

KEENAN II WIND FARM



Great Southwestern Construction Puts its Skills to the Test in Oklahoma Wind Territory

Story by Paula Frisina, MYR Group Marketing Communications Specialist

With close to a decade of experience constructing transmission lines, substations and collector systems for wind farms, Great Southwestern Construction, Inc. (GSWC), a subsidiary of MYR Group Inc., has learned a thing or two about the special conditions and requirements that go along with electrical construction for a wind farm.

“Because wind farms are usually constructed on an EPC basis and are very fast-track, it is common for multiple project players to be working on-site at any given time. This requires an extreme amount of coordination

and communication amongst everyone to ensure adherence to the overall project schedule,” said Brandon Lark, Vice President for Great Southwestern Construction. He added, “Our team has built an arsenal of lessons learned and tried and true practices that work best when it comes to wind farm construction.

We’ve learned how to become very adaptable and flexible - absolute “musts” when several phases of construction and various subcontractors are working simultaneously on the job. It’s especially crucial in

this type of scenario that everyone involved understands the project needs and anticipated constraints ahead of time - this type of early collaboration is a major key to success”.

Beginning in May of 2010, GSWC began working on the 150MW Keenan II Wind Farm, located in northeastern Oklahoma near the panhandle, and southeast of Woodward. Over the past few years, Woodward has rapidly become the state’s hub for renewable energy, and currently has approximately 38,000 megawatts of energy under development.*

A SUPPORTIVE COMMUNITY

The Woodward community and surrounding region have been extremely supportive of wind farm development in the area, and are realizing the economic benefits that come with each turbine that is erected, as well as the environmental benefits to Oklahoma residents for years to come. Wind power has created several jobs and new sources of income for the local communities.

The first phase of the Keenan Wind Farm project has been operating since late 2009 and is



Great Southwestern crews working along the new route

now commonly known as the OU Spirit Wind Farm. The project supplies renewable energy to the University of Oklahoma, and its 44 turbines generate enough electricity to serve about 25,000 homes. Keenan II has 66 Siemens 2.3MW turbines and generates enough electricity for about 45,000 average households in the region. This energy has already been promised to OG&E (Oklahoma Gas & Electric) through a 20-year power purchase agreement, and the total build out potential could exceed 400 MW.

Competitive Power Ventures (CPV) Renewable Energy Company was the

project developer, and is currently developing nearly 7,500MWs of wind power projects across North America. The general contractor on the project was The Delaney Group, a division of Tetra Tech and a recognized market industry leader with nearly 30 years of experience on heavy highway, design/build, large site development and civil infrastructure work. They also have performed several wind energy development projects in New York, including substantial work on the Maple Ridge Wind Farm, the largest wind farm in the eastern US, as well as wind farms in Alaska, Wyoming, and Oklahoma.

SCOPE OF WORK

The Delaney Group selected GSWC to perform electrical construction activities which included

140,000 circuit feet of a 35kV collector system for 66 Siemens 2.3MW wind turbine generators, a new 35/138kV substation and 10 miles of 138kV



Turbines at Sunset



Foundation backfilling on new transmission line structures



Setting Structures

transmission line on single steel poles with concrete foundations (5 miles consisted of distribution) and an underbuild utilizing 336 ACSR cable.

Mark Bilby was the Great Southwestern Project Manager on the job, and although still relatively new to GSWC, he's already gained valuable field experience on other GSWC wind farm construction projects. He also has an extensive background in civil engineering and construction, and the combination of both served him well on this project. "Overall, all aspects of the project ran very smoothly, we were fortunate that no major issues were

encountered", commented Bilby. "We did have to shorten our substation construction schedule by a few weeks, but were able to staff accordingly to meet this demand. The level of multi-tasking and interaction amongst other subcontractors and project players is unprecedented on these projects, and I feel that all parties involved worked well together." He added, "Aside from some pretty hot days, the weather was very cooperative, and we were also pleased with our ability to deliver the project on schedule as well as our safety performance."

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