located in eight countries providing conduit and pipe products to the telecom, broadband, CATV, electrical, transportation, power utility, campus, military, agricultural, industrial/municipal, renewable energy, and oil and gas gathering markets.

Dura-Line is leading the way in MicroTechnology, a system that includes MicroDucts, accessories, placing equipment, micro fiber cable, and complete field technical resources to support the design and installation.

Why are so many builders of fiber networks using MicroTechnology? By “microsizing” builders are realizing savings in material, shipping and handling, installation, and labor. Micro fiber cables are lightweight, easy-to-handle, and can be placed long distances quickly, thereby reducing or eliminating splice or slack points. Box sizes, if needed at all, can be cut in size by two-thirds. Reels are smaller and lighter, making material handling and shipping easier.

MicroTechnology products can be installed by traditional methods of plowing, boring, trenching, or placing as an innerduct. No special equipment is needed. MicroTechnology is also compatible with micro-trenching and MDU installations.

Dura-Line’s MicroTechnology products can be used from the central office directly to the home as well as in long-haul and back-haul applications. MicroTechnology is the answer for FTTH. Dura-Line’s Micro-

Technology installations are supported by Dura-Line’s field design and engineering teams that work support assist any and all installations. And once installed, Dura-Line’s MicroTechnology allows for future expansion without construction!

It’s time to see why users and builders of fiber networks are moving to MicroTechnology. Contact Dura-Line to learn more.

www.duraline.com

Global Machinery

The THALER KE-SP60100 is a leading large-capacity underground puller. With a maximum pulling force of 22,000 pounds, 3,000 feet of anti-twist steel cable, the ability to save your pull data to a memory stick or print it right at the jobsite, and a manually adjustable depth boom, it is rapidly becoming many contractors’ underground puller of choice.

These pullers are high-quality products representing the latest modern technical standards in the field of underground cable pullers. They are built in accordance with the latest industry standards and meet all governmental regulations. Some features include hydrostatic drive, double capstan system, Final Tier 4 diesel engine, large drum capacity for long cable lengths, and a pulling force that is controlled by an electronic measuring system that can be adjusted to any force between 0 and 22,000 pounds.

Global Machinery is the U.S. distributor for Jakob Thaler and stocks these 22,000-pound pullers, along with the 11,000-pound model pullers, at several locations throughout the country. The company rents, sells, and services specialized utility construction equipment to contractors, public utilities,

government agencies, and municipalities. It has everything from skid steers, track loaders, and mini excavators to large cable plows, trenchers, directional drills, and vacuum excavators. Global Machinery also rents fiber optic cable blowers, fiber optic cable pullers, and cable reel trailers. It has rented equipment from Florida to Alaska and everywhere in between.

The Thaler underground puller is available at six locations throughout the United States. Please contact Global Machinery to find the location nearest you.

www.globalmachinery.com

CASE Construction Equipment

CASE N Series backhoes (the 580N, 580 Super N, 580 Super N Wide Track, and 590 Super N backhoe loaders) feature 3.4-liter, turbocharged engines, ranging from 78 horsepower in the 580N to 108 horsepower in the 590SN. The Tier 4 Interim-certified engine burns cleaner while delivering superior horsepower, faster response, and a minimum of 5 percent better fuel efficiency under load.

N Series backhoes offer the industry-exclusive Power Lift feature that channels the hydraulic power directly to the boom with the touch of a button. N Series backhoes also feature optional automatic Ride Control on four-wheel-drive models. Automatic Ride Control engages at roading speeds (selected by the operator) to help reduce bucket spillage.

CASE N Series backhoes also deliver more power to the loader, for increased breakout and lift capabilities. The loader arms are stronger and longer, providing greater loader reach. This lets operators dump material into



the center of a truck for faster loading and increased payloads.

CASE has also added a standard panel of dipper teeth on the bottom surface of the dipper, along with optional extension/replacement aggressive hardened-steel teeth that can expand the area of the dipper covered. The dipper teeth enable the machine operator to secure unusually shaped or oversized pieces of debris or rock by pinning those objects against the dipper with the bottom of the bucket. The dipper teeth not only provide superior control of materials being moved, but they also protect the dipper from excessive wear.

