

# MEADOW LAKE WIND FARM PROJECT



**Sargent & Lundy Services:**

- ❑ Transmission Line Engineering & Design
- ❑ Substation Engineering & Design
- ❑ Collection System Engineering & Design
- ❑ Material and Equipment Procurement Support
- ❑ Construction Field Services

Horizon Wind Energy  
Houston, Texas

Sargent & Lundy performed engineering for Horizon Wind Energy's Meadow Lake Wind Farm Phases I, II, III, IV & V, located north of Lafayette, Indiana.

Cumulatively, the five phases of the Meadow Lake Wind Farm have a rated output of 600 MW. Additional phases of the project are also planned.



34.5-kV/600-V Collection System Pad-mount

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

- The 345/34.5 kV Meadow Lake I, II & IV Project Substations.
- Meadow Lake I, II, III, IV & V 34.5 kV underground collection systems.
- 10 miles of 345-kV transmission line.

Our substation scope of work included electrical and structural engineering, grading design, support for procurement of material and equipment, construction quality assurance and substation commissioning services. The collection system scope of work included electrical studies, cable sizing, equipment selection and design drawings. Our transmission line scope of work

included transmission line structure spotting, transmission line design and support for procurement of major materials.

S&L and the Horizon Wind Energy team worked closely with American Electric Power and their engineers to coordinate the interconnection of the wind farm to the AEP 345 kV system.

Engineering was initiated in the spring of 2008 to design the 345/34.5 kV phase I project substation and 34.5 kV collection system. Engineering for the phase II substation, the phase II & III collection systems and 345 kV transmission line began in the spring of 2009 and engineering for the phase IV 345/34.5 kV project substation, the phase IV & V collection systems and 345 kV transmission line began in fall 2009.

Construction of Meadow Lake I began in April 2009 and went into service in October 2009. Meadow Lake II started construction in September 2009 and is scheduled to be completed in early 2010. Phase III is scheduled to start construction in late in 2009 and Phases IV and V will start in early 2010.



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.

