
Sargent & Lundy Services:

- ❑ Transmission Line Engineering & Design
 - ❑ Substation Engineering & Design
 - ❑ Material and Equipment Procurement Services
 - ❑ Construction Field Services
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Sargent & Lundy performed engineering for the interconnection of the Horizon Wind Energy Twin Groves Wind Farm to the Commonwealth Edison transmission network. The Twin Groves Project, located east of Bloomington, IL, was constructed in two phases, each generating 200 MW of power. The facility includes 267 wind turbine generators, with a rated capacity of 1.5-1.65 megawatts each.

A study conducted by the Department of Energy and the National Renewable Energy laboratory identified several areas in Illinois that could be commercially viable wind sites, some located in central Illinois. The Twin Groves site is in one of those identified areas. The location also has excellent access to existing transmission lines, a close proximity to power markets and large tracts of open agricultural land.

S&L's scope of work included engineering and design of:

- The 34.5/345 kV Twin Groves I and Twin Groves II Substations at the termination of the wind generator collection systems for each phase of the project.
- 16 miles of 345-kV transmission line.
- The 345 kV Blue Mound Substation, a 3-breaker ring bus adjacent to the existing ComEd Pontiac - Kincaid 345-kV Transmission Line.

S&L and the Horizon Wind Energy team worked closely with ComEd staff to ensure that the interconnection was consistent with ComEd standards and practices, as well as to coordinate the interface of the protection and control systems.

S&L also provided support to Horizon Wind Energy for procurement of material and equipment for the

Horizon Wind Energy
Houston, Texas

project, including preparation of technical specifications and request for bid documents, evaluating bids, resolving technical and commercial issues and preparing purchase orders.



Twin Groves Phase I Substation

Engineering for the project was initiated in November 2005. Phase I was placed in service in February 2006. Phase II was completed at the end of 2007.

Based in Houston, TX, Horizon Wind Energy LLC develops, constructs, owns and operates wind farms throughout North America. Horizon is owned by EDP Renováveis, S.A. ("EDPR"), a global leader in the renewable energy sector.



TWIN GROVES
WIND FARM