N Series backhoes also feature remote hydraulic test ports that allow easy, ground-level access for service diagnosis, helping to keep the machine up and running and reduce costly downtime.

www.casece.com

Corning Cable Systems

Corning Cable Systems, part of Corning's telecommunications segment, is a leading manufacturer of fiber optic communications system solutions for voice, data, and video network applications worldwide.

Corning Cable Systems Solutions for Fiber-to-the-x (FTTx) Networks is a comprehensive offering of tip-to-tip products and services including an advanced suite of optical fiber technologies, photonic components, and optical networking devices. Integrated CAD and flexible manufacturing processes deliver innovative, turnkey solutions in collaborative partnerships with OEM customers. Backed by award-winning customer service, engineering services, and technical support, Corning



Cable Systems solutions enable network service providers to quickly and cost-effectively deploy fiber to the home and business.

Corning Cable Systems Solutions for wireless networks offer a variety of state-of-the-art enclosures, fiber optic cable, and connectivity products to equip wireless towers, rooftops, and switching centers. These solutions optimize costs through rapid installation combined with excellent technical support. The company's fiber optic wireless products support both fiber to the cell site, or backhaul, and evolving fiber-to-the-antenna networks.

www.corning.com/cablesystems

Vocon

Housby/Vocon is the single-source asset-dispersal solution. Traditional on-site auctions, with online bidders, a mobile team sells on location or from nearby holding yard. Online timed sales with 3-page inspection reports ensure buyer confidence.

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Vocon gives no-obligation consultations and appraisals and transports equipment to meet buyer or seller needs.

www.govocon.com



Larson Cable Trailers

Larson Cable Trailers offers some of the most reliable, versatile, and rugged cable handling trailers on the market. Rick Larson is a contractor who saw a need for a trailer



that would do more than just haul a reel. He would sit by and watch as his plow train sat idle while his crew figure 8'ed fiber by hand and knew there had to be a solution to keep the plow train rolling. That's where the idea for a cable handling trailer came from, and over the last 10 years it has grown into a line of trailers with attachments available to help contractors increase production while decreasing labor costs and downtime.

Larson's Figure 8 attachment has been around since day one and is invaluable when it comes to figure 8'ing fiber optic cable. What used to be a 5-6 worker operation is now a 2-person operation. The Honda engine does not seem to care what the temperature is outside or how heavy the cable is, it just keeps on running. Tested and approved by most fiber optic manufacturers, this attachment has very little chance of damaging the cable.

In 2010, with the help of Condux International, Larson added a small fiber blower to its line of attachments. With no tracks or electronics, this blower is maintenance free and easy to use.

In 2015, Larson will introduce a 10,000-pound capacity trailer and a simple reel trailer, with limited attachments, meant for safe transporting of reels. The company is constantly looking for new ways to help the contractor improve production with simple attachments to its trailer.

For more information visit the company website at or contact your local Vermeer dealer.

www.larsonct.com

Continued on page 56

Product Showcase

Continued from page 55

Grande Truck Center

Grande Truck Center in San Antonio, Tex., has one of the most complete and diverse truck inventories in the U.S.—on the ground, in stock, and ready to go! Grande stocks every size vehicle required for fleet or individual needs. Grande truck brands include Mack, Volvo, Western Star, Autocar, and Ford SUVs and crossovers, light-duty, medium-duty, and super-duty trucks. Grande specialty trucks include crane, garbage, and mixer trucks with the opportunity to create turn-key packages or supply just the cab and chassis.

From a start-up truck retail operation to a top national dealership, Grande Truck Center has kept trucks on the road for 47 years. A one-stop shop for trucking needs, Grande has grown to include sales, parts, and service departments for light and heavy trucks. The parts and sales departments provide assistance nationally and can ship products to all 50 states.

Grande's sales team combines for more than 300 years of truck sales experience, making them experts on getting customers in the truck they want. With 26 heavy and medium duty truck service bays, 18 light truck service bays, factory-trained technicians, extended hours, and transmission and chassis dynamometers, Grande has the right tools to meet any customer's service and maintenance demands.

