



PCCCA

Journal

3rd Quarter 2015

Developing Your High-Potential Leaders

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- Poll: Energy and Infrastructure Will Play a Key Role in 2016 Election
- Survey Shows Rural Fiber Deployment, Higher Speed Broadband on the Rise
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Winning the War for Talent: Developing Your High-Potential Leaders

By Emily Livorsi and Tim Tokarczyk

To build long-term loyalty and deep levels of motivation, organizations must do more than simply offer monetary rewards for good work. Offering opportunities for high-potential employees to grow and develop is a more strategic and more effective tool for retaining top talent and for maximizing their potential.

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PCCA Announces 2016 Project Manager Academy in Denver

Continuing its mission to help members build strong project leaders, PCCA announced that it will hold the third PCCA Project Manager Academy January 11-14, 2016, in Denver, Colo. The Academy is four days of tough, no-nonsense, total immersion into the business of construction that will fast-forward your people's knowledge, decision-making skills, and leadership abilities.

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Cisco Visual Networking Index Predicts IP Traffic to Triple from 2014 to 2019

According to the 10th annual Cisco Visual Networking Index Forecast, annual Internet Protocol traffic will triple between 2014 and 2019, when it will reach a record 2 zettabytes. Factors expected to drive traffic growth include global increases in Internet users, personal devices and machine-to-machine connections, faster broadband speeds, and the adoption of advanced video services.

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The background of the page features a conceptual illustration. A person is seen from behind, standing on a road that leads up a volcano. The road is dark with white dashed lines, and it curves upwards towards the volcano's crater. The volcano is a dark, conical shape with a large, billowing white plume of smoke or ash rising from its center into a blue sky with scattered white clouds. The overall scene suggests a journey, challenge, and the pursuit of a high goal.

Winning the War for Talent: Developing Your High-Potential Leaders

By Emily Livorsi and Tim Tokarczyk

The engineering and construction industry is notoriously competitive. You often hear people say, “We work harder,” or “We are more focused on our clients,” or “We can beat anyone’s cost.” A healthy sense of competition can characterize success throughout the industry. However, when it comes to winning in the war for talent, many organizations overlook the critical nature of beating their competition in this domain. The best organizations know that firms with the best people have a clear competitive advantage.

To succeed over the next decade, organizations will need to not only attract great people, but also retain their existing, high-potential leaders. This requires an intentional effort to address two key issues. The highest performers want to (1) be recognized and rewarded for their contributions and (2) receive continuous opportunities to grow and develop. Many organizations tend to focus mostly on the first of the two and reward high potentials through raises or bonuses. While this may generate short-term motivation, a monetary-based strategy won’t help retain your employees if your competitors can offer more. To build long-term loyalty and deep levels of motivation, organizations must do more than simply offer monetary rewards for good work. Offering opportunities for high-potential employees to grow and develop is a more

strategic and more effective tool for retaining top talent and maximizing their potential.

A recent FMI survey found that only 43 percent of organizations surveyed in the construction industry are using a consistent process to identify and develop the next generation of leaders. That means the majority of organizations do this inconsistently, or not at all. To win the war for talent, organizations will need to master the art of identifying and developing high-potential talent, yet far too many have not even started the process.

While less common, the best organizations in the industry have identified a clear and consistent process for identifying and developing high potentials. They have built the internal systems and structures needed to ensure that their next generation of leaders is continually developing its skills. This greatly contributes to longer-term loyalty because leaders who believe that you are investing in their long-term potential have a greater sense of commitment to your organization. By helping leaders clarify their short- and long-term developmental goals, you are sending a strong signal that you are interested in their career growth and potential to take on additional challenges and roles. This type of proactive development is an intentional, focused, and purposeful process that is planned out and implemented. This approach takes time

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Developing Your High-Potential Leaders

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and energy, but the payoffs are great. The three main steps in building a high potential program with a clear strategy are:

- Clarifying competencies,
- Identifying high potentials, and
- Building the high potential program.

Clarifying Competencies

When building a high potential program, organizations must first identify the specific competencies required for successful leadership. Competencies are different from the basic job duties that you might find in a job description. The most effective competency framework identifies the specific skills and traits that separate the highest performers from average performers. While it may seem like an easy step to skip, establishing clear criteria for success informs the rest of the high-potential program. If we truly understand what differentiates the success from average performance, then we can begin to evaluate and develop candidates in these key areas.

Though every organization is different, competencies such as talent management, effective communication, self-awareness, and results-orientation might represent a few that are critical for a high-potential leader to master. For example, if an organization identifies the need for high potentials to provide deep and meaningful feedback, this guiding competency will help clarify expectations for what high potentials must master in their roles and beyond. Once competencies have been identified, organizations can start to develop these competencies in their high potentials (through executive coaching or training, for example). Achieving these competencies should define success in one's role and future career trajectory.

High-Potential Identification

Top organizations expend a great deal of effort on effectively identifying their high potentials. Knowing that not every employee is a high potential, how can you identify these individuals? The most effective method is to assess candidates' performance and potential objectively. This is critical because in the absence of an objective process with clearly identified criteria, subjectivity, and favoritism tend to creep in. An objective identification process allows firms to separate out current performance levels from future potential. Current high performers may be great contributors to the organization, for example, but they may have relatively low potential for future growth. Likewise, current midlevel performers may have great potential for future growth with the proper

training and development. Without a close examination of different candidates, we could invest in developing the wrong people or miss an opportunity to develop a future star player. Indicators for potential often include learning agility, a passion for increased responsibility, and self-drive.

Assessing high potentials also requires a closer look at how each individual aligns with the organization's overall purpose and values. Many companies get into trouble by promoting individuals who may be great performers but are fundamentally misaligned with the organization's stated purpose and values. This can demoralize other individuals who recognize the disconnect. To achieve success, organizations developing a high-potential program must ensure that the candidates closely align with the vision and culture of the organization. Having both current and future leaders who walk the walk is a foundational element of shaping a strong culture.

High-Potential Program

Once the organization clearly identifies the required competencies for each leadership position and identifies its high-potential leader group, the next step is to build a compelling and skill-enriching high-potential program. This program should be designed to move the participants from their current state to a desired future state. Many organizations create unnecessary issues for themselves by cloaking the high-potential program in secrecy. Instead, the program should be fully transparent across the company, including information about the participants and the selection process. When organizations invest a great deal of time clarifying competencies for success and identifying leaders based on clear and objective criteria, those who are/aren't included in a high potential development program appreciate the rigor of the approach and tend to agree with participant decisions. Greater transparency can also be a great motivating tool to more individuals interested in what they need to do to be included in the high-potential group. This may inspire them to take a deeper look at their own levels of performance.

Because high-potential programs face insurmountable challenges when top leaders aren't involved, the programs must have the right levels of executive and senior leadership support. Senior leaders will need to assist in the process of identifying the high potentials, communicate the strategy of the program to the high-potential group and the broader organization, and play an integral role in the various stages of the progress. A high-potential program also requires commitment from key leaders, especially in the early stages. Internal champions must manage program logistics and ensure the

right content and learning opportunities are present.

Each high-potential program will look different and be designed to support the larger initiatives and strategies of the organization. Most effective high-potential programs use a variety of developmental options. For example, they may send their high-potential group through formal training sessions (either internally or externally), pair high potentials up with an executive coach, or develop action-learning initiatives or stretch assignments. Regardless of the format, consistent, clear feedback is a hallmark of great high-potential programs.

Preparing for the Future

Developing an effective high-potential program requires an investment of time, energy, and resources, both initially and ongoing. Some organizations in the industry have delayed this first step, with the mindset that they're too busy getting work to spend time on internal initiatives. Those organizations will face great challenges winning the war for talent and will play catch-up to those organizations that have

already started. The most forward-looking companies recognize that to retain their top talent, they need to invest in developing the next generation of leaders. As the Baby Boomers continue to leave the industry, organizations will need to rely increasingly on younger workers to step up and take on levels of increased responsibility. If you aren't preparing your next generation of leaders for that responsibility, you can expect to face great challenges in the not-too-distant future. The time to start developing your high potentials is now.

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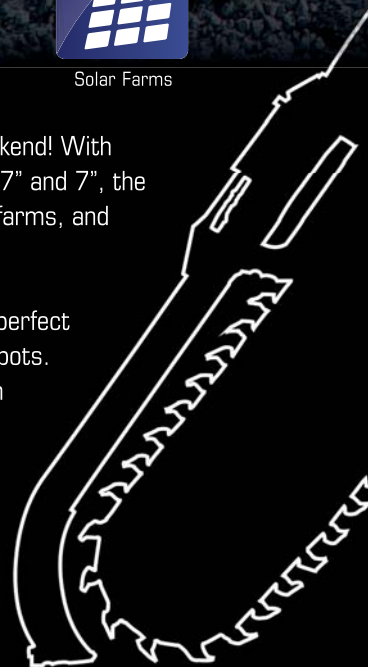
Tesmec is proud to introduce the new 885 with Rocksaw backend! With digging depth between 1'11" and 2'11" and width between 2.7" and 7", the 885 RS is perfect for fiber optic, electric, solar farms, wind farms, and mining projects.

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PCCA Announces 2016 Project Manager Academy in Denver

Continuing its mission to help members build strong project leaders, PCCA announced that it will hold the third PCCA Project Manager Academy (PMA) January 11-14, 2016, in Denver, Colo., at the Crowne Plaza Hotel - Denver International Airport.

The PCCA Academy is four days of tough, no-nonsense, total immersion into the business of construction that will fast-forward your people's knowledge, decision-making skills, and leadership abilities. But mostly, they will learn to think and act as if they have a personal stake in every project.

By all accounts the first two PMAs were wildly successful, as participants, instructors, and the association came away enlightened, enriched, and energized. Each PMA has

included construction professionals from companies around the country, and they all were fully engaged in the program and worked hard to better themselves and their companies.

"I will highly recommend this academy to our organization on sending more managers. It was four days of high-level information but explained in simple terms. It allows you to better understand how the business is looked at by owners and the importance of the things they discuss about job closeouts, receivables, production, and planning," wrote one participant on his program evaluation following the PMA.

The PCCA Academy is based on FMI's highly successful PMA, and FMI worked with a group of PCCA contractor and associate members to tailor the program specifically to our industry. The course materials include PCCA-specific

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PCCA Project Manager Academy

Continued from page 13

case studies and samples of checklists, best practices, plans, specs, contracts, change orders, etc. Your people won't be discussing homebuilding, general construction, or road building; they'll be discussing plowing, drilling, fiber to the home, transmission & distribution lines, and substations.

FMI has many years of experience teaching this program and admits that the techniques of managing projects are well-known. Training in scheduling, budgeting, and cost tracking is available from many sources. But to graduate to the next level, your project staff must learn to think and act like business owners. When projects break down, they have to feel like they are bleeding their own money. When customers are dissatisfied, your managers and staff must take it personally. When jobs are running smoothly, they must remain vigilant.

The three main FMI facilitators at the PCCA PMA—Andy Patron, Ethan Cowles, and Rick Reese—are very enthusiastic and engaging instructors. On the program evaluations, participants raved about the instructors' knowledge and their ability to hold the group's attention. "Coming from a hands-on environment to sitting in a classroom for 11 hours a day, I think all three presenters did a great job of keeping it a fun and exciting learning experience," said one participant. "Thank you!"

The PCCA Project Manager Academy is built around four core themes:

- Profitable customer relationship development
- Powerful, integrated project teams
- Financial control of projects
- Planning projects for profits and customer satisfaction

During this high-level, immersion experience, your project delivery people will examine themselves, their organizations,

and their processes. Our goal is to transform talented builders into true construction entrepreneurs.

An entrepreneur is a self-directed person who corrals and coordinates diverse talents and resources to service customers and return profits. While this description may fit many "managers," there is a key difference between an entrepreneur and a manager. While most managers are capable and dedicated to their jobs, entrepreneurs will always act as if they have a personal stake in the success or failure of the project.

The Journey Begins Now

The goal of this program is fundamental behavioral change. Stop your PMs from seeing themselves as just another employee or a witness to project outcomes. Turn them into virtual owners who have a personal stake in project outcomes and the tools necessary to succeed.

The PCCA Project Manager Academy begins weeks before attendees arrive, as each participant completes ProScan and 360° personality surveys prior to the PMA and also has surveys completed by supervisors, co-workers, people who report to them, vendors, and customers. Once at the PMA, participants learn about the value of honest feedback, the qualities of effective feedback, how to best give it, how to best receive it, and its importance to the success of one's company. During the PMA, each participant has an hour-long, one-on-one session with an FMI facilitator who reviews the specifics of their personal ProScan and 360° reports and helps them understand how the results relate to their work and their lives.

