



TODAY'S

Electrical Contractor

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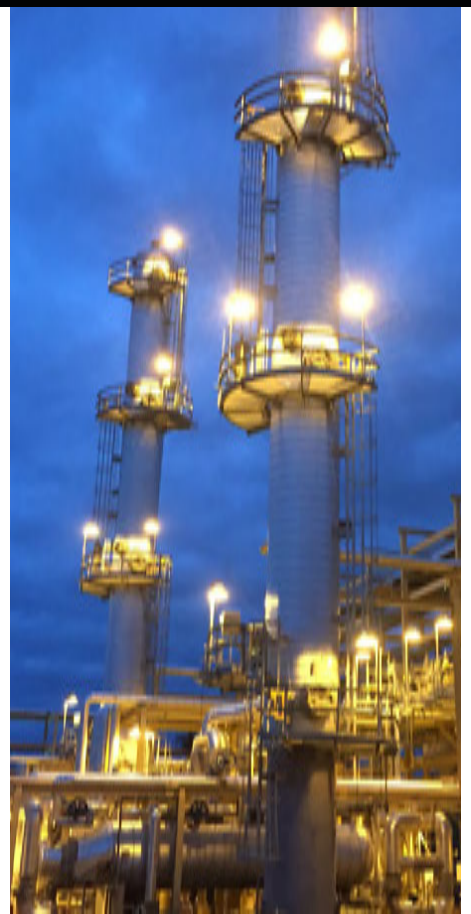
According to the National Electrical Contractors Association, "Electrical contracting is the business of bringing power, light and communications to building and communities." National trends in the industry include the need for a more dynamic role of electrical contractors and designers. Project delivery methods such as design-build and design-assist are emphasizing electrical design and specification knowledge coupled with the traditional installation skills. Integrated building systems are also an influencing factor, as buildings evolve into data hubs and become more reliant on electrical systems.

Local industry trends in Colorado revolve around the current construction boom, labor shortage, technology innovations

and changes in energy codes. According to the 52nd Annual Colorado Business Economic Outlook Forum, Colorado's economy is primed for continued growth in 2017. The construction industry is forecasted as a strong economic driver, adding 9,000 construction jobs, a 5.7% increase and the highest increase of any other industry sector.

Electrical Value-Adds

The robust Colorado economy and resulting construction boom has presented several opportunities and challenges for electrical contractors and designers. As the opportunities increase for firms to build their project portfolios and keep up with demand, electrical contractors and designers are challenged to increase the value-adds they can bring to projects.



Northern Electric, Inc. won the Industrial Project of the Year in the Over \$3M category at the IECRM 2016 Summit Awards for this gas processing plant. Photo courtesy of IECRM.

As with most trades, electrical contractors contend that they can add the greatest value to projects by being brought on early in the process. David Wright, Vice President of Preconstruction at E Light Electric, noted that when a design team brings the electrical contractors in during the Design Development (DD) phase, it “Provides a perfect window for the entire team to design forward instead of backward.” He added that at the DD phase, electrical contractors can positively influence specifications, means and methods, and code regulations, and overall, reduce constructability issues.

John Hugins, Director of Operations at Accent Electrical Services, mentioned that electricians add value by contributing to the overall functionality of the project in terms of energy savings and building controls, which allow owners to achieve their desired goals.

Labor Shortage Challenge

Challenges brought on by the growth in construction include the current labor shortage, with six out of the eight organizations interviewed, citing it as their greatest industry challenge. The lack of qualified employees has increased labor costs and delayed

project schedules, causing the industry to re-evaluate its workforce development strategies.

Paul Lingo, Training Director at the Independent Electrical Contractors Rocky Mountain (IECRM) association, emphasized the need to increase awareness among the younger generations that the electrical services industry is a viable career choice. Paul Lingo exclaimed, “Tomorrow, if we don’t have electricity, we’re in trouble. If you understand electricity, you can work anywhere.” Marilyn Akers Stansbury, CEO of IECRM, added that the electrical industry is the “epitome of life-long learning” and requires a strong foundation in math, which is critical to STEM programs in schools.



IECRM provides a four-year apprenticeship program where students receive hands-on experience in labs like the one pictured here to ensure their students are well-equipped to work in the field. Photo courtesy of IECRM.