The parts department at Grande is dedicated to customer satisfaction. The staff of highly qualified parts personnel are available 24/7 to handle all parts needs. "If we don't have it, we can get it" is a motto the company stands by. Grande Truck Center has more than \$6 million in parts inventory to get trucks back on the road. Grande's parts department offers local delivery and competitive prices and can ship parts worldwide.

www.grandetruck.com



Greenlee Communications

Sherman + Reilly Telecom, recently integrated with Greenlee Communications, has released the all new Ultimaz P2P (point-to-point) fiber drop cable installation system. The Ultimaz P2P is designed to install fiber drops from 50 to 1,200 feet long that can accommodate cable diameters from 5.8mm to 10.5mm or either of the microducts and OSP ducts measuring from 10/8mm to 1 1/4-inch I.D. This hybrid unit installs most drops simply by its cordless drill driven pusher while allowing for the injection of compressed air for difficult drops.

Benefits to installers include safer installs by eliminating injuries and fatigue from hand pulling and higher production due to no pull lines and direct installs from the cable reel. The versatile system can install round or flat cables, and the low tool cost makes it affordable.

Advantages of the Ultimaz P2P include higher-production installations, ergonomically superior to hand pulling, protecting fiber cable as enhanced by pushing, exponentially superior when jetted or blown with virtually no stress on the fiber cable, and user friendly with fast and easy setup.

www.greenlee.com

Millennium

What's the best thing about new toys? Getting to play with them! We all learn better through hands-on experience. That's why Millennium continues to offer hands-on training seminars and field product demos



to help its clients stay current, functional, and profitable as new technology and techniques become available. Millennium's mission is to bring together industry leading manufacturers with innovative products to improve daily operations, with clients that can utilize the info to help grow their own businesses.

One of the most requested trainings is for fiber placing with the GMP cable blowers for traditional and micro fiber installations. Clients get to work first hand with the Tornado and Airstream cable blowers and see all that these machines have to offer. Designed to be safe, fast, and effective, the Tornado Blower can be delivered right to your jobsite, and together we can maximize your investment in labor and install miles of cable per day into a high-integrity conduit run. You can take control of the Airstream and see first hand how it is designed to maximize protection for micro cables with precise control of torque and speed, while increasing efficiency. Millennium will work to teach your next cable blowing professionals through a hands-on approach to training.

Think this new technology doesn't fit into your budget? Millennium strives to make sure clients have access to all of the necessary products through flexible rental, leasing, and purchasing options. Millennium extends these programs to ensure clients of all sizes can have access to the latest technology, while safely and efficiently building the networks that will propel America back to being a leader in technology and communications. These programs are not limited to cable blowers and include fusion splicers, test equipment, and even fiber characterization

equipment.

www.mce1000.com

Southwire



Southwire's innovative *SIMPull* Cable-In-Conduit (CIC) helps contractors save time and money with trench-ready products that can be installed in one easy step.

"Our CIC helps make underground cable installation faster, cleaner, safer, and more efficient," said Michael Perry of Southwire Company, LLC. Installs of this product require less labor, which can help contractors save money and improve safety because crews may ultimately spend less time along dangerous roads and right-of-ways.

"Our technology-leading production lines give us the flexibility to offer just about any wire or cable inside the conduit to deliver cost-effective solutions for every type of electrical contractor," Perry said. By offering an all-in-one solution, *SIMPull* CIC eliminates the need to assemble PVC pipe and pull cables through, helping to reduce project timelines and cost.

SIMPull CIC applications include solar and industrial projects, street lighting, RV parks, sports field lighting, airport lighting, parking lots, power feeds, and temporary power. End-to-end solutions include transition couplings, termination fittings, pull tape, end caps, and tracer wire.

Always looking to make the job easier, Southwire is currently developing a complete line of electrician's tools, including conduit rotary cutters and conduit slitters, giving contractors the convenience to buy all their cable-in-conduit needs from one manufacturer.

www.southwire.com

CZM Foundation Equipment

CZM Foundation Equipment recently expanded its line of Kelly Bar models and

introduced a new product, the EK250SM.

Located in Savannah, Ga., CZM offers a comprehensive line of machines engineered for a variety of foundation applications.

Designed for performance and versatility, the CZM model EK250SM is mounted on a CAT Tier IV 336 HHP base (CAT C9.3 ACERT) giving this model 323 horsepower. It can reach a drilling diameter of 15 feet and a standard drilling depth of 60 feet. It has an effective working torque of 200,000 foot-pounds, an effective winch pull on the main winch at 58,700 foot-pounds, and up to 78,000 foot-pounds of crowd, making it one of the most competitive machines of its class.