PCCA PMA participants have been amazed by the survey tools' ability to accurately describe their personality and appreciative of the assistance provided by the FMI facilitators. The participants' comments were telling: "Wow! I am amazed on how dead on this report came out. It is as if someone had stepped into my life and lived it. To hear who I am and what to do with my faults and plusses is great! Good job!"

"Thank you for helping me understand me," said another participant. "Great exercise. Very eye-opening. I could have

"I attended the first Project Manager Academy to see what it was all about and could not have been more impressed. We will continue sending our people. If they put 25 percent of what they learned to use on the job, we will get a return on our investment that is much more than the registration fee."

— Heath Sellenriek, Sellenriek Construction



spent two hours with this info and hearing his feedback and suggestions,” said another.

Bringing It All Back Home

No seminar, course, or academy is worth much if the participants don’t effectively apply the knowledge and skills they learned to their actual work situation. At the PCCA PMA, participants develop a personal action plan with a vision, specific/detailed steps, follow-through, and accountability.

In their comments about the program, the first PCCA PMA class was very confident about the on-the-job benefits the PMA provided:

- I now know that project planning is very important in all stages of the project, not just in the early stages.
- Scheduling is obviously very important, and I will instantly begin to do that.
- This really made me stop and think about how I control my time.
- Will treat the workers differently. We will do a pre- and post-job plan.
- I think I will have crews that will better understand and work with one another.
- Listen more than talk. Get better relationships with my crew as well as my foremen.
- On customer-focused construction: A very important subject for me as well as one I need to work on, and I think I pulled several ways to improve from this section.
- Huge part of our business that is sometimes not handled as well as it should be. Importance of understanding the customer and their needs, wants and concerns.
- I expect to be able to manage time better, and to be able to tell what the customer is actually looking for.
- Better time management and better relationships with customers.
- I’ve never looked at cash flow before, but this helped illustrate why only looking at gross margin is a bad thing.
- Run jobs more efficiently and in a less stressful environment.
- Scheduling, planning and job tracking will be better.
- Increased productivity and greater confidence.

- When I’m higher up in the company, I’ll be sending two guys to this each year.

Who Should Attend

- Project Executives
- Project Managers
- Estimators

There is benefit in having several team members experience the PCCA Project Managers Academy. Companies send their team members in groups to foster greater cohesion and accountability, and the principles multiply throughout the organization. Also, registration discounts are available for multiple registrants from the same company.

Details of PCCA Project Managers Academy, January 11-14 in Denver, are being finalized and will be mailed to all PCCA members shortly and will be posted at www.pccaweb.org.

PCCA Project Managers Academy Agenda

Day 1 - January 11, 8 am - 6 pm

Safety Focus

Welcome & Introduction

- Introduce individuals and articulate objectives
- Link project management outcomes with corporate performance
- Identify communication behaviors in a team-building exercise

Management AND Leadership

- Define a “good” project manager
- Differentiate between leadership and management
- Relate the importance of motivating and energizing your team to their performance

Project Planning/Project Introduction

- Have the ability to develop a complete end-to-end project delivery plan
- Organize and structure project plan information for communicating with the project team
- Effectively document the project plan
- Identify, address, manage, and understand project plan at-

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PCCA Project Manager Academy

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tributes, qualitatively and quantitatively

Project Start-Up

- Generate and gain positive project momentum
- Identify and share key project issues, strategies, methods and milestones
- Make use of checklists
- Initiate effective communication with the project team
- Create and maintain a cooperative team environment

Personal Feedback: ProScan & 360° Feedback

- Understand the importance of feedback in personal and professional development
- Understand the impact of organizational culture on honest feedback
- Understand how PDP and 360° feedback are used at the PMA
- Adjust working and communication strategies based on personal strengths and weaknesses

Team Debriefing

- Focus on completing PDP/360 feedback questions and preparation

Day 2 - January 12, 8 am - 7:30 pm

Safety Focus

Customer-Focused Construction

- Understand the value of the customer
- Use tools to develop an appropriate, client-centered response to issues
- Implement a customer-focused strategy for your project and firm

Time Management

- Understand that it's about self-management more than time management
- Discover the keys to delegation and prioritization
- Understand the importance of life balance and its contribution to our overall productivity
- Gain insight into personal strengths and weaknesses regarding your mastery of time

Sample Project Preparation

Build Sample Project and Owner Presentations

Billings, Cash Flow, and Closeout

- * Continually monitor and act on the current cash situation
- * Billing accurately and promptly
- * Learn to drive everything on a project to closure

Build Sample Project

Team Debriefing

- Focus on delivering plus/delta feedback to each other (par-

ticipants) based on their performance on sample project and their PDP/360 feedback sessions

Day 3 - January 13, 8 am - 7:30 pm

Safety Focus

Change Order Management

Identify and evaluate all changes

- * Identify cost and schedule implications of changes
- * Use changes as an opportunity to sell increased value
- * Maintain an appropriate balance between capturing all changes and maintaining positive client relationships

Build Sample Project

Job Set-Up, Safety, and Logistics for Power and Communications Industry

- Discuss the unique challenges of working in the power and communications industry; remote location and residential
- Special equipment, tools, and materials
- Plan for safety
- Technical consideration

Build Sample Project

Standards and Best Practices

- Explain the benefits of identifying and using standard procedures derived from best practices
- Use flow-charting to understand, develop, and improve standard procedures on the project or in your company
- Communicate standard procedures to project teams
- Establish a team culture in which best practices are embraced and leveraged
- Identify situations in which it is appropriate to use non-standard procedures

Build Sample Project

Team Debriefing

Day 4 - January 14, 8 am - 3 pm

Safety Focus

Ethics and Integrity in Project Management

- Leverage the project management role into a key client relationship anchor
- Build relationships with existing clients leading to repeat work opportunities

Sample Project Closeout

- Discuss lessons learned that can be applied back in the real world
- Test the projects

Stand and Deliver

- As communicators, all project managers need to have exemplary presentation skills

- Presentation skills are a life skill—you need them in your life, not just at work

Develop Your Personal Action Plan

- Write specific action items that will be tracked and monitored over a specified period of time
- Differentiate between personal action items and items that will be addressed organizationally as suggestions for your firm
- Require each participant to share one action item with the table

Be a Project Leader, Not a Project Witness

- Improve the use of your own personal style to lead others to make changes back on the job
- Use the participant manual by adding to it and referring to it
- Refer to the PCCA Handbook for articles that will guide you as you try out your toolbox
- Understand and believe that each participant now has the tools and potential to not only lead projects, but to be recognized as a leader in his or her firm

Program Evaluations

Date

January 11-14, 2016

Location

Denver, Colorado

Hotel

Crowne Plaza Hotel - Denver International Airport
15500 E 40th Avenue
Denver, CO 80239
(303) 371-9494
www.cpdenverairport.com
\$117 per night

Registration Fees

\$5,495 First registrant from a company
\$5,295 Second registrant from a company

What's Included

- All course materials and instruction
- ProScan and 360° Feedback
- PCCA PMA laptop bag
- Breakfast and lunch on Monday
- Breakfast, lunch, and dinner on Tuesday and Wednesday
- Breakfast and lunch on Thursday

Transportation

Free shuttle service is available from Denver International Airport.

About FMI

FMI is a leading provider of management consulting, investment banking, and research to the engineering and construction industry. The firm works in all segments of the industry providing clients with value-added business solutions.

FMI's provides instructors to the PCCA Project Manager Academy who are committed to bringing their talents, energy, and passion together to develop world-class project delivery experts in the construction industry. The faculty includes senior-level FMI staff who possess both project management knowledge and direct construction experience. In addition to coaching at the Project Manager Academy, the instructors are highly respected consultants, authors and thought leaders in the construction industry around the world.



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



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New Initiative Aims to Drive Military Veterans to Utility Industry Jobs

The Edison Electric Institute (EEI) is partnering with a number of federal government agencies and utility industry groups to form the Utility Industry Workforce Initiative, a multi-year effort dedicated to facilitating the recruitment, training, and retention of exiting service members, veterans, and their spouses into employment in the utility industry. According to the Center for Energy Workforce Development (CEWD), the electric utility industry will need to replace almost half of its current workforce over the next decade.

“Our industry is facing significant retirements of our existing workforce, and we are working together to develop solutions and approaches to identify a talented, high-skilled, and innovative industry workforce for the future,” said EEI President Tom Kuhn. “The leadership abilities, mission focus, commitment to safety, and team orientation that military service members consistently demonstrate are exactly the skills our

industry needs in its workers. We are pleased to work together with our government partners on the Utility Industry Workforce Initiative with the goal to provide veterans a path to rewarding energy careers.”

Other participants in the initiative include the Departments of Energy, Defense, Labor, and Veterans Affairs; the Nuclear Energy Institute; the National Rural Electric Cooperative Association; and the American Gas Association.

“Energy is America’s great economic advantage in the 21st century global economy, but we’ll need a 21st century energy infrastructure to keep that advantage, built by a 21st century workforce,” said U.S. Secretary of Energy Ernest Moniz. “New job-driven training strategies, reflecting a broader range of needed skills, will be required to meet the challenges of the future. America’s talented pool of veterans provides the leaders our utility industry needs to build a new energy future.”

The initiative will work to identify

and promote training and credentialing opportunities for veterans to facilitate their entry into the utility industry, share information on trends about exiting military members, promote opportunities for immediate recruitment of exiting service members, and assess how military training requirements align with job requirements throughout the utility industry. It will also work to improve existing tools that match service members and veterans with employment opportunities in the utility industry.

This new initiative complements the Troops to Energy Jobs program, which was launched in 2011 by CEWD, in partnership with EEI and its member companies. Troops to Energy Jobs works to make it easier for veterans to translate their skills and training, accelerate the time it takes to get required credentials or degrees, create a military-friendly environment within companies, and increase the number of veterans who are recruited, hired, and trained in the utility industry.

Poll: Energy and Infrastructure Will Play a Key Role in 2016 Election

Recent polling conducted for Consumer Energy Alliance (CEA) continues to examine what role the Atlantic Coast Pipeline, Keystone XL Pipeline, offshore production, and other energy issues could play in the 2016 presidential election. And as echoed in recent poll results from Iowa, New Hampshire, and South Carolina, voters in Virginia, North Carolina, and West Virginia reinforced that energy policy will be an important

issue when they cast their votes for president next fall.

Key findings:

- Majorities of voters in North Carolina, Virginia, and West Virginia have heard about the Atlantic Coast Pipeline and support it.
- Across states, more than 80 percent of voters say energy will be a significant factor on how they vote.
- Presidential candidates will need to take a strong stance on

Continued on page 20

pipeline construction and energy development.

- Voters overwhelmingly believe pipelines are the safest means to transport natural gas.
- Voters support expanding offshore exploration, constructing the Keystone XL Pipeline, and generating electricity via coal-fired power plants.

In its latest poll, CEA found that a large majority of voters in Virginia (56 percent), West Virginia (70 percent), and North Carolina (55 percent) support the construction of the Atlantic Coast Pipeline. Across all three states, voters support the project by more than 30 points. The poll also showed that voters of all political affiliations support expanding offshore exploration, constructing the Keystone XL pipeline, keeping coal power plants operational, and expanding shale production via hydraulic fracturing.

Results from the poll indicate that citizens in North Carolina, West Virginia, and Virginia also support the development of energy infrastructure, especially in regards to the Atlantic

Coast Pipeline. Voters pointed to a number of reasons for their position on the pipeline, with jobs being mentioned the most frequently (19 percent), followed by an anticipated reduction in the price of natural gas (18 percent). The contribution to U.S. energy independence and the general positive impact the pipeline will have on the economy were also cited as reasons for support.

“As the primary season approaches, presidential candidates will need to take a strong stance on energy issues for the 2016 election,” CEA President David Holt said. “As we have seen in the past, the success of candidates in 2016 will hinge on their ability to promote issues that foster economic and job growth while ensuring safety and the protection of our environment. This can be achieved through the promotion of energy infrastructure and production, which will contribute to U.S. self-sufficiency, stimulate the economy, and create jobs.”



GE Launches Digital Wind Farm

GE announced in May the launch of its Digital Wind Farm, a dynamic, connected, and adaptable wind energy ecosystem that pairs world-class turbines with the digital infrastructure for the wind industry. The technology boosts a wind farm’s energy production by up to 20 percent and could help generate up to an estimated \$50 billion of value for the wind industry.

The Digital Wind Farm uses interconnected digital technology—often referred to as the Industrial Internet—to address a long-standing need for greater flexibility in renewable power. The technology will help integrate renewable power into the existing power grid more effectively.

