



Going Green....

NECA Awards of Excellence

Without electricity and online access, we would be living in the dark ages...literally. All buildings require an electrical and voice/data infrastructure. From the installation of lighting to the more complicated structured cabling systems, electrical construction is critical to our daily lives. And in today's world, the depletion of our fossil fuels requires that renewable energy sources are utilized and building automation systems are integrated in all construction projects.

Alternative sources of energy are constantly evolving. Scientists and manufacturers are trying to come up with better products that are user friendly and economical. The government is drawing policies that encourage use of alternative sources of energy. The Western Ohio Chapter, National Electrical Contractors Association (NECA) members have employed energy management guidelines in their projects for years and are leading the way in the installation of new, environmentally friendly technology. They are the most qualified contractors in the Dayton area. The quality of their work is unsurpassed because their employees are the best trained, drug free, work force in the country.

These outstanding workers are members of the International Brotherhood of Electrical Workers (IBEW) Local 82.

This issue of *Connections* is dedicated to showcasing the projects and people that are essential to building an energy efficient future.

ESI Electrical Contractors, Inc.

DP&L Yankee Solar Power Facility

ESI has recently been working on a \$5 million DP&L project consisting of the installation of 9,000 solar panels on seven acres at the Yankee Substation in Washington Township. This solar array will produce 1.1 megawatts when fully operational. It is estimated that it will produce enough electricity to power 150 homes. A visitor center to educate the public about solar power is planned as part of the installation.

Some of the advantages of solar power include:

- Renewable.
- Non-polluting / no greenhouse gasses.
- Silent.
- Sun is available generally during the time of peak power needs.
- Can be used anywhere.

Producing power where it is used lessens the strain on the electric grid and minimizes the need for more transmission lines.



The snow in February created a challenge to this ESI solar installation.

- No moving parts – means that solar generation requires little maintenance and has a long lifetime. Compared to other renewable sources, solar has many advantages; wind and water power rely on turbines which are noisy, expensive and susceptible to breakdown.

Although the cost to build a solar array is one and a



DP&L Yankee Solar Power installation by ESI.

half as much as a new coal plant, the cost of solar continues to decline.

The project was built by Ameridian Specialty Services along with Miller-Valentine Commercial Construction, SquareD/Schneider Electric, ESI and Inovateus Solar. ESI

was subcontracted by Square D/Schneider Electric to do the wiring installation between the panels, collectors and inverter/transformer assembly unit. The biggest challenge for this project, and

many other construction projects in the Dayton area, was the snowy weather in February. But ESI was able to keep the project on schedule to begin operations this spring.

ESI Electrical Contractors provides the entire spectrum of electrical installations, from wiring and control systems to telecommunications installations.

Chapel Electric, LLC

Creative Technology Accelerator

The Creative Technology Accelerator (CTA), a 42,000 square-foot facility, is the new home to the Institute for Development and

Awards *cont'd*

Commercialization of Advanced Sensor Technology (IDCAST), led by the University of Dayton. It's the anchor tenant of Tech Town, Dayton region's technology-oriented district. IDCAST is a center of excellence in chemical and biological sensing technology established by a \$28 million State of Ohio Third Frontier



Artist's rendering of the CTA.

Grant to bring remote sensor and sensor technology to market through collaborations among Ohio universities, the U.S. Air Force, and industry. Sensors and remote sensing technology have applications for the military, homeland security, and surveillance.

Chapel Electric completed the core and shell portion of this project which included a 1200A electrical

What is LEED Certification?

LEED certification is the recognized standard for measuring building sustainability. Achieving LEED certification is the best way for you to demonstrate that your building project is truly "green."

The LEED green building rating system – developed and administered by the U.S. Green Building Council – promotes design and construction practices that increase profitability while reducing the negative environmental impacts of buildings and improving occupant health and well-being.

The LEED rating system offers four certification levels for new construction – Certified, Silver, Gold and Platinum – that correspond to the number of credits accrued in five green design categories: sustainable sites, water efficiency, energy and atmosphere, materials and resources, and indoor environmental quality.

distribution system and an interior / exterior lighting package complete with motion sensors and lighting control. They also installed the tenant fire alarm system.

The CTA building has achieved a LEED-CS Gold certification. This

building has a highly efficient building energy system and envelope design that officially received 7 of 8 possible LEED Credit points for optimizing energy performance. This is equivalent to an annual energy cost savings of over 32% when compared to a conventionally designed building.

Other project collaborators include: The Architectural Group, Heapy Engineering and Messer Construction.

Chapel Electric is a business unit of Quebe Holdings, Inc., a holding company of leading electrical and technology business units operating on a national level with offices in Ohio. They provide such services as electrical, lighting, power

generation systems, structured cabling, security, audio/video and maintenance programs in virtually every sector of the economy and for a diverse range of businesses, organizations and government. Since 1946, Chapel Electric Co., LLC has ventured into a variety of different market sectors while becoming one of the nation's leading electrical contractors.