Keeping transport and DOT regulations in mind, CZM engineers designed the EK250SM with a transport weight of 102,300 pounds and the rotary head with a large inner passage. These features allow the EK250SM to deliver high drilling torque, the use of stronger Kelly Bars, and the versatility of applications like Kelly Bar and CFA. There are no changes to hydraulic hoses for converting to any application thanks to the unique patented torque mechanism, "Bottom Drive CFA."

In the short mast version, there is no downgrade of torque due to the great rotary head inner passage, which allows for more external elements to the Kelly Bar.

CZM products are recognized worldwide for their high quality and innovative design, which incorporates the CAT base, along with first-line components of American vendors. CZM is known for superior after-sales services and offers custom paint jobs for all models manufactured in its Savannah facility. CZM's



customer-oriented philosophy is backed by qualified professionals who provide top services, including corrective and preventative maintenance, commissioning, parts, tools, accessories, and more.

www.czm-us.com

Pelsue Company

The Pelsue Company has introduced the new Vert-Alert for the safety of aerial lift operators. Because regulations require the use of fall protection by all aerial lift and work platform operators, there was a need for something to ensure that aerial lift operators are actually connected to their harness before they begin to ascend. The Vert-Alert is an integrated system that alerts aerial lift operators to attach their safety harness lanyard before elevating the lift. If the safety harness is not attached to the provided anchorage, a high-decibel verbal message states, "Warning, fall protection not connected!" whenever the "UP" or "DOWN" controls are activated. If lift operators disconnect their fall protection lanyard, the Vert-Alert will announce with the same warning message.

An optional feature will interrupt the "UP" control and prevent the lift from being elevated until the safety harness lanyard is attached. Going down? The Vert-Alert sounds a high-decibel verbal message, "Warning, aerial lift descending!" whenever the "DOWN" control is activated. Jobsites can be noisy and with many aerial lifts operating quietly on DC power, it is not always noticeable to



Continued on page 58

Product Showcase

Continued from page 57

those on the ground that a lift is descending.

The Vert-Alert system has a data-logger that records the number of times the lanyard attachment alarm was activated. The Vert-Alert records the date and time of connect and disconnects of the lanyard, as well as the number of up and down motions. This information will help identify operations outside of standard operating procedures.

The Pelsue Vert-Alert is a simple and effective system to warn operators if they are not attached to the anchorage, which will help improve operator safety and OSHA compliance. It is easily installed on new and existing equipment by competent installers.

www.pelsue.com

Ripley Tools LLC

Ripley Tools has introduced the WS 76 Semi-



Con Removal Tool, part of its utility tool product line. This tool is designed specifically to accommodate semi-con diameters of 0.7 to 2.3 inches. The WS 76 spiral action also accurately removes the bonded semi-con shield within .98 inches in forward position and within .27 inches in reverse position. Easy blade replacement, an additional winding pin, and no need for messy cable lubricant make this tool ideal for utility professionals to do their job more effectively and efficiently.

The WS 76 is made in the United States of a strong, high-quality steel and aluminum construction. Utility tools from Ripley are designed and manufactured for installers and contractors in the power, transmission, and distribution industries and are a leading brand for wire and cable preparation.

Ripley has been designing, manufacturing, and assembling quality cable preparation tools for the professional installer since 1936. It is a leading worldwide manufacturer of wire and cable preparation tools for the CATV, fiber optic, electrical, home integration, telecom, and utility markets.

www.ripley-tools.com

Terramac

The Terramac RT9 is the rubber track crawler carrier designed with utility work in mind. Whether you're navigating through adverse terrain or in need of specialty equipment such as boom lifts or digger derricks to get the job done, you will enjoy all the advanced features of the RT9.

Navigating through uncharted ground has never been easier with the RT9's ground pressure of just 5.1 psi fully loaded. The low ground pressure takes you further while minimizing ground damage and preventing costly jobsite damage from occurring.

Equipped with front and rear bolt-on connections, this multi-purpose carrier can accommodate various types of specialized equipment for the job at hand. You will appreciate the ease of switching between attachments such as boom lifts, digger derricks, and various beds all in a day's work. The electrical power sources, frame adjustments, and hydraulics can all be customized to suit different attachments.

