

THE GRID

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WELCOME TO THE GRID



The industries Finley Engineering serves are continuously evolving – new technologies, new regulations and new consumer demands. From carbon credits to distributed generation to Smart Grid, there are a number of complex issues facing utility companies today.

For more than 50 years Finley Engineering has been at the forefront of our industry, and with that we've seen a lot of change. The expertise and resources Finley Engineering brings to the table demonstrate our continued commitment to our customers. We're here to help them navigate these complex issues so they can maximize performance and reduce risk.

Enjoy this issue of The Grid.

WINDS OF OPPORTUNITIES BOUNTIFUL IN NEBRASKA

The winds of opportunity are gusting throughout the state of Nebraska. Although the state's vast prairies are full of wind – ranked sixth nationally for potential wind energy output – little progress has been made to capitalize on the opportunity wind energy brings. The reason for the lack of wind energy development can be attributed to multiple areas.

Nebraska is unique from any other state. Because it's a public power state, its energy development initiatives are governed by rules that differ from states whose power companies are owned privately or by investors. The overarching question raised by many is, "If wind is an available renewable resource, who has the right to develop, oversee and profit from it?" Presently, there is no definitive answer.

The rules and regulations developers must adhere to often deter or prevent them from undertaking projects in the state. There is also reluctance on the part of investors who worry

about spending money for projects that have strict government oversight and limited energy exporting capabilities.

There has been recognition on the wind front by Nebraska lawmakers; progress, however, has been slow. Introduced and passed in 2007, LB 629 offered the idea of Community Based Energy Development (CBED) to the state. The purpose was to establish community based initiatives around renewable energy that brought economic, financial and ownership benefits to the communities and localities involved. While many viewed the bill as a gateway to wind power development, it was largely unsuccessful in doing so.

To further wind energy efforts, LB 1048 was introduced and passed earlier this year. The bill eases restrictions in an effort to allow outside developers to build wind energy farms and export that energy for use outside of Nebraska.

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Other Midwest states have seen solid results from their wind power efforts. By comparison, in 2009, about ten percent of Iowa's generated electricity came from wind power. Surprisingly, only two percent of Nebraska's energy comes from wind. Likewise, Iowa ranks second nationally for existing wind power output, while Nebraska is 24th in the same category.

While Nebraska has started taking steps to ease wind energy development restrictions, it will be interesting to see how wind energy initiatives in Nebraska continue to evolve.

FINLEY ACQUIRES BSM

Finley Engineering recently acquired Bryant Surveying and Mapping (BSM), increasing the reach of Finley Engineering's already established comprehensive survey services. Prior to the acquisition, both companies collaborated on projects related to electric transmission and distribution.

"Finley Engineering has been a leader in design, engineering and construction of electrical power systems for over 50 years," explains Phil Carroll, P.E., Vice President, Energy Division. "Over that time we've been a part of industry change and growth. We recognize the challenges facing our clients today and we're constantly working to develop

innovative ideas. These efforts help us keep our customers at the forefront of their industries – this acquisition is a strategic component of those efforts."

Based in Joplin, Mo., BSM is a regional full-service surveying and mapping company with a broad base of corporate, municipal and private clients throughout Arkansas, Kansas, Missouri, Oklahoma and Texas.

"We look forward to working with Finley Engineering to offer comprehensive survey services," says Pat Bryant, Manager of Surveying Services. "The opportunity to join an industry leader is exciting and our goal is to help Finley continue to provide the best customer service."

FINLEY COMPLETES SUBSTATION PROJECTS IN CLAREMORE, OK

Finley Engineering recently completed an electrical substation project for the City of Claremore, OK. The project called for the redesign and rebuild of four existing electrical substations and the installation of a new substation to support a proposed mall scheduled to be built.

Initially, the City of Claremore hired another engineering firm to complete the project. However, due to internal issues with aggressive scheduling, the firm was unable to carry out the project to completion. Larry Hughes, Claremore's substation technician, contacted Finley Engineering to provide cost estimates and complete the project as scheduled.