“Every business, including our own at GE, and every industry is being transformed by smarter digital technologies, and the greatest opportunity lies in energy,” said Steve Bolze, president and CEO of GE Power & Water. “The question is not whether to start down this path...

it’s about knowing how to get the most out of your digital transformation. That’s what will separate industry leaders from those left behind.”

The Digital Wind Farm ecosystem begins with the production of the turbines themselves. With the next generation of Brilliant wind turbines, GE’s new 2-megawatt platform utilizes a digital twin modeling system to build up to 20 different turbine configurations at every unique pad location across a wind farm to generate power at peak efficiency based on the surrounding environment. Additionally, each turbine will be connected to advanced networks that can analyze turbine operations in real time and make adjustments to boost operating efficiencies.

Once the turbines are built, their embedded sensors are connected and the data gathered from them are analyzed in real time with GE’s Predix software, which allows operators to monitor performance from data across turbines,

farms, or even entire industry fleets. The data provide information on temperature, turbine misalignments, or vibrations that can affect performance.

As more data are collected, the system actually learns over time, becoming more predictive and “future-proofing” wind farms by maintaining top performance and avoiding the maintenance issues that typically occur as turbines age. It also reduces costs by customizing maintenance schedules to ensure that preventive maintenance is done only when needed.

“Big data is worthless without the insight to take action, and our vision for the industry is to use today’s data to predict tomorrow’s outcomes,” Bolze said. “By harnessing the full power of the Industrial Internet, we can create a world where wind farms learn, adapt, and perform better tomorrow than they do today.”



Analyst Says U.S. 2015 Coal Production at Lowest Level Since 1987

U.S. coal production in 2015 is expected to be down 7.5 percent from 2014 and will be the lowest total since 1987, a coal analyst for the Energy Information Administration said in July. Production totals could get pulled down further as a mild summer and continued low natural gas prices weaken domestic coal demand, said Elias Johnson, who co-authored the Short-Term Energy Outlook for July.

"If demand doesn't really rebound because of a warm summer, we could see consumption go even lower and that could lead to production going down," Johnson said.

Production is expected to drop in each of the three coal producing regions. The Appalachian region will be down 12.1 percent from 2014, the Interior region will drop by 2.7 percent, and the West will drop by 6.9 percent, according to the EIA. Coal exports are expected to drop by 10.2 percent.

The EIA also projects coal consumption for electricity generation will decline by 6.6 percent from 2014 and forecasts that it will increase slightly in 2016, up 1.3 percent from this year.

Factors behind the drop in consumption include low natural gas prices and less demand due to a mild winter. A mild summer could bring down those totals further, Johnson said.

The recent Supreme Court ruling that remanded the Environmental Protection Agency's Mercury and Air Toxic Standards (MATS) back to lower courts is not expected to help as the EIA has not heard of any generator changing course on retiring coal plants, Johnson said.

One bright spot for the coal industry in the report shows that as production and consumption for electricity genera-

tion are expected to drop in 2015, both are expected to have modest upticks in 2016. "We're expecting gas prices to rise and expect a little more demand for electricity," Johnson said. "Even though

we are expecting more retirements for MATS, we were making the assumption that the remaining generators will be used at a higher capacity."

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Solar Heats Up Ahead of ITC Deadline

There has been a noticeable increase in the number of photovoltaic (PV) projects in the United States aiming to be operational before the expiration of the 30 percent federal energy investment tax credit (ITC) on December 31, 2016.

According to IHS, a leading global source of critical information and insight, more than 32 gigawatts (GW) of projects greater than 5 megawatts (MW) in size are still in development or under construction. Not surprisingly, the main bulk of projects is in California, but several other states have many large utility projects in development aiming for completion this year or next.

Based on the latest information from the IHS Solar Deal Tracker database, NextEra has indicated that 1.5 GW of Hanwha Q Cells modules will be installed by the end of 2016. This purchase will cover projects in several states, including California, Georgia, Florida, and Hawaii.

“Canadian Solar dramatically increased its project pipeline in the United States, with the company’s recent acquisition of Recurrent Energy,” said Christine Beadle, senior analyst for IHS Technology. “Many of these projects are set to be completed prior to the 2016 deadline, including a 150 MW project for Austin Energy in Texas and several other projects in California.”

Lengthy delays in permitting and approval—or the inability to secure a power off-taker—could be critical, as developers strive to complete projects in all states in time to be operational and to qualify for the federal ITC. Some areas in California are plagued with contentious environmental

issues, from Native American Tribes fearing the removal or destruction of artifacts from their ancestral homeland to environmental issues. One project, Imperial Solar Energy Center West, was already under construction when work was halted for a few weeks earlier this year because the flat-tailed horned lizard became a possible candidate for protection under the California Endangered Species Act.

“Newly proposed projects appear to be primarily located in less contentious areas and developed at sizes that are likely to promote a high potential for success in a short time,” Beadle said. “Recent project approvals by the Bureau of Land Management encourage installations in designated Solar Energy Zones.”

The most recent wave of proposed projects is in the 20 MW to 100 MW range. Some projects have been in development for a long time, but when size and location are optimal, there is a greater likelihood of success. Other projects in less optimal areas will eventually be completed, but possibly not before the deadline, which seems to have affected priorities and caused a saturation of PV projects in certain areas.

If no bill to extend the deadline is enacted, the federal ITC for commercial and utility solar projects will drop to 10 percent in 2017. Completion of these projects prior to the deadline could be crucial to ensure financial viability. Any extension of the 30 percent federal ITC into 2017 or beyond would certainly be a positive driver for U.S. solar growth after 2016, as these early-stage projects will be ready to go into construction; however, at this time an extension looks unlikely.



Study Shows States with Carbon Emissions Caps See Economic Benefits

States participating in the Regional Greenhouse Gas Initiative (RGGI) have found that regulating carbon emissions from power plants through market-based mechanisms goes hand-in-hand with economic benefits. That’s the conclusion of a new report from Analysis Group, released in July at the National Association of Regulatory Utility Commissioners

conference in New York, N.Y. The report findings provide valuable lessons for states across the country now evaluating their options under the Clean Power Plan, the EPA’s proposed effort to limit carbon emissions from power plants across the country.

“Based on an analysis of years of hard data, RGGI shows that multi-state, market-based carbon control mechanisms

work and can deliver positive economic benefits,” said Analysis Group Vice President Paul Hibbard. “That’s not to say programs designed to cut greenhouse gas emissions are economic development programs—their goals are different. But the data clearly show that cutting carbon emissions can be a net positive for the economy.”

The report, “The Economic Impacts

of the Regional Greenhouse Gas Initiative on Nine Northeast and Mid-Atlantic States,” found that implementing RGGI from 2012-2014 adds \$1.3 billion in economic value to the nine-state RGGI region, leads to the creation of more than 14,000 new jobs, and cuts electricity and heating bills, saving consumers \$460 million. Each individual state sees economic benefits as the region cuts annual carbon emissions by about a third from 2008 (140 million metric tons) to 2014 (90 million metric tons).

Under RGGI, six New England states plus New York, Delaware, and Maryland establish a regional cap for carbon emissions. States then create their own individual plans to cut carbon and offer a declining number of carbon emission allowances for sale through regional auctions. Power plant owners buy those allowances at auction—which gives

them the right to emit specific amounts of carbon dioxide—or find ways to clean up carbon emissions. Auction proceeds go back to the states, which have reinvested billions of dollars back into their economies.

Each state decides how to spend that money. The report examined individual state strategies to invest that revenue, including funding energy efficiency programs, building community-based renewable power projects, helping low-income customers pay their electricity bills, putting greenhouse-gas reduction measures in place, educating consumers, and offering training for clean-energy jobs.

“RGGI is a job creator. Investments made during the last three years will lead to 14,200 new jobs,” said Analysis Group Senior Advisor Susan Tierney. “And while electric rates can increase as power plants recover compliance

costs, total electric bills have gone down, thanks largely to the states’ investment in energy efficiency increases. Over time, the past three years of RGGI’s operations helps families, businesses, and institutions save \$460 million on electricity bills.”

The report also found that RGGI has helped keep more dollars circulating in the local economy, as the amount of money sent outside the region to pay for imported energy has dropped. RGGI reduced dollars flowing out of state to pay for fossil fuels imported from outside the region by more than \$1.27 billion, from 2012 to 2014. Meanwhile, the states’ use of RGGI auction proceeds has boosted the purchase of goods and services in the regional economy for everything from solar panels and insulation to engineering services for energy audits to labor for efficiency retrofits.

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USDA Announces \$349 Million in Funding for Rural Electric Infrastructure

Agriculture Secretary Tom Vilsack in July announced \$349 million in funding for 15 rural electric infrastructure projects to build or improve more than 1,844 miles of transmission and distribution lines for rural electric cooperatives and utilities in 13 states.

The funding is being provided through USDA Rural Development’s Electric Program, which makes insured loans and loan guarantees to non-profit and cooperative associations, public bodies, and other utilities. The loans primarily finance the construction of electric distribution facilities in rural areas.

Following are the loan recipients included in the announcement.

Georgia
The Central Georgia Electric Membership Corp.- \$26,176,000

Idaho, Oregon, Washington
Clearwater Power Co.
\$13,572,000

Iowa
Eastern Iowa Light & Power Cooperative
\$44,000,000

Indiana
Harrison County Rural Electric Membership Corporation
\$14,500,000

Kentucky
Grayson Rural Electric Cooperative Corporation
\$20,000,000

Minnesota, Iowa
Tri-County Electric Cooperative
\$28,895,000

Minnesota
Minnesota Valley Electric Cooperative
\$25,535,000

Minnesota
Lake Country Power
\$52,337,000

Missouri
Ozark Border Electric Cooperative
\$51,000,000

Missouri
Macon Electric Cooperative
\$15,200,000

North Carolina
North Carolina Electric Membership Corporation
\$29,106,000

Ohio
Mid-Ohio Energy Cooperative, Inc.
\$6,000,000

South Carolina
Marlboro Electric Cooperative, Inc.
\$14,804,000

South Dakota
Douglas Electric Cooperative, Inc.
\$1,380,000

Washington
Benton Rural Electric Association
\$6,516,000

Vilsack Announces Available Funding for Farm Bill Broadband Loan Program

In July, Agriculture Secretary Tom Vilsack announced the availability of loans to build broadband in rural areas, along with changes to the program required by the 2014 Farm Bill.

“USDA is committed to providing broadband to rural areas,” Vilsack said. “Broadband is as vital as electricity was 80 years ago. Since 2009, USDA investments have delivered broadband service to 1.5 million households, businesses, schools, libraries and community facilities. But our work is not done. With program improvements and available funding made possible by the Farm Bill, we can continue our work to make broadband more accessible to those who live and work in rural areas.”

In a rule published in the July 30 Federal Register, USDA is establishing two funding cycles to review and prioritize

applications for the Rural Broadband Access Loan and Loan Guarantee program. USDA also is setting a minimum level of acceptable broadband service at 4 megabits downstream and 1 megabit upstream. USDA urges applicants to design systems that allow for 25 megabits downstream and 3 megabits upstream to meet future needs. USDA is accepting comments on these changes through September 28.

To be eligible for funding, an applicant must serve an area where at least 15 percent of the households are unserved. Applications with the most unserved households will be processed first.

The maximum loan amount under the announcement is \$20 million. Applications will be accepted through September 30, 2015.

USDA Provides Funding for Rural Broadband Projects

Agriculture Secretary Tom Vilsack in July announced \$85.8 million in funding to strengthen access to high speed broadband for rural America. Below is a summary of the loans and grants in the announcement.

Telecommunications Loans:

In Minnesota, a \$12.63 million loan to Garden Valley Telephone will include fiber and electronics upgrades to improve the system for rural subscribers. Consolidated Telephone will use a \$12.27 million loan to provide greater bandwidth to subscribers, allowing delivery of enhanced services with network upgrades, infrastructure additions, and add a new fiber ring.

South Carolina's FTC Communications will use a \$12.38 million loan to upgrade its wireless telecommunications network to 4G/LTE, meeting growing demand for reliable, higher speed services.

In Montana, Triangle Telephone Cooperative Association will use a \$29.95 million loan to upgrade its system with fiber to supply greater bandwidth to increase speed and the quality of service for their rural Montana subscribers.

In Wisconsin, LaValle Telephone Cooperative will use \$7.61 million to deploy fiber and replace a switch to provide rural subscribers with improved services, including voice over Internet Protocol and the flexibility to connect to Gigabit Ethernet and IP interfaces.

Community Connect Grants:

In Alaska, the Arctic Slope Telephone Association Cooperative, Inc. will receive a \$1.4 million grant to provide Point Hope subscribers with high-speed Internet service and prepare the network for an undersea fiber connection currently planned for construction within the next two years.