Manufactured in North America, the CE-certified Terramac RT9 has an operating weight of 26,000 pounds and a maximum carrying capacity of 18,000 pounds. The RT9 does not require special oversize permitting to transport the machine. Ideal for carrying supplies and materials, the bed on the RT9 elevates to a 48-degree angle for dumping gravel, sand, dirt, and other materials. The bed can fold down, allowing the operator to side-load materials or equipment for carriage across rough terrain, delicate soil conditions, and remote areas. The RT9 is equipped with a 230-horsepower Cummins diesel engine. Rollover protective structure (ROPS) and



falling object protective structure (FOPS) are standard. Open- and closed-cab options are available.

www.rigsourceinc.com

Terex

To increase drilling performance



and decrease operational costs, Terex Texoma Interchangeable Head (ICH) augers are now available for the popular Terex General and Commander series digger derricks. ICH augers increase productivity and versatility by enabling utility contractors to accommodate a variety of drilling configurations and applications with a single auger body.

ICH augers eliminate the need for customers to have multiple augers in their equipment fleet. By simply switching out the head on the auger, customers can work in various ground conditions throughout their operations area, as well as change hole diameters, with minimal effort. With only one pin to switch out, ICH augers can be taken on and off auger bodies in two minutes or less. Measuring approximately 12-inches long, several interchangeable heads can easily be stored in the truck bed. This allows customers to always have the right auger for the job, when and where it's needed most.

Three types of Terex ICH augers are available: TX (TXD and TXC) Series for dirt or cobble applications, BTA Series (standard and spiral cut) for hard rock applications, and a core barrel option for extreme applications. ICH augers are designed with a 2 5/8-inch diameter hex shaft to provide a robust connection between the auger body and auger head, giving them the ability to withstand the full torque of the auger drive regardless of the auger drive output. The design of these augers also incorporates a new high-strength drawn-over-mandrel stem.

ICH augers are available in three flight options: medium duty, heavy duty, and extra heavy duty. Replacement teeth and pilot bits are also available.

www.terex.com/utilities

Altec Inc.

Altec Inc. has launched the AN67-E100 and AN67E-E100 aerial devices to offer customers increased safety and jobsite efficiency. These new units will be added to the Global Rental fleet this fall and are now available to order.

"We worked directly with customers and took a hard look at all aspects of this machine: the aerial device, the elevator, and the overall layout and chassis interface," said Dustin Yost, Altec market manager. "Every feature designed into this package directly aligns with what linemen and fleet managers thought most important: safety, productivity, reliability, and operator convenience."

The AN67-E100 and AN67E-E100 incorporate the field-proven design and reliability of Altec's AA/AN Series Aerial Devices into a 100-foot total platform height elevator for transmission applications. A high-flow hydraulic system and new independent controller for the elevator provide speed and multi-function capability. Standard platform rotator, available extended side reach, and material handling jib offer more options to position the platform and get tools and materials to height. By reducing time required for setup and positioning, a crew's productivity is greatly improved.

The new elevator design features high-tensile steel and a modern box-boom design for improved strength-to-weight



ratio. "Depending on configuration, our new double elevator allows up to 3,900 pounds of total payload on a 58,000 pound GVWR all-wheel drive chassis. Optimizing payload allows crews to carry more materials, tools, and accessories on the truck, which is key to the overall efficiency of the job," Yost said.

A service-driven design offers new features, including additional larger access holes and covers, accessible grease points and hydraulic hoses, redesigned pins and fasteners, hydraulic hose bulkheads, and hydraulic diagnostic ports. These features simplify preventative maintenance and allow more efficient troubleshooting and repairs, reducing both downtime and operating costs.

www.altec.com.

Vac-Tron Equipment

Vac-Tron Equipment, an industry innovation leader in industrial vacuums, potholing, daylighting, hydro excavation, air excavation, and environmental clean-up equipment, has introduced the new LP 533/833 XDT.

Powered by a 24-horsepower Kohler diesel engine, this unit has similar performance specs as the pre-Tier 4 final DT model. It is Tier 4 compliant and comparatively priced with the pre-Tier 4 models. For the last several months, Vac-Tron negotiated with engine suppliers to receive the very best discounts possible, and the company is confident that this current Tier 4 final pricing is very competitive with the market.

This machine features the new Series 33 Safety Rear Door. The hydraulic screw rear door offers a high-torque motor with a self-adjusting threaded shaft designed for low maintenance and easy operation. It opens to a full 90-degree angle and is equipped with



a safety lock that engages automatically.