Chapel Romanoff Technologies, LLC (CRT)

Blue Canyon Wind Farm

As we deplete our natural energy resources, alternative, renewable energy sources must be developed. One such source is wind. The Blue Canyon V Wind Farm, located near Lawton, Oklahoma, is the third phase of the Blue Canyon project. It has an installed capacity of 99MW – enough to power approximately 30,000 average Oklahoma homes with clean energy each year.

The farm, which consists of 66 General Electric 1.5MW turbines, achieved commercial operation in October 2009. As a subcontractor to Midwest Electric out of Columbus, CRT was responsible for splicing the fiber to connect all the turbines together in an underground interduct. They installed 12 strand fiber to the first tower then daisy chained around to link all the towers to the main distribution sub-station, where the electricity would be sent out for public sale and consumption. The



CRT on the job at Blue Canyon Wind Farm.

biggest challenge, according to Project Manager C.J. Withrow, was the 35-40 mph wind. The doors in the towers had to be kept open in order to install the fiber, and the wind was constantly blowing them shut.

"The farm itself is something to see," says C.J. "First roads had to be built to access the area. Most of the wind turbines were constructed in areas where rock had to be blasted and



Blue Canyon Wind Farm near Lawton, Oklahoma



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Your comments, suggestions and questions are welcome! Contact the Western Ohio Chapter - NECA.

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excavated for the foundations of the towers. It was a very interesting, if challenging project.”

White Construction Company of Indiana was the General Contractor on the project.

A business unit of Quebe Holdings, Inc. Chapel Romanoff Technologies (CRT) provides a complete line of systems integration including design, install and service of voice/data, audio and video systems, security, life safety, and monitoring systems. CRT's clients include leading corporations and institutions in technology-dependent markets, including defense, financial services, data management centers, biotech/healthcare, and institutional industries.

Aztec Electric

Building 17, WPAFB

Bringing a vacant historical building back to life is a challenge. Especially when the updates include the installation of state-of-the-art lab equipment, complete with a vibration room. That is exactly what happened in the



Aztec Electric at the jobsite for the Building 17 renovation.

renovation of Building 17 at Wright Patterson Air Force Base (WPAFB). The facility (along with Building 12) will become home to the 77th

Aeronautical Systems Group previously located at Brooks City-Base in San Antonio, Texas.

The 77th AESG is the unit charged with providing advanced performance, survival, and force protection capabilities to U.S. and allied military forces. This is done through development, production, and sustainment of human-centered systems which include life support; nuclear, biological and chemical defense; aeromedical services; AF uniforms; mishap analysis; force health and



Building 17 at WPAFB is the new home for the 77th AESG.

fitness; and medical information systems.

Completed in 1929, Building 17 was a red brick two-story structure with a low-pitched gabled roof, wide copper entablature and rectangular columns with concrete capitals and typifies early Wright Field architecture. It originally housed the Aircraft Radio Laboratory and has been vacant for the last 7 years.

The renovation contract calls for the facilities to receive upgraded electrical systems, new force protection features, asbestos removal, lead paint abatement and improved energy efficiency along with general cosmetic improvements. Aztec Electric was responsible for all of the

required electrical upgrades. The project included the installation of a 400 hertz converter to run tests for air craft components. The lighting includes motion sensors to increase energy efficiency. Aztec upgraded the electrical service with a larger pad mount transformer and new duct bank into the existing building. A new Fire Alarm and Mass Notification System along with Access Control Security System was also installed.

The design/build project was managed by Heapy Engineering who was able to secure LEED Silver status. This included a thermal test on the building to check for leakage, in order to make the building more energy efficient. Edge and Tinney were the architects; Butt Construction, the General Contractor; Chapel-Romanoff Technologies (CRT) installed the required teledata cabling; and Maxwell Lightning Protection installed lightning and grounding protection.

Aztec Electric is a full service electrical contractor whose services include power wiring, high voltage, lighting, grounding, motor controls, fire alarm, security, telephone data, fiber optics and emergency generators. Aztec is a certified Minority Business Enterprise.

Maxwell Lightning Protection

Human Performance Wing, WPAFB

Maxwell has been working at the Human Performance Wing at WPAFB since the early ground breaking. When concrete columns were poured for the foundation, Maxwell had to conceal cable inside each column in order to attach

it to grounding rods later in the project. In addition, lightning protection points have been installed around the edges of the structure, every 25 feet, to prevent a lightning strike to the building.

Protecting computer rooms is always a major concern. Maxwell is installing grounding on every other pedestal clamp that holds up the computer flooring in the South and North buildings. Ordinarily, there is a clearance of nine inches to a foot under the flooring, where the grounding cabling is installed. But Maxwell has been challenged on this project to provide grounding in a 2 1/2 inch clearance. Scott Funderburg and Delbert Corn are running this project.