Minnesota's Northeast Service Cooperative (NESC) will receive two \$3 million grants for two projects to provide broadband service to subscribers on the Fond du Lac Reservation. NESC will partner with the Fond du Lac Band of Superior Chippewa.

Oklahoma's @Link Services will receive a grant of nearly \$1.5 million to provide high-speed broadband to homes, businesses and critical community facilities in parts of Seminole County.

Virginia's Scott County Telephone Cooperative will receive \$2.1 million to build a broadband network with one gigabyte of bandwidth for 540 locations in Dickenson County. This project is expected to benefit Edwards Ridge and the surrounding area by promoting economic development through improved broadband access.



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Cisco Visual Networking Index Predicts IP Traffic to Triple From 2014 to 2019

According to the 10th annual Cisco Visual Networking Index (VNI) Forecast, annual Internet Protocol (IP) traffic will triple between 2014 and 2019, when it will reach a record 2 zettabytes. Factors expected to drive traffic growth include global increases in Internet users, personal devices and machine-to-machine (M2M) connections, faster broadband speeds, and the adoption of advanced video services. Collectively, these variables are expected to create a global IP traffic compound annual growth rate (CAGR) of 23 percent—the first global CAGR increase in consecutive VNI forecasts in nearly a decade (e.g., last year’s projected CAGR for 2013-2018 was 21 percent).

“It took 32 years—from 1984 to 2016—to generate the first zettabyte of IP traffic annually. However, as this year’s Visual Networking Index forecasts, it will take only three additional years to reach the next zettabyte milestone when there will be more than 2 zettabytes of IP traffic annually by 2019,” said Doug Webster, Cisco vice president of service provider products and solutions marketing.

Key Global IP Traffic and Service Predictions

Cisco predicts that global IP traffic will reach 168 exabytes per month by 2019, up from 59.9 exabytes per month in 2014. In 2019, nearly as much traffic will traverse global IP networks than all prior “Internet years” combined (from 1984 to the end of 2013). Several elements will shape IP traffic in the coming years:

More Internet Users. As fixed and mobile networks grow and expand, more people will have network and Internet

access. In 2014, there were 2.8 billion Internet users, or 39 percent of the world’s population of 7.2 billion. By 2019, there will be about 3.9 billion Internet users, or 51 percent of the world’s projected population of 7.6 billion. (Source: Population Division of the Department of Economic & Social Affairs of the United Nations.)

Proliferation of Devices and Connections. With 24 billion networked devices/connections expected online by 2019, compared with 14 billion in 2014, service provider networks must adapt to an influx of sophisticated devices. These devices include tablets, smartphones, and Internet-enabled ultra-high definition (UHD) TVs, as well as M2M connections and wearables (including new smart watches, health monitors, etc.). Globally, there will be 3.2 networked devices/connections per capita by 2019, up from 2 per capita in 2014. These advanced devices and connections will need to be authenticated to gain access to fixed and mobile networks, which require enhanced intelligence, network management, and security. A comprehensive IPv6 strategy will be imperative for carriers to accommodate the volume and complexity of next-generation devices and connections. Globally, 41 percent of all fixed and mobile networked devices/connections will be IPv6-capable by 2019, up from 22 percent in 2014.

Faster Fixed Broadband Speeds. Globally, the average fixed broadband speed will increase two-fold from 20.3 Mbps in 2014 to 42.5 Mbps in 2019. Year-over-year, the average global fixed broadband speed grew 26 percent from 16 Mbps in 2013 to 20.3 Mbps in 2014. From a regional perspective, Western Europe and Asia Pacific continue

to lead the world in fixed broadband network speeds. North America and other regions are also updating their network resources to accommodate more bandwidth-intensive content and applications (e.g., UHD video). By 2019, 33 percent of all global fixed broadband connections will be faster than 25 Mbps, up from 29 percent today.

New and Advanced Video Services. IP video will account for 80 percent of all IP traffic by 2019, up from 67 percent in 2014. The evolution of advanced video services (e.g., UHD and spherical/360 video) and increasingly video-centric M2M applications are anticipated to create new bandwidth and scalability requirements for service providers. Residential, business, and mobile consumers continue to have strong demand for advanced video services across all network and device types, making quality, convenience, content/experience, and price key success factors.

Mobility Momentum. By 2019, more than 14 percent of monthly IP traffic will derive from cellular connections, and 53 percent of monthly IP traffic will come from Wi-Fi connections globally, making differentiated and monetizable mobile strategies more important for all service providers.

Wi-Fi and mobile connected devices will generate 67 percent of IP traffic by 2019 (Wi-Fi: 53 percent and cellular: 14 percent) compared with fixed traffic, which will account for 33 percent of overall traffic.

In 2014, fixed traffic accounted for 54 percent of IP traffic, while Wi-Fi accounted for 42 percent and cellular 4 percent.

The Internet of Everything (IoE) and M2M Growth. The IoE trend is showing tangible growth as M2M connections

Cisco Forecast

Continued from page 27

will more than triple over the next five years (growing to 10.5 billion by 2019). There will be significant IoE adoption across many business verticals (e.g., agriculture, healthcare, manufacturing, retail, and transportation) as well as connected home deployments (i.e., video security, smart meters, lighting/temperature control, etc.).

The Connected Health consumer segment will represent the fastest M2M connections growth at 8.6-fold (54 percent CAGR) from 2014 to 2019, and the connected home segment will represent nearly half (48 percent) of M2M connections by 2019.

Annual global M2M IP traffic will grow 15-fold over this same period—from 308 petabytes in 2014 (0.5 percent of global IP traffic) to 4.6 exabytes by 2019 (2.7 percent of global IP traffic).

Gaming Impact. Cisco predicts a marked increase in network traffic associated with game downloads driven by availability of storage capacity on gaming consoles, an increase in upstream cloud traffic, and increasing fiber connections.

Advanced Service Adoption. Online music will be the fastest-growing residential Internet service with a CAGR of 7.7 percent from 2014-2019, growing from 1.2 billion users to 1.7 billion users by 2019. Mobile location-based service will be the fastest growing consumer mobile service with a CAGR of 27.5 percent from 2014-19, growing from 597 million users in 2014 to over 2 billion users by 2019. Desktop and personal videoconferencing will be the fastest growing business Internet service with a CAGR of 23.5 percent from 2014-2019,

growing from 76 million users in 2014 to 220 million users by 2019.

Regional & Country IP Traffic Projections

- APAC: 54.4 exabytes/month by 2019, 21 percent CAGR, 2.6-fold growth
- North America: 49.7 exabytes/month by 2019, 20 percent CAGR, 2.5-fold growth
- Western Europe: 24.7 exabytes/month 2019, 21 percent CAGR, 2.6-fold growth
- Central Europe: 16.9 exabytes/month by 2019, 33 percent CAGR, 4.1-fold growth
- Latin America: 12.9 exabytes/month by 2019, 25 percent CAGR, 3-fold growth
- Middle East and Africa: 9.4 exabytes/month by 2019, 44 percent CAGR, 6.3-fold growth



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Cisco VNI Forecast Implications for Service Providers

Due to the increasing number of devices (e.g., tablets, smartphones, and M2M connections) that will need to be authenticated to gain access to fixed/mobile networks (enhanced security and intelligence required), increased bandwidth capacity is not the only requirement in the next half decade.

The evolution of advanced video services (e.g., HD/ultra HD video, spherical video) and M2M applications are expected to create new bandwidth and scalability requirements for service providers (SPs). Residential, business, and mobile consumers continue to have strong demand for advanced video services across all network and device types (quality, convenience, and price are key factors for success).

Continued business video adoption (i.e., HD and web-based video conferencing and business VoD) may prompt greater growth in network virtualization and leveraging the Internet for video transmission (network ramifications for SPs/OTTPs).

By 2019, more than 14 percent of monthly global IP traffic will come from cellular connections and 53 percent of monthly IP traffic will come from Wi-Fi connections (i.e., more than two-thirds or 67 percent of total monthly IP traffic). Differentiated and monetizable mobile strategies will be important for all SPs.

IP networks must be intelligent and flexible enough to support the constant introduction of new/updated applications for fixed and mobile networks. Many SPs are actively collaborating with application and content developers to differentiate their services.

Cisco VNI Methodology

The Cisco VNI Global Forecast and Service Adoption study for 2014 to 2019

relies upon independent analyst forecasts and real-world mobile data usage studies. Upon this foundation are layered Cisco's own estimates for global IP traffic and service adoption. A detailed methodology description is included in the complete report. Over its 10-year history, Cisco VNI research has become a highly regarded measure of the Internet's growth. National governments, network

regulators, academic researchers, telecommunications companies, technology experts, and industry/business press and analysts rely on the annual study to help plan for the digital future.

Source: Cisco Visual Networking Index Global Traffic Forecast Update, 2014-2019. More information is available at www.cisco.com.



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Survey Shows Rural Fiber Deployment, Higher Speed Broadband on the Rise

The nation's small, independent telecommunications providers continue to make significant progress in providing high-speed broadband to rural Americans with advancements being made in fiber deployment and speed offerings, according to a new survey by NTCA—The Rural Broadband Association.

The “NTCA 2014 Broadband/Internet Availability Survey Report” found that 45 percent of survey respondents currently deploying fiber serve at least 50 percent of their customers using fiber to the home (FTTH), up from 41 percent in 2013. Eighty-five percent of survey respondents indicated they had a long-term fiber deployment strategy and 74 percent of those respondents plan to offer fiber to the node to more than 75 percent of their customers by year-end 2017, while 67 percent plan to offer

fiber to the home to at least 50 percent of their customers over the same time frame. An additional 25 percent have already completed fiber deployments to all customers.

Additionally, survey respondents are making higher-speed broadband service available to customers who want it. Eighty-three percent of respondents' customers can receive broadband service of 10 Mbps or greater, up from 66 percent just a year ago. While take rates traditionally lag behind availability, the majority of respondents' customers subscribe to service of 3 Mbps or faster.

Thirty-four percent of survey respondents' customers taking broadband subscribe to service greater than 10 Mbps downstream. The next most popular speed tiers are 6.0 Mbps to 10.0 Mbps (9.5 percent) and 3.0 Mbps to 4.0 Mbps (8.9 percent).

“NTCA member companies are proven

broadband solutions providers for the communities where they live and work, and these survey results demonstrate that once again as they continue to take steps to deploy fiber further out into their networks,” said NTCA Economist Rick Schadelbauer, the report's author. “They do this in spite of the often significant challenges they face in order to better serve their customers.”

Twenty percent of NTCA members participated in the online survey in the winter of 2014. The survey comprised general questions about the respondents' current operations, competition, marketing efforts, and current and planned fiber deployment. Additional questions addressed the Internet backbone, voice over Internet protocol (VoIP), and video offerings.

The full report is available at www.ntca.org/images/stories/Documents/2015_broadbandsurveyreport.pdf.

Mayors Call for Accessible Broadband Performance Information

On June 17, 35 mayors and city officials sent a letter to the Federal Communications Commission (FCC) urging uniform and accessible reporting on broadband network performance. The letter, coordinated by Next Century Cities, was prompted by the findings of a recent Government Accountability Office (GAO) report, “Broadband Performance: Additional Actions Could Help FCC Evaluate Its Efforts to Inform Consumers.” Cities signing the letter include major metropolitan areas such as Boston, Mass., Kansas City, Mo., and Seattle, Wash., as well as smaller communities such as Mount Vernon,

Wash., Salisbury, N.C., and Yellow Springs, Ohio.

“The GAO report offers an opportunity to assess how we measure network performance,” said Next Century Cities Executive Director Deb Socia. “If we are truly committed to ensuring access to fast, affordable, and reliable broadband Internet, we need to think seriously about how we measure speed, cost, and reliability and how we communicate this information to consumers.”


City leaders encourage the FCC to heed the recommendations of the GAO, consider standardized measurement of network performance, and develop easily comprehensible

Continued on page 32

materials to communicate this information to citizens. The signers feel strongly that reliable, understandable information is critical for citizens and governments alike as they seek to develop next-generation broadband Internet.

The GAO report found that current FCC requirements on network performance do not obligate providers to use standard measurements, while existing FCC reports on network performance are written in technical language that limits their usefulness to consumers. The officials signing onto the letter are members of Next Century Cities, a city-to-city initiative founded to support communities and their elected leaders as they seek to ensure that all have access to fast, af-

fordable, and reliable Internet.

In support of this effort to provide clarity and transparency in the provision of broadband services, 35 Next Century Cities member communities wrote, "Efforts to develop this core infrastructure are impeded when our citizens are unable to accurately gauge the quality and speed of their Internet.... As broadband Internet becomes increasingly critical to the well-being of towns and cities across the country, being able to reliably measure and compare network performance will help to ensure that we, as elected leaders, are delivering the essential infrastructure our communities need." 