It features CVS filtration housing. The LP ground level filtration housing also incorporates a 28-inch-diameter cyclone, four-way valve for reverse pressure, and a large silencer for quiet performance. Patent pending. It has an optional strong arm to help support the weight of the vacuum hose. It has a 6-inch debris discharge valve for quickly off-loading liquid materials by gravity or under pressure to another container.

The new unit has an easy-access engine compartment for service and regular maintenance of all components.

www.vactron.com

American Polywater Corporation

American Polywater Corporation's Splice Shield sealant leaves a thick flexible coating that creates an environmental barrier against oil, water, and corrosion. Splice Shield can be used on medium-voltage cable as long as the shield has not been damaged. It has a high dielectric strength. The kit contains all the materials needed to seal multiple underground splices or repairs cable jackets that were nicked or cut due to shovel damage.

Polywater Splice Shield sealant is packaged in an easy-to-use self-dispensing cartridge. Only one application is needed for a thick protective coating over "taped" splices, "clam shell" splices, or for use under heat shrink tubing to ensure that water won't penetrate the cable.

Polywater Splice Shield dries quickly and does not need to be "tack free" before direct burial.

American Polywater also offers the new Polywater UPR Pole Repair, which simplifies



Continued on page 60

Product Showcase

Continued from page 59

the repair of wooden utility poles damaged by woodpeckers. Woodpecker holes allow moisture to penetrate the wood, causing the pole to rot. If left untreated, poles weaken in the area of rot, causing structural instability, potentially resulting in outages and safety concerns. Damage must be repaired as soon as possible to halt further decay and save on costly change outs.

With the proper sealant and application techniques, repairs can extend pole life and dramatically reduce replacement costs. Proper repair is the low-cost alternative.

UPR Pole Repair is specially formulated to expand in the pole cavity, rather than just filling it. Because UPR expands in the hole; it fills irregularly shaped cavities for better integration with the wood. This creates superior wood grain adhesion compared to other non-expanding products. Polywater UPR Pole Repair hardens much like wood, so it is gaffable and won't chip out in chunks when climber's hooks are embedded into its surface structure.

www.polywater.com

Utility Fleet

Utility Fleet prides itself on being a highly versatile equipment solutions provider, and

it is committed to continuously delivering products and services exceeding the expectations of its customers in the electric utility industry and related energy sectors globally. The company's facilities include three Texas locations with 55 service bays, multiple overhead cranes, multiple heavy truck lifts, two full body shops, and advanced computer diagnostic equipment and tools. With these resources, the skilled technicians can handle everything required from maintenance and repair to total utility vehicle restoration.

Utility Fleet offers a comprehensive selection of utility equipment and has developed strategic equipment partnerships with leading manufacturers: Terex, Manitex Cranes, ETI,



TSE Puller and Tensioners, Brooks Brothers Pole Trailers and Reel Trailers, and Prinoth track carriers. So you are assured of renting or purchasing high-quality bucket trucks, digger derricks, pressure diggers, and support equipment. Product offerings include new, used, rental, and remanufactured products. This provides you maximum flexibility when considering how to procure equipment to meet your project scope and stay within your budget.

Utility Fleet considers your success as theirs and works diligently with you to ensure that you complete your project on time and on budget.

www.utilityfleetsales.com

Bethea Tool & Equipment Company, Inc.

Since 1986, Bethea Tool & Equipment Company has manufactured and provided a wide range of stringing blocks, bundle blocks, and handle blocks for contractors and utility companies around the world. Other products, such as swivels, ropes, mats, etc., are also in Bethea's product line. All products are high quality and guaranteed by the company's limited warranty.

This year, Bethea has expanded to include a 65,000-square-foot distribution center near Memphis, Tenn. This full-service distribution center allows for a greater amount of inventory to be maintained for improved customer service. The sales center remains in Birmingham, Ala., in order to maintain sales/order efficiency.

Bethea's catalog can be viewed online, and shipping on 90 percent of products in the catalog is normally within 24 hours after receipt of order. Pricing is competitive, and all inquiries are welcome.

www.betheatool.com



Blue Diamond

This year Blue Diamond



celebrated its

10-year anniversary and thanks its customers and suppliers for their support and loyalty throughout this past decade.

