

The Commonwealth Quarterly

News from around the circuit.

Fall 2011



Commonwealth Electric Company
of the midwest

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Solar Panels Installed at World Food Prize

Commonwealth Electric Company of the Midwest in Des Moines has recently completed the installation of a Photo Voltaic Solar Panel System on the roof of the new World Food Prize facility in Des Moines, Iowa. The system includes ninety 318 watt Sun Power solar panels, which are the most efficient panels currently on the market. These panels are capable of producing up to 28,000 watts of AC power.

The solar system will qualify the World Food Prize project for possible LEED, Leadership in Energy and Environmental Design, points under Energy and Atmosphere, On Site Renewable Energy. The

World Food Prize project is pursuing LEED Gold certification. The solar array is one of the first of its kind in the Des Moines area.

Neumann Brothers Construction was the general contractor on the project. RDG Planning & Design, Commonwealth Electric Company of the Midwest and Innovative Kinetics collaborated on the design of the solar system. Commonwealth's efforts in the office were led by project manager, Mark Ramsey and in the field by foreman, Steve Hansen. Journeyman Matt Gruis and apprentice Cory Schmidt also assisted with the installation.



Workmen install solar panels at World Food Prize facility in Des Moines, IA

Norfolk Market and Crews Expand

Ruth Chermok - Business Development

We continue to grow and expand in the surrounding communities, and the Norfolk market has been very active for us lately. We initially worked our way into this community with a presentation of Ruben Bera's program on Arc Flash Protection. We have completed several projects for Milk Specialties since then, and now perform routine time and material work for them. With our contract project at the Norfolk ball fields, a recently completed lighting project at the U S Postal Distribution Center, and several projects at Nucor Cold Finish Plant we are gaining a foundation of work in this community.

Our team has also grown with the addition of several electricians in the area, each with specific skills and areas of expertise.

Ruben recently returned and provided another presentation that was well attended by CECM team mem-

bers and clients. City of Norfolk building officials were also present, and this was a great opportunity for us to showcase our company and the difference in our safety practices, and quality standards! Several additional clients in the area have requested this training, and we will be putting together another class soon.

We are under consideration for a very large energy efficient relighting project for Covidien. Covidien is a medical glass and syringe producing facility. After the completion of a lighting study, our proposal is under final consideration with their corporate office.

Our target list of customers and clients is quite extensive in this area. We are working our way to grow our accounts in a methodical and deliberate manner that allows us to provide great customer service to our new customers!

Agrium Advanced Technologies - Fairbury, Nebraska

Nick Cole – Manager, Construction Services



In August 2011, Commonwealth Electric Company of the Midwest began preliminary work on the former Tetra Micronutrients facility located in Fairbury, Nebraska, which is 70 miles southwest of Lincoln. Our site supervision consists of Ron Lannin and Derek Behne. Tetra Micronutrients is an approximately forty year old fertilizer manufacturing plant which has under gone multiple ownership changes in recent years. The most recent purchase was completed in July, with the new owners changing the name immediately to Agrium Advanced Technologies. The plant is vital as an employer for this community of 3,700 and has survived over the years with no dedicated maintenance staff, but rather a nucleus of devoted, self-taught electricians and other craft personnel, doing whatever they had to do to keep the facility functional and the doors open. The good news for the employees and the community of Fairbury is the recent acquisition of the plant by Agrium Advanced Technologies. Agrium Advanced Technologies is a world leader in, among many other products and services, the manufacture of fertilizer products. The following is found under the heading 'Who We Are' on the Agrium Advanced Technologies website, (www.agriumat.com):

Agrium Advanced Technologies is a strategic business unit of Agrium Inc., a major retail supplier of agricultural products and services in both North and South America and a leading global producer and marketer of agricultural nutrients and industrial products.

Agrium Advanced Technologies is the leading manufacturer and marketer of controlled-release fertilizers and micronutrients in the agricultural, professional turfgrass, horticulture, and consumer lawn and garden markets.

We are at the forefront of environmentally-friendly fertilizer technologies and also provide effective pest control solutions.