Zayo Announces New Long Haul Dark Fiber Route


Zayo Group Holdings, Inc., a global provider of bandwidth infrastructure services, announced plans in June to extend its long haul dark fiber network between Atlanta, Ga., and Washington, D.C. The network expansion will add more than 800 route miles to Zayo's owned long haul network, which spans more than 19,000 route miles. Zayo will break ground beginning the third quarter of this year and expects to complete the route in the fourth calendar of 2017.

Through this new route, Zayo will be able to further support high bandwidth

demands for customers in the southeast extending into the northeast. The long haul fiber expansion will provide direct access to carrier hotels and data centers across six key markets, including Atlanta, Charlotte, N.C., Raleigh, N.C., Richmond, Va., Ashburn, Va., and Washington, D.C. Zayo will offer its full product suite of dark fiber, wavelengths, Ethernet, and IP services across this route.

"This expansion complements our current fiber infrastructure and meets the growing requirement for bandwidth in these fast-growing markets," said Matt Erickson, president and COO of

Zayo's physical infrastructure segment. "Our long haul dark fiber network will provide customers with dedicated, secure, and virtually unlimited bandwidth, which they can 'light up' as they grow and scale."

Since October 2013, Zayo has expanded its long haul dark fiber network by 5,000 route miles. Last month, Zayo announced the construction of a new long haul dark fiber route from Phoenix, Ariz., to Dallas, Tex. This route will add more than 1,200 route miles to Zayo's long haul network and is expected to be completed in the fourth quarter of 2016. 

FCC Chairman Seeks Comment on Making Broadband Affordable for Low-Income Households

On May 28, FCC Chairman Tom Wheeler shared with his fellow commissioners a set of comprehensive proposals to restructure and modernize the FCC's Lifeline program so that it can efficiently and effectively help low-income consumers afford access to

essential communications services in the 21st Century, including broadband. The proposals seek comment on how to modernize Lifeline while further combatting waste and better targeting the program to those who need it most.

Congress directed the FCC to ensure that all Americans, including low-income

consumers, have access to advanced telecommunications and information services. Since 1985, Lifeline has helped make phone service affordable for low-income Americans. But to continue to serve its statutory purpose, Lifeline must evolve to meet today's most pressing communications needs, including access

to broadband:

- While over 95 percent of households with incomes of \$150,000 or more have access, only 48 percent of those making less than \$25,000 have service at home.
- Nearly 50 percent of low-income Americans have had to cancel or suspend smartphone service due to financial hardship. Because low-income consumers disproportionately use smart phones for Internet access, this puts them at a disadvantage at a time when broadband access is essential for access to education and information, for managing and receiving health care, and for daily tasks like accessing government services, checking bank balances, finding bargains on goods and services, and more.

To bring Lifeline into the 21st Century, Wheeler is seeking comment on a number of proposals that will modernize the Lifeline program to make it more efficient, accountable, and effective, while proposing additional protections against waste, fraud, and abuse.

- **Ensuring minimum service standards for voice and broadband.** The notice proposes to establish minimum service standards for both voice and broadband to ensure that both Lifeline subscribers and ratepayers are getting the best possible value from the service delivered. The notice seeks comment on what those standards should be.
- **Resetting Lifeline eligibility administration.** Lifeline providers are currently responsible for ensuring the eligibility of their Lifeline customers, a situation that invites waste and burdens providers. Wheeler proposes to remove providers from this process and seeks comment on other ways to verify eligibility, such as establishing a neutral third-party administrator. The

notice also seeks comment on how to ensure that the program targets those most in need of the support.

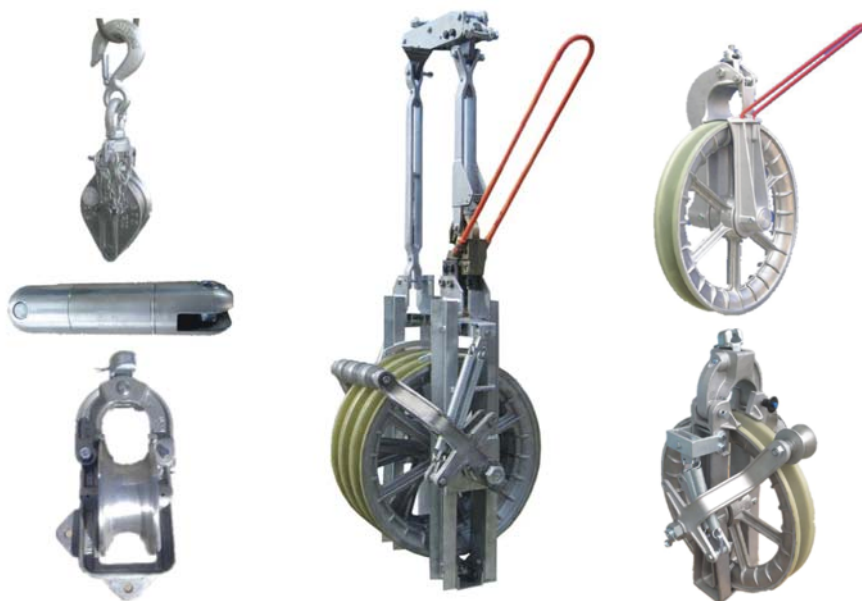
- **Increasing competition.** Competition among providers on price and service offerings would benefit Lifeline subscribers and would ensure ratepayer

dollars support an efficient program. The notice seeks comment on how to encourage providers to participate in the program. The item also asks how to encourage participation by the states.



Continued on page 34

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Study Sees Boom in Security Monitoring Services

A growing roster of smart home services and device providers are using home security monitoring as a beachhead to introduce home automation services. In the key U.S. market, a bellwether for developed markets around the world, some 15 million more U.S. homes will invest in new connected home security services in the next five years, according to ABI Research.

“After decades where penetration into U.S. households stalled, home security adoption is set for significant growth. However, it will not be the sole preserve of traditional professionally monitored home security providers. Consumers can now choose from an array of non-traditional suppliers, new technologies,

and innovative services that balance value with cost,” said Jonathan Collins, principal analyst.

Through managed smart home offerings from retailers such as Lowes and Staples as well as standalone devices such as video cameras from Dropcam or smart locks from Kwikset, consumers increasingly have the option to install and monitor their own security systems. Demand for such smart home systems will outpace those for traditional professional monitored security subscriptions as, among other attractions, they ditch the installation fees, monthly payments, and long service contracts of the traditional offerings.

At the same time, professionally monitored security service providers such

as Frontpoint Security and NextAlarm offer solutions where users self-install their devices, or can integrate existing dormant installations into new IP-based services.

“Self-install and self-monitor home security solutions are real threats to the standard business models offered by traditional vendors,” said ABI Research Practice Director Dan Shey. “While matching these solutions is one option, traditional vendors need to look for ways to better integrate their core services with partner smart home services. These can range from call-center monitoring as a plug-in service to bringing home video monitoring into the call center.”

Lawmakers Seek Lifetime Assistance for Broadband

Sen. Chris Murphy (D-Conn.), Sen. Cory Booker (D-N.J.), and Rep. Doris Matsui (D-Calif.) introduced legislation to reform and modernize the Universal Service Fund (USF) Lifeline Assistance Program—which currently subsidizes basic landline and mobile phone services for low-income Americans—by making subsidies for broadband Internet services also available to eligible households. The Broadband Adoption Act of 2015, which is cosponsored by four other Democratic senators, will instruct the Federal Communications Commission (FCC) to establish a broadband Lifeline Assistance program and will help bridge the digital divide by making in-home online services more affordable across the country.

The introduction of the Broadband Adoption Act comes just days after the FCC announced a new effort to usher the Lifeline Program into the Internet Age. Murphy, Booker, and Matsui praised the FCC’s proposal and hope that the FCC,

which has the authority to update the Lifeline Program on its own, makes subsidized Internet access available to tens of millions low-income Americans.

“Whether you’re looking to find a job, enroll in health insurance, shop online, or communicate with your child’s teacher, Internet access today is absolutely essential to economic and social well-being,” Murphy said. “But the facts state clearly that low-income Americans disproportionately lack access to broadband service and the opportunities that come with it. In Connecticut, thousands of residents in places like Bridgeport, New Haven, and Hartford have one hand tied behind their back because they lack the ability to pay for an Internet connection. Our Broadband Adoption Act will help put an end to this inequity and ensure that Lifeline continues to provide the life-changing services it was created to provide.”

The FCC has estimated that nearly 100 million Americans

still have not adopted broadband Internet services at home. Several prominent studies by Pew and the FCC have strongly suggested that broadband adoption rates in urban and rural communities are largely associated with incomes levels and the high cost of broadband services. While the broadband penetration rate is over 90 percent nationwide among households making over \$50,000 a year, that figure drops to 68 percent for homes bringing in \$30,000-\$50,000 a year, and to less than half in households making under \$30,000.

Key Provisions of the Broadband Adoption Act of 2015

- The bill directs the FCC to establish a broadband Lifeline Assistance program that provides low-income Americans living in rural and urban areas with assistance in subscribing to affordable broadband service.
- The proposal would require the FCC, in calculating the amount of support, to routinely study the prevailing market price for service and the prevailing speed adopted by consumers of broadband service.
- The bill is technology neutral to promote competition from broadband service providers under the program.

- The bill allows eligible consumers to choose how they would like their Lifeline support—whether for broadband, mobile, basic telephone services, or a bundle of these services. The bill clarifies that eligible households will qualify for only one lifeline support amount for one of those functions, not for multiple purposes.
- The bill requires the FCC to establish a national database to determine consumer eligibility for Lifeline and to prevent duplication.
- The bill encourages the FCC to consider providing a preference to participating broadband service providers that include components involving digital literacy programs as part of their offerings.

Verizon, AT&T Support Lifeline

Following the introduction of the Broadband Adoption Act of 2015, Peter Davidson, Verizon senior vice president, federal government relations, released the following statement:

“Verizon supports efforts to reform, modernize and add accountability to the Lifeline program, and the bill introduced by Representative Matsui and Senators Murphy and Booker

Continued on page 36



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is an important contribution to those efforts. Among other things, the bill includes several accountability provisions that will help protect consumers who pay for the fund. We look forward to working with the sponsors and other interested stakeholders on ways to modernize the program.”

On June 1, AT&T’s Jim Cicconi posted the following in his blog:

“Tomorrow, the Senate Commerce Committee will convene a hearing on the future of the FCC’s Lifeline program. Given the recent GAO report on the program and the FCC report on the broadband Lifeline trial, some folks might argue that Lifeline is irreversibly broken and incapable of accomplishing any credible goals. While I would agree that the existing program is broken and in dire need of reform, I think it would be a mistake to conclude that the program cannot be fixed and modernized for the 21st Century. I was in the Reagan White House when the Lifeline program was debated and ultimately created. Back then the goal of the program was not to increase telephone penetration, but rather to create a program to help low income Americans through a difficult time in life by providing them a tool to get back on their feet. In short, Lifeline was envisioned as part of our country’s social safety

net for those with very low incomes or out of work.

“Communications technology—voice service then—was the critical tool that provided access to emergency services, friends, and family, and job opportunities. If you had a phone, you had a chance. Fast forward 30+ years to the 21st Century. People still fall on hard times, and they still need safety net programs like Lifeline. But increasingly in today’s society, having a voice line is not enough. The way people find job opportunities today is different than it was back in 1985. We’ve gone from want ads in the newspaper to posting available jobs online. Apps like Facebook and LinkedIn have become important job networking tools. Education and training courses—even the process of applying for a job—have all moved online, along with needed services like childcare. In short, Internet access has quickly become the more needed Lifeline technology for the 21st century. If we still believe this part of the social safety net was soundly conceived and is still needed today—and I do—we need to focus on fixing the program to eliminate abuses and modernizing it to meet today’s needs, all while preserving the essence of the program’s good intentions.”



Study Shows That Fiber Access Increases Home Value

The Fiber to the Home (FTTH) Council Americas recently released a white paper finding that access to fiber may increase a home’s value by up to 3.1 percent. Using the National Broadband Map and a nationwide sample of real estate prices from 2011 to 2013, the study’s authors investigated the relationship between fiber-delivered Internet services and housing prices. The boost to the value of a typical home—\$5,437—is roughly equivalent to adding a fireplace, half of a bathroom, or a quarter of a swimming pool to the home.