Upon initial review of the four existing substation sites, Finley Engineering found that some substations required modifications, and required review and sealed drawings from Phil Carroll, P.E., Vice President-Energy Division.

The existing substations needed to be replaced because they were dated and insufficient to support new load growth. To meet the high level of reliability required by the City's electrical department,

requirements for larger fault duty on breakers, new relay protection schemes and control houses were incorporated into designs.

"Working with Finley Engineering on the substation project was effortless. They were very organized from the onset and had wonderful ideas to improve the project," recalls Hughes. "They were more than accommodating to work around our needs and meet deadlines."

The project was a team effort between the City of Claremore and Finley Engineering. The city poured concrete foundations for the control houses, completed decorative fence work and transported contractor materials to keep contractor costs within budget.

"The biggest challenge was defining who was responsible for what so everyone was on the same page," explains Mike Socha, P.E., Manager of Transmission and Distribution Services. "This project could not have been more successful. Everyone involved put forth their best effort to complete this project on time and on budget."



FCC ADOPTS NEW POLE ATTACHMENT RULES

In May, the Federal Communications Commission (FCC) adopted a new pole attachment Order and Further Notice of Proposed Rulemaking (FNPRM). The Order is a follow-up to a February 2009 initiative in which Congress tasked the FCC with developing a national broadband plan to provide internet access to the entire country.

After the initial inquiry by Congress, the FCC sent a Notice of Inquiry (NOI) requesting input from electric utility companies about how such a plan would affect our nation's electric grid as it relates to pole attachments.

As a result, a number of suggestions were placed in the NOI that would create a burden on the electric industry's core mission of providing electricity safely and reasonably to consumers. These included the expansion of access rights to include organizations previously excluded from FCC regulation and a request to amend Section 224 of the Communications Act. Although proposed in the initial broadband plan, the new rules will not apply to electric cooperatives and municipals.

The new regulations will likely not be enacted for about a year. Regarding pole attachments, the FCC took the following actions:

- The FCC clarified that the Order does not apply to utilities located in states that regulate pole attachments or utilities that are municipally or cooperatively owned.
- The FCC stated that the nondiscrimination principle in Section 224 of the Communications Act means that communications providers have a statutory right to use space and cost-saving techniques, such as boxing, when practical and where consistent with individual pole owners' use of those techniques. Utilities retain the right to limit their use when necessary to ensure safety, reliability, and sound engineering.

- The FCC clarified that access to poles must be timely in order to be considered just and reasonable.
- The FCC requested comment on a specific timeline for all wired pole attachment access requests, including fiber and other wired attachments by wireless carriers.
- The FCC requested comment on proposed rules allowing the use of outside contract workers to perform make-ready work in certain circumstances.
- The FCC requested comment on proposed reforms to the dispute resolution process.
- The FCC requested comment on proposals to establish rental rates that are as low and uniform as possible.

The policy that will be established by the FCC and congressional legislation will affect the operations and reliability of the nation's grid. As utility companies prepare for these changing regulations, alliance within the industry is central to risk management. In the current environment, Finley Engineering is poised to be a resource and partner to customers.



Q&A

Q How do new Canadian and FERC vegetation management regulations influence the design and maintenance of transmission facilities?

A With little regulatory guidance surrounding vegetation clearance, engineers have previously established their own thoughts about wire clearances based on the line movement envelopes and transmission line easement right of way widths.

One reason for this lack of guidance can be attributed to the National Electrical Safety Code, which focuses more on safety aspects concerning workers and the public, and less on providing regulations for vegetation clearances. Previously, vegetation management has been left to those responsible for maintaining or removing incompatible species.

With the onset of new regulations, specifically the North American Electric Reliability Corporation (NERC) FA03 vegetation standard, it's important to keep in mind the added aspect of those regulations – both federal and state – and provide additional clearances for growth rates, blowing together, and fall-ins from off right of way.

On higher voltage facilities considered critical to the transmission grid, there are serious financial consequences for failure to maintain vegetation that could ultimately lead to sustained line outages. Failure to maintain vegetation around these critical facilities could place the North American power system at risk and reduce the reliability we find ourselves accustomed to.