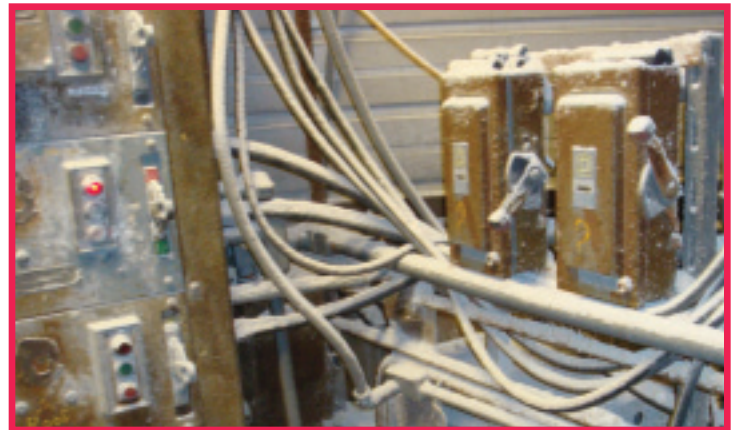
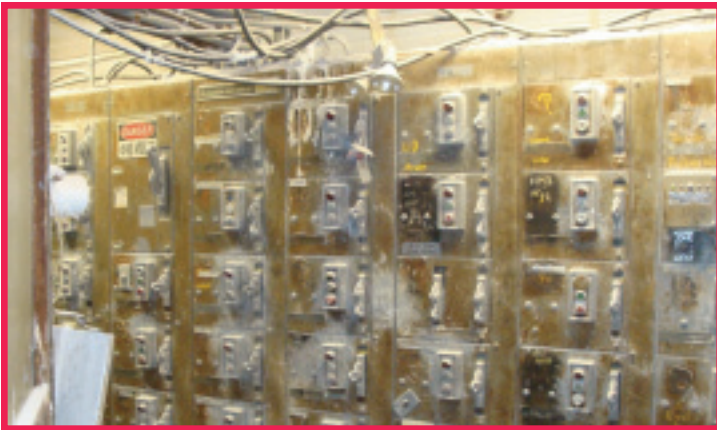
We deliver innovative, premium quality products with unsurpassed customer service. We achieve this through the expertise of our employees, strong customer relationships and our passion for developing technologies and leveraging them into new markets.

Nick Cole is working closely with Agrium Advanced Technologies Capitol Project Engineering Manager, Elliott Boyd and his staff from Loveland, Colorado, and Plant Manager Ron Satterfield and his staff to develop design and budgeting for this important project. The mission of Commonwealth Electric Company of the Midwest on this project is multifaceted and multiphased. We have just completed the first two of several phases of work; Phase 1 – OSHA Upgrades and Phase 2 – Design Development. When we first visited the jobsite, we found a plant in full production. We could not have imagined what we would find upon completing our initial walk-through. The facility was found to be in very poor condition electrically. Immediately noticeable multiple 1970's vintage motor control centers completely rusted with multiple holes in the exterior doors and panels, almost all indicating lights, pushbutton lenses, and covers missing, no labeling, and questionable fuse sizing. Additionally was found missing panel and wiring system covers, miles (it seems) of unsupported sheathed armored cables and Type SO and SJ cables, multi-outlet devices (that we use for computers and printers in our offices) being used in the production areas for power to miscellaneous motors and other loads, nonfunctional large exhaust fans, general and emergency lighting fixtures and open wiring systems throughout the plant. There are numerous (too many to count!) National Electrical Code violations; including a major electrical room in which motor control centers, panelboards, and control panels are installed ... complete with several inches of standing water on the floor! The integrity of grounding and bonding and overcurrent protection within the plant is severely compromised. In general, the electrical system within the plant is in urgent need of attention in order that the employees who work there have an electrically safe environment to work in, along with protecting the owner's investment. Agrium Advanced Technologies has hired Commonwealth Electric Company of the Midwest to work with them and their consultants toward that end.

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Agrium Advanced Technologies cont'd.