The study adds to a growing list of others showcasing the consumer benefits from widespread access to fiber broadband Internet. A number of studies have linked broadband networks and new in-

vestments in such networks to improved economic performance. And the speed and reliability fiber provides offer further benefits. In 2014, the FTTH Council released a study finding higher per capita GDP in communities where gigabit Internet was available. Infrastructure investment, job creation, entrepreneurship, and companies relocating or expanding to a city are all manifestations of this growth. This year’s study found that for homes where 1 gigabit-per-second broadband was available, transaction prices were more than 7 percent higher than homes located where the highest speed available is 25 Mbps or lower.

“The evidence is mounting: investment in fiber improves the economic performance of a community as well as its quality of life,” said FTTH Coun-

cil President and CEO Heather Burnett Gold. “Around the United States, leaders at the local level have started to think about how their community’s Internet infrastructure is a catalyst for economic, educational, and governmental innovation.”

“The benefits of all-fiber, ultra-high bandwidth networks are clear to people in communities where it is deployed,” said FTTH Council Board Chairman Kevin Morgan. “Today’s findings further validate our mission as an organization: to promote investment in and adoption of FTTH services throughout the country creating value for service providers and their customers. We’re looking forward to working with more providers, communities, and leaders to make that happen.”



Fibertech Awarded Grant to Expand Delaware's Fiber Optic Network Infrastructure

Fibertech Networks, a leader in providing fiber-optic based network services throughout mid-size cities in the Eastern and Central regions of the United States, in July announced it has been awarded a \$1 million grant from the State of Delaware to significantly expand its current network footprint in Delaware and help be a conduit to increase broadband access in rural areas within the state.

"Online tools and resources exponentially increase the possibilities to advance education, careers, business growth, and public safety, which means better quality of life and a stronger economy," said Delaware Governor Jack

Markell. "But that also means there is a clear dividing line in today's society between those who have access to high-speed broadband and those who don't."

Currently, Fibertech operates more than 300 miles of fiber optic network throughout Delaware, from Wilmington through Dover, Georgetown and into Millsboro. The company will build upon this significant investment through this grant to further expand its network, building approximately 18 miles of new network to Seaford in the west and approximately 18 miles of new network to Lewes on the east. Both network segments will connect in Georgetown and therefore offer connectivity to Fibertech's

existing network infrastructure running through Kent and New Castle Counties with further connectivity to Philadelphia, New Jersey, and Baltimore.

Fibertech's service offering encompasses both dark fiber and optical broadband options to area businesses that have predominately used traditional carrier lines in the past. The company's complete optical solutions portfolio of services includes private line connections ranging in speeds from T1 to OC-192, point-to-point and multi-point Ethernet service in speeds ranging from 10 Mbps to 100 Gbps, dedicated Internet access, DWDM, and collocation for fast communication between multiple locations.

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OSHA Issues Temporary Enforcement Policy for Confined Spaces In Construction

The U.S. Department of Labor's Occupational Safety and Health Administration (OSHA) announced in July a 60-day temporary enforcement policy of its Confined Spaces in Construction standard, which becomes effective August 3, 2015. The agency is postponing full enforcement of the new standard to October 2, 2015, in response to requests for additional time to train and acquire the equipment necessary to comply with the new standard.

During this 60-day temporary enforcement period, OSHA will not issue citations to employers who make good faith

efforts to comply with the new standard. Employers must be in compliance with either the training requirements of the new standard or the previous standard. Employers who fail to train their employees consistent with either of these two standards will be cited.

Factors that indicate employers are making good faith efforts to comply include scheduling training for employees as required by the new standard, ordering the equipment necessary to comply with the new standard, and taking alternative measures to educate and protect employees from confined space hazards.

OSHA issued the Confined Spaces in Construction final rule on May 4. The rule provides construction workers with protections similar to those manufacturing and general industry workers have, with some differences tailored to the construction industry. These include requirements to ensure that multiple employers share vital safety information and to continuously monitor hazards—a safety option made possible by technological advances after the manufacturing and general industry standards were created.

Keeping Young Workers Safe

The Occupational Safety and Health Administration provides the following guidance. More information can be found at www.osha.gov/youngworkers.

Do you employ young workers? Young workers are those new to the workforce, even up to age 24. Young workers can be an asset to your workforce, but it may be their first job or the first time they are operating equipment.

Many young workers are also temporary workers. Host employers must treat temporary workers as they treat existing workers, especially including adequate training to young temporary workers. Temporary staffing agencies and host employers share control over the employee and are therefore jointly responsible for the temp employee's safety and health.

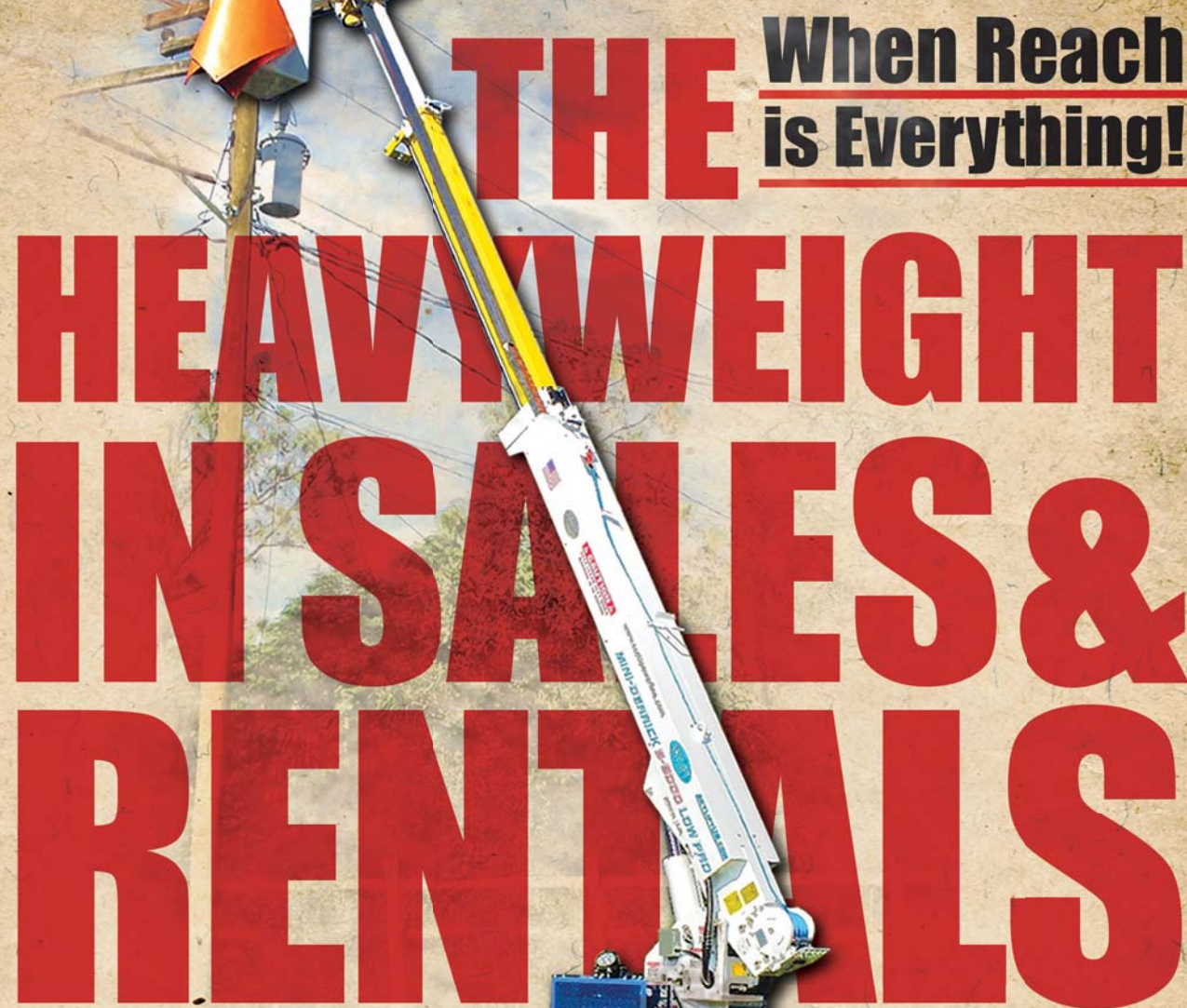
You can prevent or reduce workplace injuries and make work safer for all workers, including youth. First-line supervisors have the greatest opportunity to protect young workers and influence their work habits. Stress safety!

Employer responsibilities for young workers:

- Understand and comply with the relevant federal and state

child labor laws. For example, these laws prohibit youth from working certain hours and from performing dangerous/hazardous work.

- Ensure that young workers receive training to recognize hazards and are competent in safe work practices. Training should be in a language and vocabulary that workers can understand and should include prevention of fires, accidents, and violent situations and what to do if injured.
- Implement a mentoring or buddy system for new young workers. Have an adult or experienced young worker answer questions and help the new young worker learn the ropes of a new job.
- Encourage young workers to ask questions about tasks or procedures that are unclear or not understood. Tell them whom to ask.
- Ensure that equipment operated by young workers is both legal and safe for them to use. Employers should label equipment that young workers are not allowed to operate.



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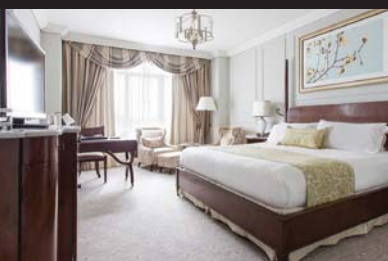
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Schedule of Events

Wednesday, September 23

3 - 7:30 pm **Registration**

3 - 5 pm **Board of Directors Meeting**

6 - 8 pm **President's Welcome Reception**

PCCA President Tim Killoren and his wife, Nancy, welcome you to historic Charleston and the 2015 PCCA Mid-Year Meeting at this casual reception at the beautiful Palmetto Cafe. The cafe is complete with indoor fountains, antique planters, and a wall alive with sculptured greenery that embraces the design aesthetics of the outdoor courtyard with all the charm of Charleston. Enjoy great ambiance, soft music, heavy hors d'oeuvres, cool beverages, and all the good people that make up the PCCA.

Thursday, September 24

7:30 am - 1 pm **Registration**

7:30 - 8:30 am **Continental Breakfast**

8:30 - 9:45 am **General Session
Leadership and Accountability
When It Matters - Cmdr. Kirk Lippold**

Commander Kirk Lippold, USN (Ret.), was the Commanding Officer of the USS Cole when it came under a suicide terrorist attack by al Qaeda in the port of Aden, Yemen in 2000. During his command, he and his crew distinguished themselves by saving the American war ship from sinking. This event is widely recognized as one of the most brazen acts of terrorism by Al Qaeda prior to September 11, 2001. With this unique and invaluable experience, Commander Lippold has briefed thousands of military and law enforcement officers and given more than 300 presentations on this seminal event in the war on terrorism.

Commander Lippold's assignments prior to the USS Cole included Executive Officer of USS Shiloh, an Aegis-class guided missile cruiser. His department head tour was unique in his assignment to the crew that commissioned USS Arleigh Burke, the



Navy's first Aegis-guided missile destroyer where he served as the Operations Officer responsible for crew's training and combat readiness. He had two division officer assignments, which included a tour on USS Yorktown. There, he completed a lengthy deployment to the Mediterranean, where he participated in the Achille Lauro aircraft seizure, Black Sea Freedom of Navigation operations against the Soviet Union, and Attain III combat operations in the Gulf of Sidra off Libya that followed several Libyan sponsored terrorist attacks in Europe. His initial division officer tour was in USS Fairfax County, a tank landing ship, where he completed a deployment to Beirut, Lebanon, in support of the U.S. Marine Corps and the Multinational Peace-keeping Force when terrorists attacked the American Embassy and severely damaged it.

Lippold is a graduate of the U.S. Naval Academy and received his commission in the Navy in 1981. He has also served as the Administrative Aide to the Secretary of the Navy. He recently served on the Joint Chiefs of Staff, Directorate for Strategic Plans and Policy, where he was instrumental in crafting detainee policy for the war on terrorism during its initial stages following the 9/11 attacks. His last assignment was in the International Strategy Division in the Office of the Chief of Naval Operations.

Lippold's personal awards include the Defense Superior Service Medal, Legion of Merit (three awards), Meritorious Service Medal (three awards), Combat Action Ribbon, Navy Commendation Medal (two awards), Joint Service Achievement Medal, Navy Achievement Medal (two awards), and various campaign and service ribbons.

Lippold is the author of *Front Burner - Al Qaeda's Attack on the USS Cole*, which recounts the story of Al Qaeda's bombing of his ship on and the continuing ramifications for the war on terror.

9:45 - 11:45 am **Construction Industry Roundtable**

This fast-paced and frank discussion touches on the various segments of the industry and promotes the sharing of insights and opinions from contractors, suppliers, and manufacturers working in different market sectors all over North America. Speakers include Ken Kuchno from the USDA's Rural Development Program and a representative from the American Communications Engineers as

well as construction economists and other industry experts.