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IECRM offers a Four-Year Electrician Apprenticeship Program, where apprentices can begin earning \$12 - \$13/hour with no prior experience, with the opportunity to become a Journeyman and eventually a Master Electrician. The U.S. Bureau of Labor Statistics reports \$51,880/year as the 2015 median wage for electricians, with upward earnings of \$60,000/year, with no college tuition debt.

Pre-apprenticeship programs are also emerging as another solution to mitigate the labor shortage. In Colorado, the Construction Careers Now program offers a series of four-week training programs in construction, with no cost to participants and no experience required, with a hiring fair included in every program aimed at immediate job placements.

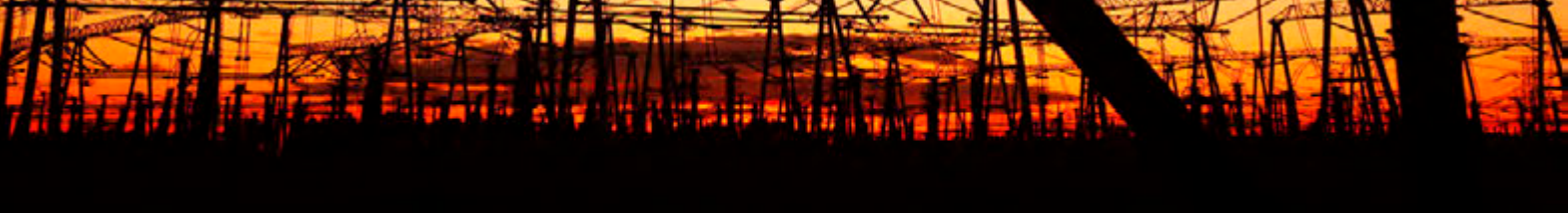
When asked about the future of workforce development in construction, John Hugins, who started his apprenticeship back in 1984 and is now the Director of Operations at Accent Electrical Services, commented,

“Construction Careers Now has helped restart the dialogue about the importance of construction apprenticeships, after 20 years of the industry not communicating to the next generation, and not emphasizing the construction trades as an option.”



IECRM is the largest trade electrical apprentice training institution with over 1,000 students in the program each year and the only State Approved electrical training school in Colorado. Photos courtesy of IECRM.





Weifield Contracting Group won Commercial Project of the Year in the Over \$3M category for this Union Station Block A Project at the IECRM 2016 Summit Awards. Photos courtesy of IECRM

Looking Ahead: Technology Impacts & Changing Energy Codes

Reflecting on changes in the industry over the past decade, 87% of the electrical contractors and designers cited the evolution of technology as the biggest difference in the industry. Bob Hadley, Vice President- Business Development at Ludvik Electric Co., commented that,

“The way information is passed to the field, field layout, the level of design detail, field scanning, 4 & 5-D modeling, and automatic takeoff have really developed more in the last 10 years.”

Leonard Gurule, Principal at M-E Engineers, included the commonality of integrated systems where lighting controls are now being integrated with the full building automation systems as a major difference in

the way buildings are designed. Nate Otterson, Vice President of the Hunt Electric office located in Colorado, added,

“From Building Management, to A/V, to Lighting Control, to Security, to Renewable Energies, the innovation to improve the building experience for the end user has taken a large step over the last decade.”

Energy codes have also heavily influenced the industry over the past 10 years. Max Billington, Chief Electrical Engineer for The RMH Group, commented, “Energy codes have had significant changes recently that require more design effort on the part of electrical design professionals. Code editions are generally published every three years; but these publication dates are not

coincident. This means design professionals are consistently learning new codes and having to design based on a cornucopia of energy code requirements of different jurisdictions and different code editions.”

In terms of what’s next for the industry, Roger C. Crawford, PE, Founding Principal and President of MEP Engineering, revealed one of the latest innovations when he commented,

“The most up and coming technology includes LiFi – imagine a light that operates as your WiFi connection. Our suppliers, such as The Lighting Agency, locally are predicting that LiFi will replace WiFi within the next 10 years.”



Despite advancements in technology and sustainable energy codes, Robert Hadley at Ludvik Electric concluded,

“Training is extremely important to the future of our industry. People are our greatest asset so the investment is well worth the effort.”