Blue Diamond has developed a "Boreable" HDPE continuous conduit with three innerducts pre-installed inside. The 3N1 Boreable Conduit is patent pending. Blue Diamond 3N1 saves time and money by allowing contractors to bore a complete package. Customers from coast to coast have already embraced the benefits of having the innerducts pre-installed with 3N1.

The 3N1 is available in a 4-inch SDR 11.5 casing with three 1 1/4-inch SDR 13.5 innerducts installed. Custom innerduct configurations are also available. Lengths of 500-1000 feet are standard, and custom options are available.

Blue Diamond offers a complete solution in microduct technology. With its partners, Blue Diamond can offer all of the components required to build the complete microduct system, including bends, connectors, adaptor tees, access fittings, and chambers. Whether you are building a new FTTH, FTTC, FTTX, or are interested in adding microduct to an existing conduit, the company has a solution and the expertise to get the job done. BDI also manufactures cable in conduit by extruding the pipe over power, CATV, and telecom cable during the manufacturing process.

Blue Diamond is a premier manufacturer of high density polyethylene (HDPE) conduit headquartered in Lexington, Ky. It is a Women Business Enterprise and DBE certified in multiple states. Its Quality Management Program is ISO 9001:2008 certified. Blue Diamond is certified to UL and RUS compliant. It manufactures conduit for telecom, power, green energy wind and solar, highway and street lighting, fiber to the home, intelligent highway systems, CATV, cell tower backhaul, and cloud storage applications.

www.bdiky.com

FieldAware

FieldAware is a cloud-based mobile app that transforms your field service operations by making every aspect of serving your customers more efficient. With FieldAware your business can streamline your service scheduling process, increase field worker productivity, generate more revenue opportunities in the field, accelerate invoicing, improve customer satisfaction, and eliminate unnecessary paperwork.

All this efficiency allows you to focus on what matters: earning more revenue and delighting your customers. Plus, everyone will be on the same page, including your customers.

You can use FieldAware with technology you already have: the web, smartphones, and tablets. FieldAware works “in the cloud” and via free mobile apps, which means there are no expensive software or devices to buy. It also means that FieldAware is available to your field workers anytime and anywhere, whether they’re in the office, on service calls, or even at home.

Your business is unique, so FieldAware offers rich customization options that let you tailor the solution to the way you work. At the same time, the company works hard to make FieldAware as easy to use as possible because you shouldn’t have to be a programmer to use software.

You shouldn’t have to go it alone when using FieldAware to run your business, so the company offers first-class support and onboarding to ensure that you get the most out of FieldAware and your business keeps moving without a hiccup.

To learn more about our solutions or to schedule a demo, contact your local FieldAware representative.

www.fieldaware.com



KGP Logistics

KGP Companies, including both KGP Logistics and BlueStream Professional Services, is a value-added supplier of supply chain services, communications equipment, and integrated solutions to the telecommunications industry. With a national logistics network and a complete portfolio of manufacturer partnerships, KGP Companies is uniquely positioned as the solutions provider of choice.

www.kgplogistics.com



NESCO

With more than 45 locations in the U.S., Canada, and now Mexico, NESCO’s extensive fleet and knowledgeable staff offer the right equipment and service to suit your needs. Since 1988, NESCO Rentals has been a premier provider of utility equipment rentals. From aerial devices, boom trucks, cranes, digger derricks, and stringing gear to blocks, augers, repair parts, tools, and accessories, NESCO provides everything you need to get the job done.

The Terex Hi-Ranger TM100 is one of NESCO’s signature pieces. Designed with the customer in mind, the TM100 non-over-center, telescoping material handling aerial device boasts a series of improvements that add to its reliability and overall productivity. Physical updates include decreased travel height and lower overall weight to support installation on standard factory trucks, including a 6x6 chassis. Other enhancements include new outriggers and sub-frame con-



figuration that reduce the vehicle’s weight and allow for increased payload capacity.

With an overall height of 13 feet, length of 38 feet 4 inches, and a gross vehicle weight of rating of 52,000 pounds, the TM100 aerial device is designed to achieve 90 degrees of lower boom articulation, 100 feet of working height, and 51 feet of side reach. It also boasts a 95-foot bottom of platform height. Other features include an end-mounted, two-person, D-shaped, 800-pound capacity working platform, pilot-operated hydraulic controls that provide a smooth “feel and feather-ability” to control boom functions, and rigid tower sections that allow controlled boom movement and reduce sway.