12:15 - 6 pm **PCCA Golf Tournament**

The PCCA Golf Tournament is at the Patriots Point Golf Course, part of the Patriots Point Naval Museum. Situated on the edge of Charleston Harbor and offering spectacular views of the city, Fort Sumter, and ships arriving from all over the world, Patriots Point is a favorite among locals and resort guests. Players of all skill levels will enjoy this Willard Byrd designed links course, especially the 17th hole, an island green poised in the Charleston Harbor with sweeping vistas, which is perennially awarded "Best Par-3 in the Lowcountry."

\$175 includes greens fees, box lunch, transportation, taxes, and gratuities. \$71 extra for rental clubs.

1 - 4 pm **Historical Downtown Walking Tour**

Enjoy a walking tour of Charleston's magnificent Historic District with our own private guide. Visit historic landmarks and exquisite gardens, including St. Michael's Church, the oldest church structure in the city and whose white spire is one of the city's iconic images. Another stop is the restored Nathaniel Russell House, a superb example of Adams architecture. The house is well known for its spiral staircase, which is unsupported from floor-to-floor. This brick double house was built in 1772 by rice planter Daniel Heyward, and the city rented it for George Washington's use during his week-long Charleston stay in 1791. It has been called the Heyward-Washington House ever since.

\$75 includes guides, admission fees, taxes, and gratuities.

Friday, September 25

7:30 - 8:30 am **Continental Breakfast**

8:30 - 9:45 am **Issue Roundtables**

Join your fellow PCCA members to discuss issues important to the association and the industry. The Marketing/Membership Roundtable looks at PCCA's place in the broader construction industry and explores ways to make the association stronger and more beneficial to members. The Government/Labor Roundtable tackles issues affecting members' businesses. All PCCA members are encouraged to attend.

10 - 11:45 am General Session - Management Succession w/ Andy Patron

In this session led by FMI's Andy Patron, we will discuss the components of a successful management succession program and process. We will look at the inputs needed to create an effective transition plan, including the importance of having a clear vision and strategy. We will help you to define some specific leadership requirements within your company. We will then walk you through the personal development process and introduce some tools to help you implement and track your management transition plan:

- Clarify the Organization's Vision
- Develop Business Strategies & Objectives
- Identify Leadership Requirements
- Evaluate Organization & Candidates
- Create a Development Process
- Outline & Implement the Transition Plan

A principal with FMI, Andy Patron has a 25-year history with private and public sector owners and contractors. He started his career as a management engineer, analyzing operations, studying work process flow, and creating industrial engineering solutions for a national healthcare provider. He went on to manage the planning, design, and construction of their major medical facilities. He has been responsible for the day-to-day operations of a residential builder, and he has a practical understanding of the unique field challenges that exist within the construction industry. He has also been a worldwide project manager for a Fortune 100 information technology company and understands the complexities of working across continents and cultures.



1:30 - 2:30 pm Charleston Carriage Tour

Depart Charleston Place for a wonderful private tour of Charleston's Historic District in a horse-drawn carriage. You will see a number of the Port City's major landmarks: the Battery, White Point Gardens, Rainbow Row, and Charleston's oldest church, St. Michael's (circa 1752). During the carriage ride, your guide will regale you with Charleston folklore and insider's stories about this fascinating city and its history.

\$35 includes guide, taxes, and gratuities.

1 - 4:30 pm Patriots Point Military Tour

Board an executive coach, travel across the Cooper River Bridge, take in the expansive views of the South Carolina shoreline, and embark on a wonderful journey where you'll survey the ships of Patriots Point, the magnificent aircraft, a reproduced Vietnam support base camp, and the rest of the exhibits that make the Patriots Point Naval and Maritime Museum one of the most visited attractions in the Carolinas. The centerpiece of Patriots Point is the world-famous aircraft carrier USS Yorktown, a heavily decorated warship that was at the "tip of the spear" in America's victory in the Pacific during World War II. You will walk in and around the mystique of the Destroyer Laffey, DD-459 Submarine Clamagore, Coast Guard Cutter Ingham, and a River Patrol Boat used in South Vietnam.

The Congressional Medal of Honor Museum, located on board the USS Yorktown, features interactive exhibits that explain the origin of the award and what it stands for. These exhibits tell the stories of brave Americans who displayed remarkable courage, such as Audie Murphy, Sergeant Alvin York, and Jimmy Doolittle. Even now, the Medal of Honor continues to touch the lives of Americans as the museum pays special tribute to the first recipients from the War On Terror, exceptional Americans who made the ultimate sacrifice in Iraq and Afghanistan.

Wear casual clothing, hat, sunscreen, and comfortable walking shoes.

\$75 includes transportation, guides, admissions fees, taxes, and gratuities.

6 - 9 pm A Celebration in the Riviera Theater

Party like it's 1939! PCCA rolls out the red carpet at the Riviera Theater, an exquisite example of romantic Art Deco style. Currently on the National Registry of Historic Places, the Riviera is from an elegant period in Charleston's rich heritage. Built Circa 1939, the Riviera opened to great fanfare and applause and has always been a place of significant gatherings and events for the city gentry and aristocracy. Today, this stunning landmark has been meticulously restored and preserved, including the original exterior, marquee, ticket booth, etched glasswork, elaborate interior murals, and stone mosaic entry. Thus, the Riviera has been transformed into one of the most unique and ingenious event facilities in America!

The celebration features the Andrew Thielen Big Band, who has been called "the southeastern Michael Buble Band PLUS," "Big Band music brought into a new millennium," and "the best wedding reception band on the planet." From swing to rock to disco tunes, Motown classics, and a little hip hop too, the band plays and sings your favorite style of music, all the songs you love to hum.

The evening will be capped off with a special celebration of the 2015 PCCA Hall of Fame inductees.

Saturday, September 26

8 - 11:30 am PCCA LDP: Executive Communication

Part of the PCCA Leadership Development Program, this session is a refresher for those who attended the Executive Communication session at the PCCA Convention in March and a catch-up for those who were unable to attend. The session will touch on a variety of topics, including elements of communication, communication styles, tools for effective communication, and conducting successful meetings. Participants will discuss their Personal Action Plans and the Performance Tool that was emailed in June to all who attended the March session.

2:00 - 6:00 pm Fort Sumter Tour

Arrive at Liberty Square and board a tour boat that takes you to historic Fort Sumter in the center of Charleston Harbor, where the Civil War began. The fort is a National Monument, maintained by the National Park Services, and is accessible only by boat. Fort Sumter features an excellent museum containing priceless Civil War exhibits. The tour consists of approximately 1 hour at Fort Sumter, then a 1 hour and 15 minute cruise around Charleston's historic harbor with a private guide. During the harbor cruise portion, you'll enjoy the panoramic view of the Atlantic Ocean and the entrance to Charleston Harbor, where Charlestonians are fond of saying, "The Ashley and the Cooper Rivers meet to give birth to the Atlantic Ocean."

\$85 includes transportation, harbor boat cruise, guides, admission fees, taxes, and gratuities.

Explore Charleston!

Mixing a mild climate with Southern character, Charleston is a unique slice of American heaven. Charleston is located in the Lowcountry of South Carolina, midway between Myrtle Beach and Hilton Head Island. It offers visitors beautiful beaches, salt marshes, quaint streets, and fortified ports. Historic Downtown Charleston sits on a peninsula a stone's throw from the Atlantic Ocean and is one of the best-preserved cities in the American South.

Set in the heart of downtown, Charleston Place is an ideal location to explore this historically rich, yet vibrantly cosmopolitan city. Charleston offers colorful American history, a scenic waterfront, and seemingly endless options for dining, shopping, golfing, exploring, and carousing. It is no surprise that the discerning readers of *Condé Nast Traveler* have voted Charleston as the number-one city in the U.S. for four consecutive years (and number-two in the world in 2014).

The Charleston area is a veritable living museum populated with expertly preserved antebellum mansions and plantation estates, museums such as the Patriots Point Naval & Maritime Museum, and historic monuments such as Fort Sumter, where the first shots



of the Civil War were fired in 1861. The city's rich, 300-year nautical heritage stems from being a seaport city surrounded by beautiful resort islands. The Atlantic Ocean, Charleston Harbor, and many rivers and marshes create stunningly unique vistas.

The city offers many ways to play—all day, every day. You can hoist a sail or hear a ghost tale, rent a boat or kayak, or hop out to one of the barrier islands for sunshine, water, and beach activities. And because this is South Carolina, the Southern golf Mecca, you have a number of fantastic golfing options. The PCCA Golf Tournament is at the nearby Patriots Point Golf Course, but Charleston Place maintains a close working relationship with more than 20 courses in the Charleston area and can get you out on the links.

As Charleston has evolved over the years, it has become more cosmopolitan while retaining its human scale and unique Southern culture. The visual and performing arts scene is a vibrant and integral part of city life. Shopping is also considered an art form, with the city earning a fashion forward reputation. In short, you'll find many amenities usually associated with larger cities, but in Charleston they are accompanied by genuine hospitality.

Charleston is world-renowned for its dynamic and ever-expanding dining scene. Lowcountry cuisine is the delicious local fare, but the city is rife with highly trained, world-class chefs who seek to show off their skills in all areas of cuisine. The city's restaurants push each other to new heights on a nightly basis—resulting in more tantalizing dining options for you! Or as PCCA's Tim Wagner said after the site visit, "The food in Charleston is crazy good. You can walk out any door of our hotel blindfolded and run into a fantastic restaurant."



Belmond Charleston Place

Located at the very heart of downtown Charleston, in the historic district and within walking distance of all the major attractions, Belmond Charleston Place makes every guest feel part of this great Southern city.

A gathering point for local society, this luxury hotel blends gentility and old-world charm with a leading-edge spa and innovative cuisine. Leisure activities include relaxing by the rooftop pool, dining in the award-winning Charleston Grill, and browsing the exclusive boutiques.

The Best Place to Stay in Charleston – Hands Down

The Rooms. It's not just the deep pile carpets, Italian marble, and mahogany furniture that make Charleston Place accommodations so inviting. The 435 rooms and suites, from generously sized Deluxe Rooms to Presidential Suites made for entertaining, are fashioned with many little luxuries to fit all of your needs.

Each room and suite includes complimentary wireless high-speed Internet, Italian marble bathrooms, period reproduction armoires, spa bathrobes, and DVD players.

The Swimming Pool. The undisputed jewel in the hotel's crown is located on the rooftop of the fourth floor. Under the stunning retractable glass roof, you'll feel like you're standing on top of the world. The pool delights swimmers and sun-worshippers alike with a heated saltwater pool and luxurious lounge chairs on the deck. Striking porthole windows overlook downtown Charleston, and lush plants surround the pool providing a private paradise.

A children's splash pool and a whirlpool are also available. And for the ultimate, calorie-burning workout, visit the ultra-modern, state-of-the-art health club. It's equipped with a full range of free weights and the latest Cybex, Life Fitness, and Stairmaster cardiovascular machines.

The Food. Guests can enjoy fine cuisine in a choice of three superb restaurants:

- Boasting the prestigious AAA Four Diamond Award for food excellence, Charleston Grill serves a wonderful array of gourmet specialties and also features nightly jazz music.
- With informal, tropical garden-style ambience, the Palmetto Cafe is the ideal place to while away an afternoon enjoying the sumptuous range of American and international dishes.
- Conveniently located next to the hotel's grand


staircase, the Thoroughbred Club is the best place in town for cocktails, appetizers, and desserts—all backed up with live music every night.

The Spa. Hide away from the world in your own secret sanctuary. Renew your spirit and rejuvenate your body with a range of indulgent treatments, everything from Deep Tissue Massage to the deliciously satisfying Magnolia Blossom Body Scrub. The Spa at Belmond Charleston Place has been specially designed to be an oasis of calm, providing the perfect place in which to relax and unwind.

The Shops. From Godiva to Gucci, the Shops at Belmond Charleston Place are an exclusive collection of world-famous stores nestled in the heart of Charleston's downtown shopping district.


Getting There. Charleston is easy to reach. Charleston International Airport currently offer 130+ daily arrivals and departures, including non-stop flights to/from 13 metropolitan areas. Carriers include Delta, US Airways, Southwest, JetBlue, United, and American Airlines.

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Subsite Electronics Unveils New Website



Subsite Electronics, a Charles Machine Works company, has unveiled its new mobile-friendly website. Guided by customer input, the site provides utility, pipeline, telecom, and other underground construction professionals easy access to information regarding Subsite's unique selection of underground awareness products for enhanced jobsite safety and productivity.