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During the Phase 1 – OSHA Upgrades work, we provided electrical safety upgrades throughout the facility; mainly covering openings in live equipment and raceway systems, identifying and removing open and electrically live wiring which was not currently in use, and other urgent safety upgrades. OSHA has been on-site multiple times during our time there and has to be pleased with the attention being

paid to these issues. Phase 2 – Design Development, has consisted solely of the development of current one-line drawings of the existing electrical distribution system, from the service equipment through each remote electrical room or distribution point. When Agrium AT purchased the facility, there were no one-line drawings whatsoever.



The work at Agrium AT has presented some special safety concerns for our employees. The manufacturing area permeated with such things as sulfuric acid, zinc sulfate, copper, magnesium and heavy metals such as lead. Commonwealth Electric Company's Corporate Safety Director, Ruben Bera, has made several visits to the site and has interacted with Agrium AT personnel to insure that we are equipped with the proper Personal Protective Equipment to insure the safety of our on-site personnel. These items included Tyvek suits, full face respirators complete with two filters and pre-filters, rubber and leather gloves, hearing protection, and decibel monitors. The safety of our people is our primary concern and is being monitored closely by Ron and Derek, along with Ruben Bera and Nick Cole.

We are now in the Design Assist Phase of the project, which consists of a new two story addition to the plant to house the new service and electrical equipment for motor and equipment power and controls, miscellaneous power, an unin-

terruptible power supply system, general and emergency lighting, and possibly new public address-paging-warning system, data-communications, and gas and fire detection systems. Almost all of the new electrical installation will be installed as NEMA 4X corrosion resistant and water resistant. We are working with Agrium AT personnel to determine if any classified environments exist within the plant that would require wiring installations conforming to National Electrical Code Article 500 requirements. Additionally, we have discussed with Agrium plans for what happens after the renovation projects that Commonwealth Electric Company can partner with them and help to facilitate; including maintenance preventative maintenance, arc-flash studies and implementation, and testing services. Commonwealth Electric Company of the Midwest is proud to be involved on this project with Agrium Advanced Technologies and eager for the opportunity to provide our wide ranging services. A special thanks for the investment to date in the project by Ron, Derek, and Ruben!

Satellite Maintenance for IPTV

Allison Petersen – Service Coordinator

The Service Department in Des Moines is continuing a valuable relationship with Iowa Public Television in Johnston, Iowa. Recently our service electrician, Troy Shannon helped out with some general maintenance on one of their satellite dishes. Every few years, a plastic cap on the cone of the satellite dish has to be replaced. Due to the size of the dish, this work requires the use of a boom truck,

which is where Commonwealth Electric Company of the Midwest came in. In addition, it has to be performed when there are no satellite feeds scheduled. Troy took out a series of bolts and removed the damaged cap replacing it with a newly machined cap. The work was quite a departure from the electrical service work we normally perform and provided a striking photo opportunity as well.



Troy Shannon performs general maintenance on an IPTV satellite



A close-up view of an IPTV satellite

New Kum & Go in West Des Moines Goes LED

Allison Petersen - Service Coordinator

Commonwealth Electric's Des Moines branch recently completed construction of the 5000 square foot Kum & Go Titan Store in West Des Moines, Iowa. This is the first Kum & Go store to utilize light emitting diode (L.E.D.) technology for both their interior and exterior lighting. The new high efficiency LED lighting design was developed by Modus Engineering, Commonwealth Electric Company of the Midwest and Electrical Engineering and Equipment Company. Kum & Go's management staff was very pleased with the amount of light produced by the low voltage LED fixtures, which will also significantly reduce their energy consumption and long-term maintenance costs.

Commonwealth's team consisted of foreman, Robin Pearson, journeyman Gary Hagen, apprentices Jon Ivanovich, Cory Schmidt, and Aaron Haug, un-indentured apprentice Nathan Heath, and project manager, Mark Ramsey. Mark and Robin worked very closely with Henning Construction for another successful project for Kum and Go.



High Efficiency LED lighting at Kum & Go