Operators can easily access the platform from the ground, and the robust outrigger configuration offers a solid foundation for operation. Other standard features include a control-plus, 4-function single joystick control at the platform, continuous unrestricted planetary rotation, 78 degrees of elevation above horizontal, 168 degrees of upper boom articulation, and a closed-center, load-sensing hydraulic system.

www.nescorentals.com

FMI

FMI Capital Advisors, a subsidiary of FMI Corporation, is a leading investment banking firm exclusively serving the engineering and construction industry. With more than 650 completed transactions, FMI’s industry focus enables the company to provide clients with valuable insight and advice. Clients gain access to an outstanding network of industry contacts and relationships, deep market knowledge, and technical expertise based on decades of experience. Services offered by FMI Investment Banking Group include M&A representation, private capital placements, valuations and fairness opinions, and ownership transfer planning.

www.fminet.com



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PCCA Industry Calendar

UCT 2015	January 27-29, 2015
George R. Brown Convention Center	Houston, Texas
DCA Annual Convention	February 7-12, 2015
The Roosevelt	New Orleans, Louisiana
PCCA 70 th Annual Convention	March 6-11, 2015
Hyatt Regency Aruba Resort	Aruba, Dutch Caribbean
WINDPOWER 2015	May 18-21, 2015
Orange County Convention Center	Orlando, Florida
Solar Power International	September 14-17, 2015
Anaheim Convention Center	Anaheim, California
2015 PCCA Mid-Year Meeting	September 23-26, 2015
Charleston Place	Charleston, South Carolina
ICUEE 2015	September 29-October 1, 2015
Kentucky Exposition Center	Louisville, Kentucky
PCCA 71 st Annual Convention	March 4-9, 2016
Ocean Reef Club	Key Largo, Florida
2016 PCCA Mid-Year Meeting	July 20-23, 2016
Kalahari Resort & Convention Center	Sandusky, Ohio
2017 CONEXPO-CON/AGG	March 7-11, 2017
Las Vegas Convention Center	Las Vegas, Nevada

Advertiser Index

Bethea Tool & Equipment Co., Inc.	49
Condux International	28
CZM Foundation	15
Ditch Witch	8
Dura-Line	27
FMI Corporation	6
FS3, Inc.	21 & 22
General Machine Products	43
Global HR Research	30
Grande Truck Center	47
Kirby-Smith Machinery, Inc.	41
McLaughlin	11
NESCO, Inc.	12
Pelsue Company	51
Prysmian Group	18
RWF Bron	45
Schonstedt Instrument Company	53
Scott Powerline & Utility Equipment	Inside front cover
Sherman & Reilly, Inc.	4-5
Tallman Equipment Co., Inc.	17
Terex	10
UCT 2015	29
Utility Fleet Sales	Inside back cover
Vac-Tron Equipment	Back cover
Vermeer Manufacturing	3
Wagner-Smith Equipment Company	24



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*Shown with optional Strong Arm



CVS FILTRATION HOUSING. The LP ground level filtration housing also incorporates a 28" (71.1 cm) diameter cyclone, four-way valve for reverse pressure, and the largest silencer in the industry for quiet performance. Patent pending.



SERIES 33 REAR DOOR. The hydraulic screw rear door offers a high torque motor with a self-adjusting threaded shaft designed for low maintenance and easy operation. It opens to a 90° angle and is equipped with a safety lock that engages automatically.



OPTIONAL STRONG ARM. Optional strong arm to support the weight of the vacuum hose.



6" (15.2 CM) DEBRIS DISCHARGE VALVE. For quickly off-loading liquid materials by gravity or under pressure to another container.



ACCESSIBILITY. Easy access engine compartment for service and regular maintenance of all components.



BUILT TO LAST. Dexter torsion axles and Goodyear tires help to enhance the heavy-duty trailer under the Vac-Tron LP series vacuums.

Introducing the XDT: Powered by a 24 HP Kohler diesel engine, this is a unit with similar performance specs as the pre tier 4 final DT model. It is Tier 4 compliant and comparatively priced with the pre-tier 4 models. For the last several months Vac-Tron Equipment negotiated with engine suppliers to receive the very best discounts possible and we are confident that this current Tier 4 final pricing is very competitive with the market.

For more information contact Vac-Tron Equipment LLC at 1-888-Vactron or visit us online at www.vactron.com



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