The new responsive site is available via desktop, laptop, tablets, and mobile devices, giving users convenient and quick access to information, whether they're on the jobsite or at the office. The site also includes time-saving software updates for Subsite Electronics products. Users can easily access a find-a-dealer tool to locate the nearest Ditch Witch dealership, from which Subsite products are sold.

The new site is an extension of the Subsite Electronics commitment to providing innovative, integrated, and reliable electronics to help facilitate the installation and maintenance of buried pipe and cable. Through decades of innovations, the company delivers a comprehensive suite of electronic products serving the underground construction professional, including HDD guidance systems, utility locators, and equipment machine controls.

Roller Cones Need Love Too

The following tool tips were provided by PCCA member Radius HDD.

With the increasing power and capability of today's HDD rigs, more boring contractors are turning to roller cones to succeed in hard conditions.

Whether it's a Single Roller Cone pilot bit or a Hole Opener

designed with roller cone cutters, keeping the internal bearings greased is often overlooked. Many HDD operators are unfamiliar with roller cone technology and not aware that roller cones can (and should) be greased.

The two most common roller cones used in HDD are Sealed Roller Bearings and Friction Bearings; both require greasing for proper operation.

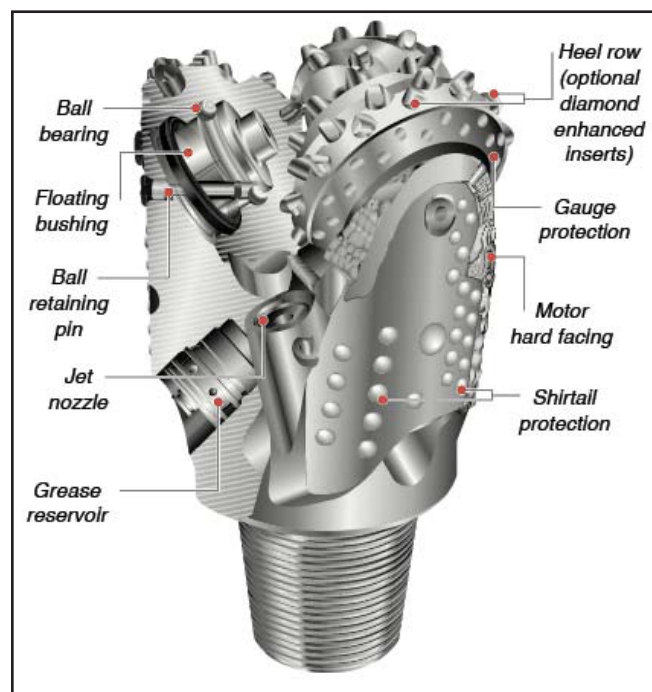
A word of caution: Over greasing a sealed bearing roller cone can result in blowing the seal and damaging the cone. Knowing when to apply grease is important!

If the cone rolls somewhat freely, it is likely the grease has broken down. A new application will protect and extend the life of the internal bearings.

Both bearing and friction roller cones have a grease port located near the bearing cavity. It is usually plugged with a set screw. If the bit is worn, it might take a little searching to find.

Remove the plug and screw in a grease zerk fitting common with your grease gun. Apply 2 to 3 pumps of grease and check the results on the "roll" of the cone. It should be more firm and require additional effort to spin. If it is still too loose, apply two more pumps of grease and check the spin again. Be sure to remove the zerk and re-seal the cavity with the set screw. Contamination (dirt and fluid) and friction (heat) are the two primary causes of premature cone failures.

Reminding your crews to clean and grease your tools



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before and after use will go a long way in extending tool life. And that makes money.

Radius HDD has more than 1,000 different kinds of tools, parts, and supplies, all available at your fingertips, 24/7/365. Whether it's regular size tooling or maxi-rig tooling, Radius has the right tool right now. Contact the company for an online or printed catalog.

GMP's Whisper Micro Cable Blower

General Machine Products Co., Inc., (GMP) recently introduced the Whisper Micro Cable Blower to its complete line of fiber optic cable placing equipment.

Engineered to install micro fiber cable into pre-installed 0.157- to 0.708-inch diameter microduct, the Whisper Micro Cable Blower will place 0.078- to 0.334-inch diameter cable at speeds up to 260 feet per minute. This, along with its low maintenance and high durability, makes the Whisper an excellent value.

Ideal for smaller jobs where traditional, field-size blowing machines are unsuitable, the Whisper's versatility, compact size, and portable maneuverability make it perfectly suited for both interior and exterior fiber cable placement applications. The operating principle behind the Whisper is simple and convenient. Microfiber is propelled into the microduct by the use of a conventional, variable speed drill (not included). The unit is also engineered to provide fast, on-site adjustments to accommodate multiple cable or duct sizes.

Other features include flat drop compatibility, an electronic monitoring system that provides digital read-outs of speed and distance, light weight, durable construction, integral air valve and pressure gauge, one-worker operation, and backing by GMP's 75-years of engineering integrity and defect-free products and services.



Southwire Expands High-Voltage Cable Production

Southwire Company recently signed an agreement with ABB, Inc., to purchase a high-voltage and extra high-voltage underground transmission cable manu-

facturing plant in Huntersville, N.C. Through the acquisition, which is expected to close in the third quarter, Southwire adds extra high-voltage cable products to its portfolio and expands its capacity to produce high-voltage cable, a market in which it already is a leading manufacturer.

"We are committed to growing in the global wire and cable market. Today, we take another step toward that goal as we further expand our manufacturing capacity and expand our lineup of products that are made in America for new and existing customers, both here and around the world," Southwire President and CEO Stu Thorn said. "In addition, today's agreement paves the way for us to develop a strategic relationship with a global company like ABB, a recognized leader in power and automation technologies."

The 240,000-square-foot, 3-year-old plant features state-of-the-art technology for producing high-voltage and extra high-voltage underground transmission cables, ranging from 230kV to 400kV. Helping to strengthen North America's power transmission infrastructure, these cables distribute massive amounts of electricity and renewable energy in support of the nation's smart grid initiative.

Southwire's Energy Division supplies a full line of wire and cable and provides technical leadership in the power delivery market. Positioned on a 20-acre site in Commerce Station Business Park, the Huntersville plant fits nicely with Southwire's family of manufacturing facilities and customer service centers in the United States, Canada, Mexico, Honduras, and China.

"Southwire is a U.S.-based manufacturer expanding on U.S. soil," Thorn said. "We are building a business that will be sustainable into future generations by continually evolving to meet the changing needs of our industry."

Scott Announces Covington Retirement

Scott Powerline & Utility Equipment has announced that account manager Brian Covington has retired following more than 30 years of combined service with Scott Equipment and Scott Powerline.

Like so many Scott employees, Covington was more than just an employee; he is family, a valued friend, a wise voice, and a trusted wingman.

Covington started with Scott in 1983 following a 16-year



career in banking. He first served as office manager for the Scott Equipment branch in Shreveport, La., then found his true calling when he took on an equipment sales territory there. Following a decade as a successful sales representative, he was promoted to the branch manager position in Little Rock, Ark., where he served in that capacity for three years.

Scott Powerline's organization as a separate company brought new opportunities for Covington. Company founder Tom Scott, Jr., wanted to recruit the best sales talent for his new venture, and he knew just where to start: Brian Covington. He joined the venture in May 2000 and soon found success in marketing several of the company's early lines of equipment. Following an unfortunate but successful battle with cancer, Covington came back strong and developed new relationships with many accounts throughout the country and in different industries. He helped introduce new products, tirelessly promoted the product support team, and negotiated several long-term field service arrangements for several different customer projects.

Everyone at Scott and at PCCA congratulates Brian on his brilliant career. We wish him an enjoyable and well-deserved retirement as well as many years of good health and happiness with his wife, Teresa.

Vermeer Breaks Ground for New Technology Hub Building

The Iowa State University Research Park (ISU RP) and the Vermeer Corporation announced in June the groundbreaking on the Vermeer Applied Technology Hub, a state-of-the-art facility that will house offices, meeting spaces, and a high-bay space.

Vermeer intends to create an environment for software engineers to excel in the development of practical, affordable, and modular equipment technology. The unique space will provide office space to allow students and faculty from Iowa

State and other schools to work collaboratively on technology advancements for Vermeer industrial and agricultural equipment. As technology is developed, Vermeer intends to utilize the high-bay facility for testing and validation.

Vermeer will initially occupy approximately 23,000 of the 35,880-square-foot facility, which will be built, owned, and operated by ISU RP. The remaining 12,880 square feet is cur-

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Member News

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rently available for lease. Construction will continue throughout 2015 and into early 2016, with an anticipated move-in date in May 2016.

“We are excited to continue our relationship with Iowa State to demonstrate how partnership between Iowa’s education system and private industry can best be applied,” said Vermeer Chief Operating Officer Jason Andringa. “When the state, our education system, and the state’s private industry come together, strong economic development potential can follow.”

In 2012, Vermeer created a presence at ISU RP as a means of engagement with future workforce and to benefit from increased collaboration with academia. Since then, there have been seven Capstone projects in which Vermeer and ISU students have partnered together to advance the educational instruction of students using real-life Vermeer opportunities. In addition, more than 25 students and Vermeer team members utilize the existing office space each year, and the company intends to recruit additional software engineers and employees to work from the space.

“Vermeer represents a great model for engagement with Iowa State University,” said Steve Carter, Director at ISU RP. “Their presence at ISU RP allows them immediate access to topnotch talent, and this facility will take that to the next level, as it will offer students and employees a way to learn and interact in a hands-on environment. This is a win not only for the company, but also for enhancing student learning.”

Greenlee Acquires Partner Endura Tools

Greenlee, a Textron Company, announced in July the acquisition from its joint venture partners of the remaining interest in Endura-Greenlee Tools (Shanghai) Co., Ltd., a professional hand tools manufacturer for residential, construction, industrial, and automotive channels.

Greenlee established the Endura-Greenlee Tools joint venture in 2010 to expand Greenlee’s presence in China through application

of innovative technologies and leveraging the distribution network. Endura-Greenlee Tools has a strong international sales network and advanced expertise in the Chinese markets. Endura specializes in designing, manufacturing, and marketing high-quality hand tools for global professional trades and industrial and construction markets. Since its inception in 1998, Endura has been considered one of the top professional tool brands in China, with over 3,000 products

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Member News

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in more than 30 different categories. Endura also has over 1,000 resellers in China and exports to ten countries.

Integration of the Chinese operations of Textron's Klauke tool business and Endura-Greenlee Tools into a single team allows for application of collective resources to broaden customer support and accelerate product engineering.

"This strategic acquisition is a unique opportunity to provide greater value to our customers in the Chinese markets with Textron's extended resources," said Scott Hall, president of Textron's Industrial Segment. "We are confident that the Endura brand will deliver a more comprehensive solution to our international customers and optimize our growth in an evolving competitive market."

NESCO Rentals Donates Equipment to Vocational Ministry in Haiti

Vocational training is an important part of any economy, but in a country still recovering from the 2010 earthquake and with an unemployment rate of nearly 80 percent, Haiti's infrastructure is in near perpetual need of renewal. Necessary skills are lacking, preventing any real progress.

Loving Shepherd Ministries (LSM)—based out of Bluffton,

Ind., NESCO's hometown—is working to solve that problem by establishing the LSM Vocational Ranch in Les Cayes, Haiti. The infrastructure on this 40-acre reserve is currently being built with the goal of providing vocational training to the once-vulnerable children they serve. Ultimately these children will grow to be sustainable adults, empowering them to be change-makers in their own communities.

NESCO Rentals recently donated the shipment and use of an auger to the LSM Vocational Ranch, where it is being used to drill holes for trees, install utility hardware, and help regulate drainage.

"We're able to check soil bearing capacities with a special attachment [on the auger], which has given us a way to make foundation construction decisions," said Troy Leye of LSM. "Immediately upon arrival, we used it to determine the foundation conditions for a school we're building."

The auger and supplies spent three weeks in transit once they left Indiana before reaching their final destination at the vocational ranch. Heavy equipment of this nature is difficult to come by as it is not locally produced or supplied.

"NESCO Rentals has allowed us to better utilize our staff to do more meaningful work and get it done faster," said Shane Shaw, projector coordinator for LSM.

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PCCA Industry Calendar

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 Project Manager Academy	January 11-14, 2016
Crowne Plaza Hotel Denver Airport	Denver, Colorado
UCT 2016	February 3-5, 2016
Georgia World Congress Center	Atlanta, Georgia
2016 DCA Annual Convention	February 15-19, 2016
Naples Grand Beach Resort	Naples, Florida
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
PCCA 72 nd Annual Convention	March 17-22, 2017
El San Juan Resort & Casino	San Juan, Puerto Rico

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