Maxwell is installing lightning protection at other projects in the area. At the new Dayton Airport Tower, Edward Bruggeman has been hanging off swing gear for a month during the installation process. Other projects include the renovation of Buildings 12 and 17 at WPAFB and the new Miami Valley Hospital.

Established in 1963, Maxwell Lightning Protection is one of the largest and most reputable companies nationwide in the lightning protection industry. Maxwell also specializes in installing and servicing all types of grounding systems, from the preliminary sketch to design and installation. Maxwell has the technical experience and expertise to deal with any and all projects, maintaining yesterday's "old time" quality with today's modern technology and competitive spirit. Owner Wayne Maxwell serves on the Board of Directors for the United Lightning Protection Association.

Outstanding Performance Awards

Congratulations to Charlie Hartshorn and IBEW Local 82 Business Manager Nick Comstock for their dedication to implementing the Code of Excellence program and promoting high standards of professionalism within the electrical industry.

The Code of Excellence program, developed by the International Brotherhood of Electrical Workers (IBEW) International, is designed to provide increased value to electrical construction and maintenance users by enhancing the performance of signatory employers and the efficiency and craftsmanship of IBEW workers. The program is intended to enhance the partnership between labor and management that is devoted to furthering common objectives by maintaining high standards of workmanship while improving competitiveness.



Congratulations to IBEW Local 82 Business Manager Nick Comstock (left) with NECA Field Representative Frank Piatt and Vice President ESI Charlie Hartshorn.

At ESI Electrical Contractors, all employees, including office staff have been through the Code of Excellence training. "The training is required of all new hires as well," says Vice President Charlie Hartshorn. "The Code of Excellence training can only help our industry. It reinforces a positive mental attitude toward the quality of workmanship and customer relations. I want to thank the IBEW for embracing the training and hope that refresher courses will be held throughout the year," says Charlie.

Frank Roddy

Frank has been an electrician most of his adult life. He has been a member of IBEW Local 82 since 1993. But prior to that he spent six years in the military doing high voltage work. After that, Frank worked as a residential/commercial electrician until he enrolled in the JATC Inside Wireman Apprenticeship program. Frank became an instructor at the JATC as soon as he became a Journeyman. His expertise is teaching motor controls to fourth-year apprentices and Journeymen.



Frank Roddy of Aztec Electric

For the last thirteen years, Frank has worked at Aztec Electric as a Foreman, Estimator and Project Manager. He has several certifications under his belt including: BISCO Certified Technician; Level II Fire Alarm Certified; State Fire Alarm Certified; and is NJATC certified for High Voltage Splicing. Over the years, he has worked on dozens of projects throughout the Miami Valley. "Frank is a leader," says Aztec Electric President George Minarcek. "He is knowledgeable, works hard, and is a true asset to our company."

Upcoming Events

Cookout for Scouting at Riverscape

The Miami Valley Council, Boy Scouts of America is proud to announce the 11th annual **COOKOUT FOR SCOUTING AT RIVERSCAPE**, to be held on Friday, June 11th, 2010 from 11:30am to 1:30pm at RiverScape Park on Monument Ave. in downtown Dayton. Boy Scouts from around the Miami Valley will be serving up a choice of Grilled Chicken or Polish Sausage sandwiches, fresh fruit, chips, cookie and a soft drink for \$7.00.



This event benefits the Campership Fund of the Miami Valley Council. All those who participate in this event will have the satisfaction of knowing that Scouts from the Miami Valley will be able to attend camp this summer, regardless of their ability to pay.

In addition, the URS will be holding their annual fund-raising program, Rubber Duck Regatta at the same time as the Boy Scouts Cookout. Sponsors for the Cookout are the Labor Management Cooperation Committee of the Western Ohio Chapter of the National Electrical Contractor's Association (NECA) and the International Brotherhood of Electrical Workers (IBEW) Local 82; and the Miami Valley Alliance of Construction Professionals (MVACP).

The Western Ohio Chapter - National Electrical Contractors Association Directory:

NECA Members

Aztec Electric, Inc.
Chapel Electric Company
Chapel-Romanoff Technologies
ESI Electrical Contractors
High Voltage Maintenance
Kastle Electric Company
Kastle Technologies
Maxwell Lightning Protection
Mutual Electric Company
Studebaker Electric
Union Lightning Protection
Wagner Industrial Electric
York Electric, Inc.

Contributing Contractors

Automated Controls
Bright Street Electric
Broadway Electric Service Corp.
Glenwood Electric
Justice Electric
Lake Erie Electric
M.B.A. Electric, Inc.
Power Services
Precision Electrical Contrs.
Productive Electric, Inc.
Spurling Electric Co., Inc.
The W.G. Fairfield Co.
Triad Electrical
Westfield Electric
Wilson Sign Company

Affiliate Members NECA

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Becker Electrical Supply
Copp Systems Integrator
FD Lawrence Electric Company
Graybar Electric Co., Inc.
Heapy Engineering LLC
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Uptime Solutions

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